



# 2030 STRATEGY





# Lublin 2030 Strategy

## Originator of the Lublin 2030 Strategy and its main objectives

Krzysztof Żuk, PhD – Mayor of Lublin

## Coordination of work on Lublin 2030 Strategy

Mariusz Sagan, PhD  
Piotr Maleszyk, PhD  
Robert Żyśko

## Architecture of the Lublin 2030 Strategy process

Michał Furmanek  
Piotr Maleszyk, PhD  
Mariusz Sagan, PhD  
Robert Żyśko

## Methodology of the Lublin 2030 Strategy

Piotr Maleszyk, PhD  
Mariusz Sagan, PhD

## Content-related editing

Piotr Maleszyk, PhD  
Mariusz Sagan, PhD

## Authors

Michał Furmanek  
Mariusz Gwozda, PhD  
Szymon Horosiewicz  
Piotr Maleszyk, PhD  
Magdalena Opoka  
Mariusz Sagan, PhD  
Mateusz Stępnik  
Dorota Wolińska  
Robert Żyśko

## Authors of sections

*How was the Lublin 2030 Strategy developed and how to read it?* | Michał Furmanek  
*The Lublin 2030 Strategy in the new strategic planning framework* | Piotr Maleszyk, PhD  
Conclusions from the diagnoses | Piotr Maleszyk, PhD, Magdalena Opoka, Mateusz Stępnik, Dorota Wolińska  
*The future of Lublin: vision and mission* | Michał Furmanek, Mariusz Sagan, PhD

## Development areas of the Lublin 2030 Strategy

Michał Furmanek, Mariusz Gwozda, PhD, Piotr Maleszyk, PhD, Magdalena Opoka, Mariusz Sagan, PhD, Mateusz Stępnik, Dorota Wolińska  
*Horizontal objectives of the Lublin 2030 Strategy* | Szymon Horosiewicz, Piotr Maleszyk, PhD

*Model of functional and spatial structure of Lublin I* | Szymon Horosiewicz, Magdalena Opoka, Dorota Wolińska

*The Lublin 2030 Strategy implementation system* | Piotr Maleszyk, PhD, Robert Żyśko  
*Compliance of the Lublin 2030 Strategy with higher-order documents* | Szymon Horosiewicz  
*Bibliography* | Szymon Horosiewicz, Mateusz Stępnik

## Technical editing and proofreading

Paulina Olchowska  
Robert Żyśko

## Task force managing the project “Let’s invent Lublin together. We participate in the creation of an intelligent Lublin 2030 Strategy”

*Bureau of the managing task force*  
Robert Żyśko – Chair  
Mariusz Sagan, PhD – Deputy Chair  
Agnieszka Duda-Jastrzębska – Bureau Member

## Project office staff

Paweł Cienkiera – Project Manager  
Dominika Łuczka – Assistant to the Project Manager

## Public participation team

Agata Cholewa  
Piotr Choroś  
Kinga Jarmałowicz-Szymańska  
Paula Krać  
Agnieszka Malinowska  
Marta Nazaruk-Napora  
Anna Szadkowska-Ciężka  
Ewa Wasilewska-Wójcik

## Strategy and research team

Michał Furmanek  
Piotr Maleszyk, PhD  
Mariusz Sagan, PhD  
Mateusz Stępnik  
Robert Żyśko

## Promotion and communication team

Ariel Cyfra  
Ewelina Frelas-Tyczyńska  
Łukasz Kuzioła  
Paulina Olchowska  
Agata Patoleta

## Finance, accounting and public procurement team

Paweł Cienkiera  
Gabriela Dycha  
Aldona Grabowska  
Tomasz Krajewski  
Monika Król  
Ewelina Nater

## Lublin 2030 Strategy Social Partner

Lubelska Grupa Badawcza (Lublin Research Group)

## Lublin 2030 Strategy Council

### Board of Councillors

Mariusz Sagan, PhD – Chair  
Prof. Agnieszka Sitko-Lutek, PhD – Deputy Chair  
Michał Furmanek – Secretary of the Strategy Council

### Council Members

Agnieszka Duda-Jastrzębska  
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Maciej Maniecki  
Karolina Moląg-Leś  
Marta Nazaruk-Napora  
Maria Curie-Skłodowska University  
Professor Zbigniew Pastuszak, PhD  
Krzysztof Stanowski  
Beata Stepaniuk-Kuśmierzak  
Robert Żyśko  
Joanna Żytkowska

## Members of the Thematic Working Groups

### TWG 1: Academia

Leader: Prof. Jan Pomorski, PhD  
Piotr Guz  
Viktoriya Herun  
Prof. Robert Litwiński, PhD  
Paweł Marczak  
Patrycja Olchowska, PhD  
Mariusz Sagan, PhD  
Justyna Targońska  
Agnieszka Wasilak  
Agnieszka Ziętek, PhD

### TWG 2: Good neighbourhood

Leader: Paulina Paga  
Paweł Bakiera  
Maciej Zaporowski  
Barbara Grondkowska, PhD  
Anna Jastrzębska  
Konrad Kuśpit  
Magdalena Łuczyn  
Sandra Pikula  
Małgorzata Sosnowska, PhD Eng. Arch.

### TWG 3: Education

Leader: Adam Kalbarczyk, PhD  
Ewa Dumkiewicz-Sprawka  
Paweł Dzierżak  
Marcin Giza  
Iwona Nowakowska  
Agnieszka Kantor-Kołodowska  
Monika Schmeichel-Zarzezna  
Grzegorz Jerzy Nowicki  
Ewa Ziembowicz

### TWG 4: Smart and sustainable economy

Leader: Lublin University of Technology  
Professor Artur Paździor, PhD Eng.  
Łukasz Goś  
Emil Górniak  
Agnieszka Komor  
Agata Koszarna  
Anna Nowak, PhD DSc  
Piotr Popik  
Agnieszka Smreczyńska-Gąbka

Robert Wciśł  
Michał Wójcik

### TWG 5: Culture and creative industries

Leader: Cezary Hunkiewicz  
Rafał Chwała  
Michał Karapuda  
Bartosz Mitrut  
Patrycja Radkowiak-Gąsiorowicz  
Katarzyna Smyk, PhD DSc  
Michał Szewczyk  
Aleksandra Szuc-Choma  
Waldemar Tatarczuk  
Piotr Tyczyński

### TWG 6: Metropolis

Leader: Dagmara Kociuba, PhD  
Łukasz Bilik  
Bartłomiej Cybula  
Arkadiusz Gołębiowski  
Ewelina Graban  
Krzysztof Jakubowski  
Rafał Juściński  
Paweł Skurski  
Krzysztof Stanowski  
Jacek Warda, PhD

### TWG 7: Socially sensitive city

Leader: Paweł Prokop  
Anna Bieganska-Skóra, PhD  
Anna Dąbrowska  
Małgorzata Kępa Mitura  
Łukasz Lewicki  
Izabela Misztal  
Sławomir Skowronek  
Aleksandra Smyk-Kotlarz  
Grzegorz Wenarski  
Katarzyna Zabratkańska

### TWG 8: Green City

Leader: Joanna Hołda, PhD  
Marzena Sylwia Brodowska, PhD DSc  
Marlena Denysiuk  
Robert Gogola  
Prof. Krzysztof Józwiakowski, PhD  
Mateusz Kulik, PhD  
Anna Ewa Michowska

Bartosz Niewiadomski  
Blanka Rdest-Dudak  
Krzysztof Stasiak

### TWG 9: Participation and co-governance

Leader: Joanna Ciesielka  
Agata Cholewa  
Rafał Kępski  
Dominika Knap  
Marta Kurowska  
Małgorzata Kwiatkowska  
Szymon Pietrasiewicz  
Marcin Skrzypek  
Anna Szadkowska-Ciężka  
Małgorzata Wiśniewska

### TWG 10: Sport

Leader: Tomasz Lewtak  
Bożena Bednarska, PhD  
Paweł Cegiętko  
Jarosław Daniewski  
Konrad Koperwas  
Jakub Kosowski, PhD  
Jerzy Lipski  
Maria Stępień  
Emilia Tomala  
Rafał Walczyk

### TWG 11: Tourism

Leader: Agata Kobylka  
Justyna Domaszewicz  
Łukasz Fiuta  
Marzena Koziółek  
Jan Leus  
Anna Mazurek-Kusiak, PhD DSc  
Krzysztof Raganowicz  
Wojciech Sienko  
Kinga Witkowska-Mirosław  
Konrad Woliński

### TWG 12: Urban planning and mobility

Leader: Lublin University of Technology  
Professor Natalia Przesmycka, PhD DSc.  
Eng. Arch.  
Miroslaw Hagemeyer  
Bartłomiej Kwiatkowski, PhD Eng.  
Dominika Mazur  
Hubert Mąćik, PhD

Paweł Mierzwa  
Maciej Mikulski  
Arkadiusz Niezgodza  
Krzysztof Ożóg  
Karolina Skowronek

## Graphic design, typesetting, revision

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Lublin City Office  
Strategy and Entrepreneurship Department  
plac Litewski 1, 20-080 Lublin

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## Dear Residents,

### Ladies and Gentlemen,

over the last decade Lublin has undergone a huge metamorphosis. The dynamic development we have witnessed would not have been possible without the Lublin Strategy adopted in 2013, which indicated the most important areas of city development until 2020: openness, friendliness, entrepreneurship and its academic spirit. The implementation of the Strategy allowed the image of Lublin to be reshaped and the city reconstructed not only in economic terms, but also in terms of quality of everyday life. Today, we can proudly say that Lublin is one of the most dynamically developing cities in Poland.

Implementation of the Lublin Development Strategy 2013–2020 put our city on the path of dynamic changes. We have invested enormous financial resources in building and further developing, among others, roads, sports, social and cultural infrastructure, and creating the foundations of a new, diversified, innovative economy. However, because of changing conditions, new economic and social challenges, as well as legislative changes in the field of local government development policy, it is time for us to set new priorities for Lublin's development. By outlining this vision of the future, together with all the stakeholders, we wish to continue the process of sustainable and balanced growth of our city.

The strategy constitutes a certain signpost – an idea for the city of Lublin expressed in the form of a document. The current version of the strategy, which includes the 2030 perspective, is one of the first documents in Poland developed among large cities on the basis of the new legal framework for strategic planning. However, what makes it special is something else: the fact that you are its co-authors. Thanks to a multi-stage participatory process, together we have developed a synthesis of ideas about the future of the city as seen through the eyes of its residents, people representing business and science, NGOs and many other institutions.

I would like to thank all of you for your involvement in the preparation of the *Lublin 2030 Strategy*. Once again we have proved that the development of Lublin is our common priority. Thanks to social involvement, during numerous meetings and consultations we have collected thousands of applications, evaluations and

opinions, which have helped to define the directions of action, providing points of reference not only for the document itself, but also for future sectoral strategies.

In 2030, Lublin will be a city recognisable both nationally and internationally, aspiring to the rank of European metropolises and assuming the role of a local leader for the neighbouring municipalities. It will be a creative, university-oriented and entrepreneurial city, economically based on innovative ecosystems, whose sustainable development allows it to maintain its status as one of the greenest Polish urban centres. It shall be a compact city, with a well-organised urban structure, providing its inhabitants of various age groups with above-average conditions for living, studying, professional fulfilment and all kinds of activities – sports, cultural or social ones. It will be an open, inclusive and hospitable city, for which both closer ties with its neighbours and relations with visitors are equally important. Finally, it shall be a city with a strong sense of identity and pride of being its inhabitant.

For this vision of Lublin 2030 to become a reality, we need mobilisation, synergy of actions and multifaceted cooperation at the district, local, regional and governmental level. In this way, we will create a city that we wish to be a part of not only today, but also in the future.

**Krzysztof Żuk**  
Mayor of City of Lublin



# How was the Lublin 2030 Strategy developed and how to read it?







## How to read and interpret the Lublin 2030 Strategy?

*Lublin 2030 Strategy* is a document which synthesizes the ideas about the future of Lublin as seen by its inhabitants. The strategy defines the vision of the future of the city, describing the progress necessary to make it the best possible place to live, work and study in a nearly 10-year perspective. The document identifies the city's greatest potentials, defines its development policy, sets goals to be achieved, and provides a framework for action. By reinforcing the consistency of administrative decisions, the *Lublin 2030 Strategy* constitutes the starting point for planning sectoral programmes, projects and operational initiatives. It is not only an internal document of the City Office used for budget management. Many of the goals presented in the Strategy have already been pursued by other entities for a long time or they are beyond the formal jurisdiction of the city authorities, therefore their ultimate achievement is possible only through cooperation and synergy of actions. One of the important premises of the *Lublin 2030 Strategy* is to involve in its implementation, as broadly as possible, all the parties interested in developing the city, both within and outside its territory – individual inhabitants, social and informal

groups, non-governmental organisations, institutions, companies and other organs of public administration. This means that the *Lublin 2030 Strategy* constitutes a common good of the Lublin community. The gradual efforts by the local government and potential partners to strengthen their cooperation have an impact on the prioritisation of activities. Initiatives supported by good partnerships will naturally stand a better chance of implementation.

## The language of the Lublin 2030 Strategy

The *Lublin 2030 Strategy* is a document free of prejudice and stereotypes, based on openness, inclusion and respect towards all the people interested in reading it. The assumption behind its creation was to emphasise the diversity to which it refers and which constitutes its content and the essence of the mission formulated therein. A particularly important element of the message in this context is the language used, especially its inclusivity. Respecting the idea of diversity, and in accordance with the position adopted by the Council for the Polish Language at the Presidium of the Polish Academy of Sciences, the authors believe



that the Polish language needs more and possibly full symmetry between masculine and feminine personal names, and the use of feminatives is of great importance for the identity evolution of the contemporary Polish language. Following the guidelines of the Council, the editorial team decided that there was no need to use constructions such as “male and female residents”, “male and female students” in every paragraph and sentence, where the symmetry of personal names would be deemed necessary. Since the masculine forms, according to the rules of the Polish language, can refer to different genders, the authors, in order to simplify the language of the document, made a compromise decision to apply only these forms in the text of the Strategy. It should be clearly emphasised that wherever masculine forms are used, e.g. “residents”, “interested parties”, the authors of the document have in mind the community of women and men as well as non-binary persons constituting Lublin’s community.

## The development methodology used in the Lublin 2030 Strategy

The *Lublin 2030 Strategy* was developed following the assumption that the vision of the future of the city should be legitimised by the awareness, understanding and acceptance of the community living there. This is possible only by involving the widest possible group of inhabitants and city users in the process of its formulation. The central concept guiding the whole process was social participation expressed in dialogue, with full equality of the residents of Lublin in the decision-making processes and assigning them the role of real co-creators of the city development concept. Those

involved in the process became thereby co-authors of the Strategy, the most important document outlining the directions for the development of the city, constituting a synthesis of ideas on its future. Representatives of the local government played the role of animators responsible for the process and for the selection of appropriate methods and techniques involving all the interested parties in the creation of the Strategy.

The *Lublin 2030 Strategy* was developed using the participatory and expert method, drawing on the best and most up-to-date models of creating strategies for smart cities, as well as aspiring to create its own unique solutions constituting good practice for other cities. The aim of the process of developing the *Lublin 2030 Strategy* was to create one that would best meet the needs of the city residents, i.e. a strategy that would implement a vision accepted by them. The diagnosis and formulation of development priorities was based on extensive research and participatory activities allowing for the inclusion of a wide range of inhabitants of Lublin in the creation of the vision of the city, as well as for listening to opinions of people who do not live in Lublin but who have various links to the city.

The first task undertaken with public participation was to prepare a list of strategic areas that would define the framework for work on the *Lublin 2030 Strategy*. This was completed by a group of over 35 Lublin intellectuals, representatives of science and activists during a creative workshop. Then the list of areas and their mutual relations was verified by the members of the *Lublin 2030 Strategy* Council and additionally evaluated by 3 independent experts specialising in urban policies. The final step towards the target layout of the areas was the verification of their substantive scopes and the selection of key words that best described them. Another 50 experts in different fields were involved in this

activity on a voluntary basis. As a result, an arrangement of 12 strategic areas has been prepared, determining the substantive scope of work on the *Lublin 2030 Strategy*.

In the next step, some Lubliners were asked about their vision of the city’s future. The surveys, conducted by means of quantitative and qualitative methods in the city space and on the Internet, allowed for the collection of nearly 11,000 opinions. As part of an extensive participatory process conducted by the local government and the Lublin Research Group – a social partner involved in the process of developing the *Lublin 2030 Strategy* – the opinions of more than 2,000 Lublin residents were collected: 15 three-hour open meetings were held and 17 Mobile Points were organised within the city space. The researchers contacted residents of all Lublin districts. Field activities were accompanied by thematic workshops and outdoor games. At the same time, a Participant’s Café was opened where nearly 50 informative meetings, workshops and thematic discussions about the city took place. Some of the meetings and interviews were addressed to foreigners and communities at risk of exclusion. In total, at least 13,000 Lublin residents were involved in the process of defining a vision for the future of the city.

The visions of the future and the opinions developed by the city community became one of the most important sources of inspiration in the work of the Thematic Working Groups (TWG) – 12 expert teams of 120 people in total, formed on the basis of the layout of the 12 strategic areas. The task of the TWGs was to develop, by means of workshop methods, strategic recommendations outlining the directions for the development of the city within the 2030 perspective. The composition of the TWG was selected through open selection in accordance with the principle of diversity and environmental representation. A series of four workshops was

organised on the basis of the *Three Horizons Framework* method adapted for the needs of developing the *Lublin 2030 Strategy*, based on a comparison of variants of the future, which is an extrapolation of the current status quo and the desired future, and determination of the path of transformations and actions enabling transition from the first to the second variant. The method draws on other leading methodologies for group counterfactual thinking processes, such as *The Day After* (RAND) and *Futures Wheel* (*The Millennium Project*). The applied approach perfectly reflected the objectives of the TWG work, including the diagnosis of the current situation in a given strategic area, the formulation of its vision for 2030 and the determination of objectives and directions of action that would provide for the implementation of the desired scenario. The recommendations on the strategic directions of Lublin development elaborated by the experts were included in the Final Report on the work of the Thematic Working Groups, which is an important reference and inspiration for the *Lublin 2030 Strategy* document. They were then submitted for formal public consultation, during which 548 people and 37 different institutions/organisations expressed their opinions.

## The scope of impact of the document

The *Lublin 2030 Strategy* does not constitute a list of all the activities undertaken by the local government, but it describes the scope of essential changes desired for the development of Lublin and considered to be crucial in the perspective of the next 9 years and beyond. It defines the priority areas for those changes which result from the specificity of the city. Moreover, it

does not assign the implementation of these priorities to particular institutions or organisational units, but defines them as tasks for all of them, within the limits of their competences and the need for their integral cooperation (it may, however, name leading institutions to coordinate this cooperation). At the same time, the *Lublin 2030 Strategy* assumes the voluntary involvement of other entities in its implementation and provides the basis for building multiple partnerships. The Strategy will be supplemented in individual areas by municipal sectoral strategies and programmes which should include more detailed arrangements concerning the activities of the organisational units and entities of the City of Lublin, also with regard to their routine tasks resulting from statutory and regulatory obligations.

## Configuration of the Lublin 2030 Strategy

The *Lublin 2030 Strategy* document has a branched structure. Its core consists of 5 main development areas which constitute a synthesis of the initial layout of strategic areas according to which the work on the *Lublin 2030 Strategy* proceeded. The development areas branch out into objectives, objectives into directions, and directions into tasks and projects. Each objective, together with its sub-points, is assigned a place in a given area and in the branching of the Strategy. At the same time, the Strategy does not impose a hierarchy of objectives, but encourages to read it not only along the branches, but also across them, following many different routes, important for the interested parties – addressees of the document. Therefore, the objectives are accompanied by recommendations and synergies

suggesting possible connections and horizontal relations between the objectives. The complementary perspective for strategic areas is created by the system of 4 horizontal objectives, complementing the goals and tasks indicated so far with priorities resulting from trends and challenges experienced in many areas of functioning of the city. The horizontal objectives should constitute a signpost during implementation of various objectives and tasks indicated in the five development areas of the *Lublin 2030 Strategy*. The strategy encourages the implementation of its objectives in any number of ways. The lists of directions, tasks and projects are not closed and they can be enriched with new proposals if they ultimately affect the implementation of the objectives. The final structure of projects and programmes implementing the *Lublin 2030 Strategy* need not mirror the structure of its text – just as the crown of a tree is not a reflection of its root system.

## Addressees of the Lublin 2030 Strategy

The *Lublin 2030 Strategy* is first and foremost a description of the vision of the city's future developed by Lublin residents and authorities. The intentions and tasks resulting from it constitute a point of reference and a signpost for the organisational structures of local governmental administration, as well as for the institutions managing support programmes (at the EU, national or regional level). Its aim is to determine the areas of compatibility of Lublin's development policy with the guidelines of those programmes. Furthermore, under the Act on the Rules of Conducting Development Policy (Ustawa o zasadach prowadzenia polityki rozwoju)



amended in late 2020, introducing multiple changes in the area of strategic planning for local government units, the municipality development strategy is treated as the basic and most important document (besides the study of conditions and directions for spatial development of the commune) at the local level, creating guidelines for implementation and spatial planning documents. At the same time, the Strategy also constitutes an invitation to cooperate addressed by the local government to all

institutions and entities (economic, scientific, sectoral, social, cultural and other) who share its objectives. The Strategy can also inspire their own plans and initiatives, guaranteeing the local government's favour for activities that comply with it. For the inhabitants of the city, *Lublin 2030 Strategy* provides information about the intended changes and a declaration of the intention to implement them. Hence, every reader of this document should find here the perspectives of Lublin's development.



A photograph of a modern building facade featuring a grid of glass windows and white panels. The image is used as a background for a title. The text is white and positioned in the upper right quadrant. The building's facade is composed of a grid of glass windows and white panels, with a blue sky visible in the background. The overall aesthetic is clean and modern.

# The Lublin 2030 Strategy in the new strategic planning framework







New principles for strategic planning in local government units were defined by the Act of 15 July 2020 Amending the Act on the Rules of Conducting Development Policy and Certain Other Acts (Ustawa o zmianie ustawy o zasadach prowadzenia polityki rozwoju oraz niektórych innych ustaw; hereinafter "Act"), which entered into force on 13 November 2020. The legislative changes significantly affected the requirements for the process of creation and the content of the development strategy: for the first time in national legislation, a single legal basis for the communal development strategy was introduced, which became the basic and most important document of the local government, providing guidance for both implementation documents and spatial planning. The integration of development in the social, economic and spatial dimension and the establishment of a framework for the participation of residents and other stakeholders provide an opportunity for creating better development strategies and improving their implementation thus, consequently, for more sustainable urban development. The new regulations should also increase the consistency of strategic planning at different territorial levels. The *Lublin 2030 Strategy* is one of the first strategic documents prepared by large cities based on the new legal framework for strategic planning.

The architecture of the participatory process of creating the *Lublin 2030 Strategy* was outlined in September 2018,

even before the adoption of the Act introducing the new regulations. In February 2019, the concept of creating the *Lublin 2030 Strategy* was recognised in the competition "Human Smart Cities. Smart cities co-created by their inhabitants", organised by the then Ministry of Investment and Development (now the Ministry of Development Funds and Regional Policy). In the same year, the first stage of research and participatory activities began, during which the city's community formulated a vision of Lublin's future. At this stage, the priority was to collect the opinions of the largest possible number of Lublin residents and those variously connected with the city, while fully reflecting the views of people of different ages, occupational and social roles. Despite the ongoing pandemic, the use of different research and participatory techniques provided an opportunity to co-create the future of Lublin for all people living and working in the city – both the most active ones, with experience in various forms of participation, as well as representatives of the "silent majority" of residents and stakeholders not actively involved in the city's affairs and, finally, inhabitants at risk of marginalisation and exclusion. The tangible result of these activities was a number of social research reports, which (together with other studies) constituted a social, economic and spatial diagnosis of Lublin.

In February 2021, the Lublin City Council adopted a resolution to proceed with the preparation of a draft *Development Strategy for the Lublin Municipality for*

the years 2021–2030 (*Strategia Rozwoju Gminy Lublin na lata 2021–2030*) and to determine a detailed procedure and schedule for the preparation of the draft strategy, including the consultation procedure. The principles of further work on the *Lublin 2030 Strategy* not only met, but also greatly exceeded the requirements for the public consultation procedure set out in the Act. Special attention should be paid to the fact that not only the document of *Lublin 2030 Strategy* itself was subject to consultations but also the directions of the development of the Municipality of Lublin formulated earlier by the Thematic Working Groups, which constituted the guidelines for the draft version of the *Lublin 2030 Strategy*. A long list of entities invited and participating in consultations as well as numerous participation techniques applied are yet another example of good practice in creating a development strategy compliant with the new strategic planning framework.

The structure of the *Lublin 2030 Strategy* reflects the new provisions of the Act on the Rules of Conducting Development Policy (*Ustawa o zasadach prowadzenia polityki rozwoju*). The first part of the document contains the conclusions from the social, economic and spatial situation diagnoses. Each of them includes (in different proportions and configurations) the perspective of the inhabitants derived from social surveys and participatory activities, a synthetic review of trends identified in national, European and global development strategies, benchmarking indicating Lublin's position in relation to a number of other voivodeship cities in Poland, diagnoses included in the report summarising the work of the Thematic Working Groups as well as diagnoses included in local governmental documents and commissioned analyses.

Another, major part of the document covers 5 development areas, which branch out into 18 objectives. Each of these objectives has been given a logical and clear

structure. First, the priority importance of accomplishing each objective for the city development is substantiated in a descriptive manner and the desired vision of the future is presented – the vision formulated by inhabitants and experts in the process of developing the *Lublin 2030 Strategy*, which should be achieved through the implementation of the indicated objective. Then, each of the main objectives is broken down into specific goals together with a list of key tasks and projects. This list should not be treated as a closed catalogue, but rather as a starting point for the implementation of the Strategy objectives and an invitation to supplement it with new proposals that implement the formulated objectives. The main and detailed goals reflect the objectives and directions of activities required by the Act, while the expected results of planned activities (including the spatial dimension) required by the Act include both the key tasks and projects with a section devoted to the evaluation of the objective pursued and a descriptively formulated vision of Lublin's future. As in the *Lublin 2020 Strategy*, the objectives and tasks are accompanied by recommendations and synergies, which, albeit of an immeasurable, “soft” nature, provide an important context and direction for the implementation of the objective and suggest horizontal connections between various objectives. The structure of each objective is complemented by a section devoted to the evaluation of its implementation through monitoring of the completion of tasks and key projects, analysis of main and additional quantitative indicators and measures, public surveys or expert evaluation.

Modern development policy requires a territorial and integrated approach, which is reflected in subsequent parts of the *Lublin 2030 Strategy*. First, horizontal objectives were formulated to complement the objectives and tasks indicated in the five development areas



with cross-sectional priorities resulting from trends and challenges experienced in many areas of the city's functioning. The four horizontal objectives should constitute a signpost in the implementation of various objectives and tasks indicated in the five development areas of *Lublin 2030 Strategy*. The next part of *Lublin 2030 Strategy*, which highlights the cross-sectional dimension of many socio-economic phenomena, is an expression of the territorial approach to development planning. This part of the document consisted of the following elements, specified in the Act: the model of functional and spatial structure of the municipality, findings and recommendations on shaping and implementing spatial policy in the municipality, areas of strategic intervention specified in the voivodeship development strategy and areas of strategic intervention crucial for the municipality.

Another part of the *Lublin 2030 Strategy* presents the system of implementation of the Strategy and provides guidelines for the preparation of implementation documents, the monitoring and evaluation system as well as financial framework and sources of financing. The last part demonstrates the compliance of the *Lublin 2030 Strategy* objectives with the objectives of the currently binding *Strategy for the Development of the Lubelskie Voivodeship until 2030 (Strategia Rozwoju Województwa Lubelskiego do roku 2030)* and with the provisions of the *Strategy for Responsible Development until 2020 (including the perspective up to 2030) (Strategia Odpowiedzialnego Rozwoju do roku 2020 [z perspektywą do roku 2030])*, as well as the *National Strategy for Regional Development 2030 (Krajowa Strategia Rozwoju Regionalnego 2030)*.



# Conclusions from the diagnoses





## Social diagnosis

### What does the social diagnosis of Lublin comprise?

The presented part of *Lublin 2030 Strategy* is a synthesis of results and conclusions from a comprehensive social diagnosis of Lublin. Due to the broad scope of the subject matter and the use of complementary research approaches, the complete social diagnosis consists of various studies forming three pillars.

The first one – of key importance for the participatory character of the process of developing *Lublin 2030 Strategy* – was extensive social research and participatory activities which made it possible to involve in the process of diagnosis and formulation of development priorities, both a wide range of Lublin inhabitants and people who do not live in Lublin but are connected with the city in various ways. In this case, the research strategy was characterised by a triangulation of sources and research methods – the idea was to use various complementary research methods and participatory techniques and to reach members of diverse social groups and environments. Thanks to these activities, it was possible to collect more than 13 thousand opinions from city residents. Full analyses of these opinions are included in the following reports:

- [1] *Diagnosis Lublin 2030: A report on qualitative research and participatory actions*. It summarises the results of both 123 individual interviews (ID) and 11 group interviews (FGI) conducted in 2020 with representatives of various social groups of different ages, performing different social and professional roles,<sup>1</sup> as well as the conclusions from 40 meetings with inhabitants (open thematic meetings or street interviews).
- [2] *Diagnosis Lublin 2030: A survey report*. It was prepared on the basis of a representative<sup>2</sup> survey carried out in autumn 2020 using the mix-mode technique on a sample of 1,053 inhabitants of Lublin.
- [3] *Diagnosis Lublin 2030: Conclusions from the qualitative analysis of the materials collected by the Mobile Points*. It sums up interviews with 677 inhabitants in late 2019 and early 2020 conducted by the Lublin Research Group at 15 Mobile Points.

**1** Children, secondary-school and university students, adults of different ages – with or without children, seniors, entrepreneurs from different sectors of the economy, foreigners (both students and working persons), emigrants from Lublin, returning migrants, people with disabilities, people at risk of social exclusion, residents of municipalities near Lublin, and in some cases also members of organisations cooperating with the above-mentioned groups.

**2** Based on an address and housing survey.



- [4] A series of reports titled *Opinions of Lublin Residents about their City*, prepared in 2016–2019 on the basis of annual surveys carried out using the PAPI technique in the Residents' Service Offices on representative samples of Lublin residents.<sup>3</sup>
- [5] Three reports from online surveys conducted during voting on the Civic Budget (CB 2019 and CB 2020 editions): *What does Lublin need? A report on the quality of life in the districts of Lublin* [5a], based on the responses of 5,753 inhabitants who voted for the CB 2019; *Let's invent Lublin 2030 together: A report on the analysis of open questions in an online survey* [5b], and *Diagnosis Lublin 2030: A report on a survey of living conditions in the districts* [5c], both presenting the results of the analysis of opinions and evaluations by nearly 3,000 respondents.

The second pillar of the social diagnosis consists of findings by expert teams and analyses contained in local government documents. The studies used include: a diagnosis included in the *Strategy for Solving Social Problems of the City of Lublin 2021–2030* [6], conclusions from diagnoses included in the *Final Report on the Work of Thematic Working Groups* [7], *Report on the State of the City of Lublin for 2020* [8], and cyclical reports *How is Lublin Developing? Monitoring the Implementation of the 2020 Lublin Strategy* [9].

The third, complementary pillar of the diagnosis consists of a synthetic review of trends in social development identified in European and national strategic documents, *Foresight Lublin 2050*, and a benchmarking which shows Lublin's position in relation to a number of voivodeship cities in Poland.

By combining various studies and research approaches, the social diagnosis combines a subjective view of the quality of life in the city, prevailing in social research, with an objective approach based on a comprehensive analysis of the measures and indices of social development. Such an integrated approach to measuring social development and the quality of life reflects the contemporary approach of the European Commission and Eurostat or the OECD. Thus the process of diagnosis takes into account both the perspective and needs of a wide range of inhabitants and city stakeholders, as well as the opinions of experts with professional knowledge on the possibilities of implementing various postulates.

**3** The diagnosis preferred the results of a survey carried out in 2018 on an increased sample of 1,101 residents. The research was conducted on quota samples representative in terms of gender, labour market status and place of residence.



### Diagnosis of Lublin – the residents' perspective

This section presents findings from social research and participatory activities. It is worth emphasising that they cover various aspects making up the extremely broad category of quality of life in the city. The residents' opinions referred not only to the issues related with social development, but also to other development dimensions: economic, environmental, infrastructure and spatial order. Nonetheless, they have been considered collectively, which on the one hand follows from the integrated approach to city development and on the other allows for the gradation of strengths and weaknesses of the city in the eyes of its inhabitants. The conclusions from economic and spatial diagnoses broaden and deepen the most important findings presented in this part.

### Strengths of Lublin

Residents responding to surveys and participatory activities, regardless of age or social status, provided an overwhelmingly positive evaluation of Lublin as a place to live, identifying with the city and declaring a sense of pride in being an inhabitant of Lublin [1–5].

Surveys [2, 4, 5a, 5c] show that four out of five respondents would recommend living in their neighbourhood to a friend [5a, 5c] and over 80% of respondents felt that the city has changed for the better in recent years [2]. A high level of satisfaction (from 65 to over 90% of positive ratings) applies to most aspects of city life assessed: safety, level of child education, infrastructure for sports and recreation, concern for city cleanliness, cultural offer and the activities of cultural institutions, public transport or getting around the city on foot and by bike. It is worth noting that in the context of each of the above areas, residents also notice a positive change over recent years, while the

percentage of those expressing the opposite opinion (i.e. indicating a slight or definite change for the worse) is represented in single figures, most often between 2 and 5%. Most people surveyed (60–80%) are satisfied with green areas, the quality of drinking water or the waste segregation system. Most of the respondents (65–90%) positively evaluated the road investments in the city and communication between Lublin and other cities, and also appreciate the improvement of space aesthetics [2, 4].

The surveyed residents generally rated well the living conditions in the immediate vicinity of their place of residence: the median (middle value) rating was above 4 (on a scale of 1–7) for 16 out of 18 aspects rated, and the highest scores (median above 5) concerned convenience of daily shopping, commuting by car and public transport, green and recreational areas as well as safety [5c].

It is worth adding that residents most often rated their housing and financial situation favourably [2, 4], although in the latter case, the assessments were formulated in the period when the pandemic had not yet led to an economic downturn.

Much more extensive information, deepening the residents' perception of Lublin, is provided by analyses based mainly on qualitative research methods [1, 3, 5b]. Among the strengths of Lublin, the greatest emphasis was put on aspects related to the size of the city, its atmosphere, tranquillity, convenience of mobility and friendliness. The residents' attention is also focused on the Old Town itself, which turns out to be a very important point in the urban fabric – as a characteristic venue, vital for recreational and identity functions.

The atmosphere, understood as a strong point, is a combination of tranquillity with energy and vitality of the city at the same time, something that results from the activity of young people and people engaged in



culture. In the opinion of the respondents, this is what distinguishes Lublin from other large cities in Poland: it is a combination of a big-city character with familiarity and regionality, of tradition with the modernity of experiencing the unique climate of Eastern Poland. The inhabitants themselves also play an important role here, as their lifestyle contributes to the atmosphere of openness, friendliness and neighbourly cordiality, mainly through polite interpersonal relations. Respondents emphasised the dynamism, vigour and activity of the inhabitants, as well as their hospitality and tolerance. They also stressed Lublin's multiculturalism, understood as the ease of establishing contacts with people of other nationalities.

An aspect closely linked to the atmosphere is tranquillity and the unhurried pace in the city, embodying the ideas of *slow living* and *slow city*. When writing about tranquillity, the balance between the size and development of the city and the still perceptible unhurriedness, safety and intimacy is emphasised. This tranquillity, deemed unique by the respondents, is also described as intimacy, relaxation, silence, cosiness, associated with the absence of big-city hustle and bustle. Given that, the size of the city is yet another strong point. Lublin is perceived as a compact city, whose compactness ensures easy mobility, creating a dense network of relations and accumulating social capital.

The transformation that has taken place over the last 10 years is also considered an asset of Lublin. Its residents appreciate the improved road infrastructure, the city's transport connections with Warsaw and the presence of the airport. They point out the expansion of Lublin, the revitalisation of Litewski Square or Saski Garden, the creation of new recreational spaces, the improvement of public transport, the economic situation, the image of the city and the development

of sports infrastructure. They also underline the very dynamics of the changes taking place.

Residents point to improvements in the quality of life in the city, such as the development of gullies and ravines and making them into attractive recreational spaces, starting the revitalisation of the Bystrzyca Valley, creating flower meadows or not lawns. However, a certain ambivalence can be observed with regard to green places. On the one hand, the available green areas in the urban space are treated as an important asset of Lublin, distinguishing it from other cities. On the other hand, there is a need to increase the amount of greenery and take care of the existing one – respondents are concerned about the shrinkage of green areas and the cutting down of trees in the urban space.

The respondents also indicated culture (its rich offer and quality), events, student events and festivals organised in the city as well as the activity of cultural centres as the strengths of Lublin. Festivals are perceived as something not only exceptional, but also something that gives the city magic, atmosphere and a sense of "happening". They draw people from all corners – not only from Poland, but also from the rest of the world, both as artists and tourists.

Further, attention was also drawn to the presence of young and active people in the city. The respondents perceived Lublin's academic and educational potential as the educational centre of the region – thanks to all the universities, the presence of students and the educational offer itself.

Among other important aspects positively influencing the quality of life in the city, the inhabitants mentioned a good service offer close to their place of residence, safety, cleanliness and lack of polluting industry (especially when compared to other cities), or the city's aesthetics – its visual attractiveness, revitalised and

interesting architecture. Respondents noted the interesting topography of the city – its location among valleys and hills. The very geopolitical location is recognised as a source of the city's authenticity, and its location in the eastern part of Europe enables Lublin to function as "the Gate to the East". At the regional level, attention was drawn to the tourist attractions of Lublin and its surroundings (Nałęczów, Kazimierz Dolny, Rostocze).

### Lublin's weak points

Living in Lublin, as in any city, also has its drawbacks. Some of them may be connected with problems typical of highly urbanised areas, others should be perceived in the context of nationwide social and economic changes, yet each of these issues constitutes a need for a more intensive effort on the part of local authorities.

Surveys have shown that negative evaluations outnumber positive ones in three categories of living conditions in the city. Firstly, respondents expressed the greatest dissatisfaction with the possibility of finding employment and the amount of income received from work. Although an improvement can be observed in recent years, negative ratings (i.e. answers "rather bad" or "very bad") of professional prospects are still expressed by 40 to 50% of respondents. It is curious, though, that the labour market is assessed less favourably by people over 50 years of age, i.e. those with the most stable employment situation or receiving pension or disability benefits, while young and middle-aged people are twice as likely to positively assess Lublin in terms of job opportunities and income. Slightly fewer negative evaluations concern the availability of medical services (40%) [2, 4], which the city authorities can only influence in a very limited way. The third critically assessed aspect is getting around the city by car, with negative assessments in this area expressed before the

pandemic by every second interviewee at the Resident Service Office (BOM) in spring 2019 [4], while in autumn 2020, in the period of low traffic in the aftermath of the COVID-19 pandemic – by every fifth resident of Lublin [5].

The remaining aspects of living conditions in Lublin are usually assessed positively, although some of them are characterised by a relatively high percentage of negative opinions. This applies mainly to the availability of housing (30% of negative opinions) and the accessibility of facilities for people with disabilities (27%) [2]. Of the other aspects, a relatively high proportion of residents (20–25%) negatively assess air quality and noise level in their place of residence [2, 4], while online surveys [5] and other urban studies (e.g. the acoustic map of Lublin) confirm a significant spatial variation with regard to these phenomena.

Qualitative research [1, 3, 5b] provides a more in-depth picture of Lublin's weaknesses and shortcomings. During the interviews, many respondents struggled to name the city's weaknesses [1]. Slightly more often, the issue of weaknesses was raised during public consultations conducted in residential areas [3], and in the online survey [5b], the issue of shortcomings that respondents perceive in the city was raised. In general, however, the themes present in these reports seem to be similar.

The most frequently indicated disadvantage of Lublin was the situation of the labour market. Respondents pointed out the insufficient number of attractive job offers (especially for young people), low wages and a lack of career opportunities, linking this situation to the outflow of young people from Lublin. Younger respondents often pointed also to the unfavourable ratio of salaries and related creditworthiness to housing prices.

The second area where residents made a number of critical comments concerned the spatial development



of the city. Residents pointed out that the new housing estates were too densely developed, ever more condensed construction, large-format shops in the city centre and enclosed housing estates. In their opinion, some of the buildings do not fit in with their surroundings and the rapid urban development is not matched by the expansion of infrastructure. Concerns were very often expressed about the shrinking amount of green spaces and insufficient greenery in the city centre. They also pointed to specific areas in need of regeneration – most frequently the former PKS bus station, the area around the railway station and Zemborzycki Lake.

When asked about the disadvantages of living in the city, respondents also pointed to the infrastructure, which still requires numerous modifications and renovations. The comments concerned road, bicycle, sidewalk, parking and station infrastructure. They also complained about the decrease in frequency of public transport and traffic jams in the city centre.

Other, less frequently indicated problems or concerns included smog, lack of sports and recreation facilities in certain districts further from the centre, poor promotion of the city, a limited number of flights from the airport and the low position of Lublin's universities in national rankings.

### Social development of Lublin – status and perspectives

#### The context of contemporary concepts and trends

Social development is one of the three pillars of sustainable urban development, alongside economic and environmental ones. Social development is in the focus of most of the UN *Agenda 2030* sustainable development goals, such as eradication of poverty and hunger, good health, quality of life, decent work and reduction

of inequalities. The special role of cities in achieving sustainable development goals is reflected in the formulation of goal 11 in the Agenda: Sustainable cities and communities, which calls for making cities and human settlements safe, stable, sustainable and inclusive. Tasks pursuing this objective should be oriented towards ensuring high accessibility of housing and basic services, affordable and sustainable transport systems, security and safety, as well as improving social inclusion and participation, protection of cultural heritage. The way these tasks are implemented should take into account gender equality and the needs of vulnerable groups. It should also be noted that both *Agenda 2030* and the UN's *New Urban Agenda* related to goal 11, Habitat III, draw attention to the need for an integrated approach to urban development – that is, integrating social, economic and environmental development, including spatial aspects.

The need for cities to meet the goals of the global *2030 Agenda* has also been highlighted in the *Urban Agenda for the EU*, including the *New Leipzig Charter* approved in 2020. The scope of the EU agenda includes establishing partnerships in such areas of social development as housing, urban poverty, inclusion of migrants and refugees, safe public space, culture and cultural heritage. It is also worth pointing out the social consequences of digital transformation and the impact of technological change on jobs and skills and mobility in urban areas.

The *New Leipzig Charter* emphasises that one of the three dimensions of a European city should be a fair city – providing equal access for all inhabitants (regardless of gender, socio-economic status or age) to education, social services, health care, culture or other basic public services. Affordable and safe housing resources and socially balanced, diverse and safe districts are also part of this vision. Ensuring and enhancing quality of

life should be realised on three spatial levels: district, city and functional area.

Many of the above issues and challenges have been identified in existing and forthcoming national strategic documents. However, in national strategies, attention may be drawn to issues that are particularly relevant to the current situation in Poland. The *Strategy for Responsible Development until 2020 (Strategia na rzecz Odpowiedzialnego Rozwoju do Roku 2020 [z perspektywą do 2030 r.]*) or the *National Urban Policy 2030 (Krajowa Polityka Miejska 2030)*, which is under preparation, draw particular attention to the effects of depopulation and the growing group of elderly people. It is worth noting that demography and population flows were also one of the two key axes (besides adaptation to technological progress) in the analysis of long-term development scenarios of Lublin carried out in the *Foresight Lublin 2050* project.

Apart from this fundamental social issue, national strategic documents and public policies attach great importance to the situation of families, child care and reconciliation of professional and family obligations, development of skills and lifelong learning, solving crisis situations in families (including counteracting violence), the situation of persons with disabilities or barriers to social inclusion, social participation, and, with regard to urbanised areas, the effects (also social ones) of suburbanisation.

#### City benchmarking

The presented development trends and the review of methodologies for the measurement of social development and quality of life used by Eurostat, OECD and Statistics Poland (Główny Urząd Statystyczny – GUS) provided a point of reference for the selection of

18 social development indicators for Lublin. For the purposes of the diagnosis, it was assumed that the analysis should have a comparative nature and present Lublin's position in comparison with all other voivodeship cities, which means that comparable data from public statistical sources should be used.

Figures 1a and 1b (the so-called box-and-whisker diagrams) present a synthetic description of Lublin's position in terms of social development in comparison with other voivodeship capitals in Poland. The 100% level for each indicator is the median (middle value) for 18 voivodeship cities. The box covers half of the cities with relatively minor deviations from the median (i.e. between the 1<sup>st</sup> and the 3<sup>rd</sup> quartile), the whiskers – the distance to the cities with the highest and the lowest values of the given indicator, and the dot – the position of Lublin. The first chart includes 8 indicators whose low values are generally considered more favourable from the perspective of social development or whose high level indicates the need for increased intervention by public authorities. The second chart includes 10 statistics for which high scores are more desirable.

Generally speaking, Lublin is characterised by an above-average level of social development in comparison with other voivodeship cities in Poland. The city is one of the leaders in the field of health care (2<sup>nd</sup> in Poland in terms of the number of medical practitioners per 10 thousand people, 3<sup>rd</sup> in terms of the number of hospital beds and 8<sup>th</sup> in terms of the accessibility of clinics) and safety (17<sup>th</sup> in terms of the number of crimes and 6<sup>th</sup> in terms of offender detection). Good results (i.e. below the median in the top graph and above the median in the bottom graph) concern poverty (relatively low expenditure on social assistance per capita) and income inequality (low Gini coefficient). Moreover,

Lublin is characterised by a high human and social capital (a high percentage of people with higher education<sup>4</sup> and a large number of non-governmental organisations), relatively good accessibility of nursery care and young population, as compared to other cities. The role of the leading academic centre of Eastern Poland positively influences both the human and social capital of the city, as well as the age structure of its inhabitants. The indicated areas represent Lublin's strengths and at the same time potential for further strengthening of social and economic development of the city – on condition that proper care is taken of further development of those advantages and underlying resources.

The indicators presented allow Lublin's weak points to be identified. An unfavourable situation in comparison with other voivodeship cities (results above the median on the upper graph and below the median on the lower graph) is observed with regard to salaries (12<sup>th</sup> position) and the divorce rate (6<sup>th</sup> position). It should be emphasised that the improvement in salaries and the situation of families can only constitute an indirect, though important, tool for influencing of the local socio-economic policy.

Lublin is also characterised by a low availability of flats (measured by the ratio of the average remuneration to the average price per 1 m<sup>2</sup> of flats sold), with one of the higher prices per 1 m<sup>2</sup> (6<sup>th</sup> result) and a low usable apartment floor area per 1 person (13<sup>th</sup> result). The most difficult situation (in comparison to all the cities) concerns the problems in the labour market: high share of long-term unemployment (2<sup>nd</sup> result in the country) with an above-average unemployment rate in general (4<sup>th</sup> position) and the percentage of young people

registered as unemployed (2<sup>nd</sup> position); when interpreting these results, however, one should take into account the still low (at least by the end of 2020) unemployment rate in the national labour market, especially in the labour markets of strongly urbanised areas. Increasing the availability of employment and housing depends largely on the market situation; however, the local government does have the tools to positively influence the development in these areas, therefore the improvement of the housing situation and employability of the unemployed should rank high among Lublin's development priorities. This postulate seems all the more important considering both the economic downturn during the pandemic, which will materialise in the labour market in the nearest future, and the continuing strong growth of prices in the housing market.

Average results (levels close to or equal to the median) concern the availability of places in kindergartens, expenditure on culture and engagement of residents in artistic groups, clubs and sections, as well as the death rate of people under 65. The first reading may indicate the need to intensify activities in the area of strengthening both the cultural sector and participation in culture or – more broadly – social capital. It seems, however, that due to the difficulties in capturing the cultural potential within measurable indicator frameworks, conclusions for the Strategy should be based more on the results of qualitative analyses, treating statistical data as a secondary, albeit helpful, source of information. On the other hand, the average mortality result may be due to a number of reasons, yet, it may be assumed that given the higher quality of healthcare than in other cities and the high level of

<sup>4</sup> According to data from the Labour Force Survey of voivodeship cities for 2017–2020, Lublin ranks 4<sup>th</sup> in terms of the percentage of residents with higher education in the working population.

education, an improvement in the material situation of the inhabitants and the state of the environment may contribute to a decrease in mortality.

A more complete picture of the social development of Lublin is provided by the analysis of the changes in the values of the indicators over time. Comprehensive summaries of data are provided in the reports presenting the progress: *Lublin 2020 Strategy – Reports on the State of the City of Lublin (Strategia Lublin 2020 – Raporty o Stanie Miasta Lublin)* [8] and in cyclical reports entitled *How is Lublin developing? (Jak rozwija się Lublin?)* [9]. When analysing the dynamics of the indicators related to the subject scope of the diagnosis (parts A.3, B.2, B.4, B.5, B.6 and D.4 of the study) it can be observed that favourable trends in the period of the *Lublin 2020 Strategy* were noted for 69% of quantitative data, the trends of every ninth indicator changed in an undesirable direction and in the case of 19% data deficiencies or the nature of the indicator made it impossible to make an unambiguous assessment.

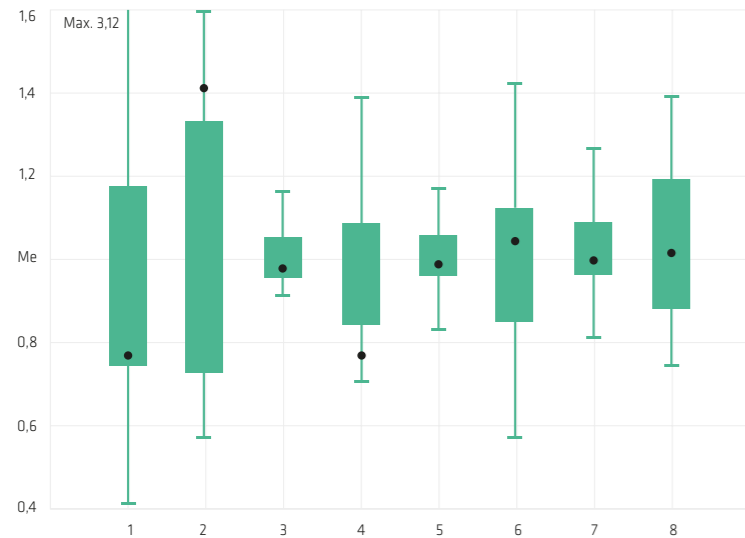
It appears, however, that a more reasonable approach would be to assess the development tendencies in relation to other Polish cities. A number of positive social changes observed in Lublin had their source in national or even more widespread processes, such as a good economic situation, new social transfers or the availability of EU funds. However, these conditions affected Polish cities with different intensity and the degree to which they were used was to a large extent shaped by local factors, including the quality of development policy. The formulation of assessments on the basis of such benchmarking is possible for 15 out of 18 indicators presented in Fig. 1a and 1b – those for which data for a sufficiently long time series (7–9 years) are available.

Lublin has improved its position in the ranking of cities in terms of 6 indicators and moved down in

the case of 9 indicators. The improvement concerns poverty, long-term unemployment, recorded crimes and their detection rate, membership in groups, clubs and sections as well as the number of places in crèches. The worsening of the position in the ranking of cities concerned the age structure of the population, the number of divorces vs. the number of marriages, cultural expenses, the number of children per one place in kindergartens, deaths of under 65s, the amount of salaries, the number of foundations, associations and social organisations, the number of medical practitioners and clinics; for the last two indicators, though, Lublin retained its leading positions. Such tendencies support the conclusions formulated above about the need for an active local economic policy, which may contribute to an improvement in the wage dynamics and to intensified pro-family and pro-health activities. Due to the occurrence of favourable external effects, it will also be desirable to improve Lublin's position in terms of rational spending on culture and stimulating the activity of the third sector.

An unfavourable demographic forecast until 2030 – indicating a decrease in the number of inhabitants from 340.7 thousand in 2015 to 322.6 thousand in 2030, with a simultaneous growth in the proportion of people aged 65+ from 17.6% to 24.6% – merits a separate comment. The scale of the projected decline in the number of residents is relatively strong compared to other cities, but the actual number of Lublin residents has turned out, at least until 2020, to be higher than predicted. The current data indicate an average situation of Lublin compared to other cities, both in terms of natural growth (9<sup>th</sup> position) and migration balance (8<sup>th</sup> position). It is worth mentioning that Lublin's position in terms of natural growth has deteriorated in recent years, while in terms of migration balance it has improved. Irrespective

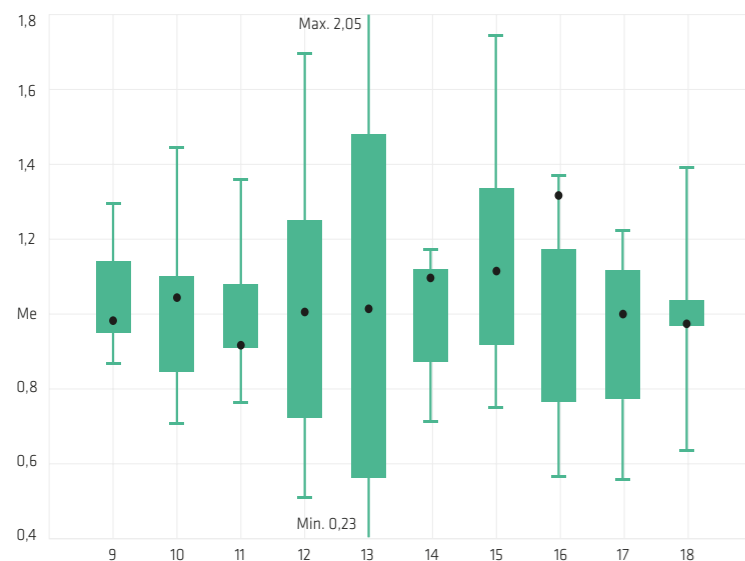




Legend: 1. Expenditure on social assistance – benefits to individuals, per capita. 2. Percentage of unemployed for more than 12 months. 3. Gini coefficient. 4. Crimes recorded by the Police per 1,000 inhabitants. 5. Percentage of persons aged 65 and over in the total population. 6. Ratio of the number of divorces to the number of contracted marriages. 7. Children aged 3–5 per one place in pre-school education establishments. 8. Deaths of persons aged up to 65 per 1,000 population in this age group. 9. Average gross monthly salaries. 10. Foundations, associations and social organisations per 10,000 inhabitants. 11. Housing affordability (ratio of average monthly salary to average price per square metre of housing units). 12. Expenditure on culture and protection of national heritage (budget heading no. 921). 13. Members of artistic groups, circles, clubs and sections per 1,000 inhabitants. 14. Crime detection rate. 15. Places in crèches and children's clubs per 1,000 children under 3 years old. 16. Doctors working according to their main place of employment per 10,000 population. 17. Clinics per 10,000 population. 18. Population forecast of municipalities in 2030 by Statistics Poland (as % of the population in 2020).

Notes: data for 2020 except for indicators no. 3, 7 (data for 2018), 6, 11–13, 16 (data for 2019).

Source: Own compilation based on Statistics Poland data.



Figures 1a and 1b

Lublin's position against other voivodeship cities in terms of selected indicators of social development

of the situation with regard to other provincial cities, it should be stressed, however, that Lublin – similarly to the majority of large cities in the country and the regions of Eastern Poland – may experience the process of ageing and depopulation, which is one of the greatest challenges for public policies.

### Findings of expert teams

While the index analysis shows Lublin's position in relation to other cities, a more in-depth, quantitative and qualitative social diagnosis of Lublin was conducted by experts and interested parties of the area, first during the work on the *Strategy for Solving Social Problems of the City of Lublin 2021–2030 (Strategia Rozwiązywania Problemów Społecznych Miasta Lublin 2021–2030)* [6], and then – during the work of Thematic Working Groups [7].

The long-term aim of the Strategy is to integrate individuals and families from vulnerable groups and, consequently, to maintain or improve social cohesion and reduce areas of social exclusion. The document includes a diagnosis of eight interrelated directions of intervention: families with children, foster care, seniors, health and prevention, people with disabilities, the unemployed, social and living safety and prevention of domestic violence. The scope of this intervention is to a large extent determined by the shape of the obligatory own tasks defined in legal acts.

As far as the situation of families with children is concerned, Lublin's strengths include i.a. the quality of social services staff and good identification of problems, the development of childcare places for children up to 3 years of age and of the network of pre-school education institutions in recent years, the variety of forms of assistance offered to families experiencing difficulties and the effectiveness in obtaining external

funding. Weaknesses identified included the insufficient number of places in public nurseries and kindergartens (especially in certain districts) and long waiting times for specialist psychological assistance for families in crisis. Risks connected with the pandemic and its socio-economic consequences, as well as with contemporary social changes affecting the breakdown of bonds within the family, were also identified. Attention should be paid to risks associated with inflation and the increasing cost of living for families, as well as the professional burnout of social service workers. Measures in this area should therefore consist in developing a complementary and effective system of support for families with children, e.g. by taking measures aimed at maintaining the social and living standard of families, development of childcare places for children up to 3 years old, development of a system of allowances and discounts for families with many children, development of the offer of spending free time for children and young people, as well as strengthening preventive, therapeutic and intervention measures. A characteristic feature is the multiplicity of entities implementing tasks in this area of intervention, which requires the coordination of information exchange and strengthening of cooperation between institutions.

As regards foster care, recommendations formulated on the basis of the diagnosis concerned increasing the number of professional foster families, ensuring adequate financial and non-financial support for foster families and the development of training. The recommendations also emphasised the need to supplement the institutional system of foster care with, among others, a specialised therapeutic institution, and to maintain the existing support for people who become independent. An opportunity for the development of the foster care system may be the great potential of

non-governmental organisations and the possibilities of acquiring financial resources from external sources.

Lublin's senior citizen policy, which has been developed in recent years and is characterised by a large number of innovative actions, a wide range of leisure time activities and intergenerational initiatives, the creation of institutional solutions and a well-developed network of cooperation between various entities, constitutes a strong point of Lublin. The weaknesses identified relate to the flow of information about the cultural offer, digital exclusion of seniors, and the accommodation base (e.g. activity centres for seniors or community centres). Against this background, the improvement in the quality of life of seniors is to be achieved by, among others, shaping a positive image of seniors and the perception of old age in society, supporting seniors' social activity, development of senior social services (e.g. telecare, home care points, volunteer and neighbourhood assistance, psychological support) combined with a system of information about these services, promotion of healthy lifestyles and active ageing, as well as initiatives in the field of intergenerational integration. Strategic measures should increase the sense of security of seniors at various levels, and in the context of a pandemic – especially at the level of health. In connection with demographic changes, forms of care for seniors and people requiring round-the-clock support should also be developed, e.g. through the use of social welfare homes.

The diagnosis in the field of health and prevention indicated the growing importance of this area resulting from the ageing society, the growing number of people struggling with various mental disorders, and threats to health security, exemplified by the ongoing COVID-19 pandemic. Lublin's strengths include experience in the implementation of numerous preventive

health actions, the involvement of the city's educational institutions, a developed infrastructure and organisation of support for people with mental disorders, a large number of active non-governmental organisations and interinstitutional cooperation, as well as a developed network of medical institutions and the presence of the Medical University of Lublin. Weaknesses include the lack of a sports base, especially in housing estates, and insufficient subsidies for sports clubs. The priority for local government initiatives, complementing the activities of the National Health Fund or health programmes run by other entities than the city, should be the improvement of the health of the city's inhabitants through health promotion and prevention, with particular emphasis on the prevention of addictions.

In Lublin, people with disabilities can use a wide range of services provided by municipal institutions specialising in this area. The strengths of the support system are its qualified staff, the wide range of educational institutions (although there is no centre providing comprehensive support for children and young people with disabilities) and the effectiveness in obtaining external funding. Other important achievements of Lublin are the information system dedicated to various stakeholders in the area, the openness of city institutions to the problems of people with disabilities or the implementation of innovative programmes, and the accessibility of public transport and individual transport for people with disabilities and their carers. The weaknesses of the existing support system are the low availability of respite care for carers, the poor offer of activities for children and young people in the summer holidays, the underdeveloped e-services and the amount of funds for staff training. The city also suffers from insufficient accessibility of urban spaces, including public buildings and the lack of a centre providing

comprehensive educational, remedial and rehabilitation support for children and young people with disabilities. The diagnosis also identified the potential for development of this area through new sources of funding and programmes and the involvement of NGOs. Against this background, the priority for local government social policy should be to ensure that Lublin residents with disabilities have access to different spheres of life, for example by improving the accessibility of public space or places of residence, further implementation of the principles of universal design, and implementation of housing policy dedicated to the needs of people with disabilities. Priority has also been given to actions creating opportunities for occupational and non-occupational activity, improvement of the system of services (including educational services) dedicated to people with disabilities. Attention was also drawn to the need to develop the infrastructure of social support (both local government and non-government organisations), to develop a system of support for carers and to carry out activities aimed at raising the level of awareness of the society and building a positive image of a person with disabilities. Due to the large number of entities implementing various tasks, special attention should also be paid to strengthening intersectoral cooperation and local partnerships.

The system of support for the unemployed, mainly regulated by the provisions of the Act on Employment Promotion and on Labour Market Institutions (Ustawa o promocji zatrudnienia i instytucjach rynku pracy), offers a wide range of labour market services and instruments implemented through the Municipal Labour Office in Lublin (MUP). Lublin's strengths include high employment effectiveness of activation forms offered by the MUP, individualisation of work with the unemployed, experience in obtaining and implementing

projects financed from external resources and a developed network of cooperation with representatives of the local environment, including employers. The most important weaknesses identified include: a high percentage of the long-term unemployed, a large share of the unemployed with higher education and young people, as well as their low occupational mobility. On the basis of the diagnosis the priorities of the activities of the local government included among others increasing the employment opportunities of the unemployed (especially the young and long-term unemployed), increasing professional qualifications and professional development opportunities of the unemployed in a particular market situation, supporting entrepreneurship, promotion of continuing education and development of cooperation with the local community.

In terms of ensuring social and welfare security, the strengths of the institutional support system in the city are the experienced staff of social services, the variety of forms of the support provided, the efficiency in obtaining funds from external sources, the system of helping the homeless and foreigners, and the main weakness – the small number of flats in the housing resources of the Lublin Municipality. A significant threat to social and health security are the consequences of the still ongoing COVID-19 pandemic. The recommendations formulated on the basis of the diagnosis concerned providing material support (through social work and benefits) to people in a particular material and living situation, strengthening activities aimed at overcoming the problem of homelessness and organising systemic activities for foreigners, with particular emphasis on integration activities. Attention was also drawn to the need to improve the mechanism of monitoring social needs and greater emphasis on building local partnerships, including cooperation with NGOs.



The last line of intervention identified in the strategic document is counteracting family violence. The strengths of the institutions operating in this area were indicated as experience in the implementation of projects financed from external funds, educational and preventive activities, a large number of support institutions and a wide range of specialised assistance activities, the possibility of providing 24-hour places to stay in support centres and other forms of 24-hour assistance. The weaknesses included problems with cooperation between various entities under the Blue Card procedure and the lack of a system of supervision to support people working with victims of violence. Attention was also drawn to the still insufficiently understood impact of the pandemic on the phenomenon of intrapersonal violence, or more broadly – on crisis situations, as well as barriers resulting from imprecise legal regulations in the field of violence prevention. In order to improve the effectiveness of counteracting violence and solving crisis situations of families in Lublin, it was pointed out that it is necessary to strengthen the preventive measures and social education, to intensify the activities in the field of protection and assistance given to persons affected by family violence, as well as to increase the effectiveness of actions against the perpetrators of violence.

The *Final Report of the Thematic Working Groups* [7] is a document containing diagnoses of different areas of social development. The most relevant are the results of the groups' work regarding the socially sensitive city and education, and to a large extent also the groups on culture and creative industries, good neighbourhood, sport and academia.

In the area of the socially vulnerable city, the group's attention was focused on the quality of life and well-being of social groups particularly at risk of exclusion

or marginalisation. Strengths mentioned included the Lublin City Office's programmes for senior citizens and people with disabilities as well as the growing grass-roots activity and operation of third sector organisations. The weaknesses included the lack of a systemic policy and activities for the inclusion of disadvantaged groups (the activities realised are often incidental, limited in time and/or territory). A number of procedural and infrastructural deficiencies were also diagnosed, which do not allow the fully free functioning of selected social groups, including persons with disabilities, the elderly, national minorities, LGBT+ persons and others. The recommended activities include: implementation of an anti-discrimination and anti-violence education programme, introduction of social clauses in planned investments (principles of universal design), implementation of a social sensitivity, cohesion and diversity policy plan, development and implementation of a plan to create places and generational integration and the development of health policy programmes targeting the most common diseases in the Lublin area.

The strengths of culture in Lublin were indicated as the large participation of Lublin residents in culture and the high status of culture in the city's strategic documents, as well as strong cultural institutions and well-known festivals, the presence of universities and a strong creative community, the diversity of activities and high recognition of Lublin's culture. Among the weaknesses, issues like under-financing of culture, low salaries and the difficulty faced by young artists to make a name for themselves were pointed out very often. The lack of institutions acting as centres in a given field, the absence of an artistic university and the insufficient (although increasing in recent years) level of cooperation between various cultural entities, were considered as problematic. The recommended

directions of action include the strengthening of under-represented directions of cultural activity as an indicator of the city's metropolitan character (e.g. contemporary art, activities using new technologies), adapting the cultural offer to different groups of recipients with difficult access, strengthening the existing entities creating culture and creating new ones, maintaining balance between various cultural events of supralocal and local or district reach, establishing the Lublin Culture Observatory, and increasing funds allocated to competitions for NGOs and grants.

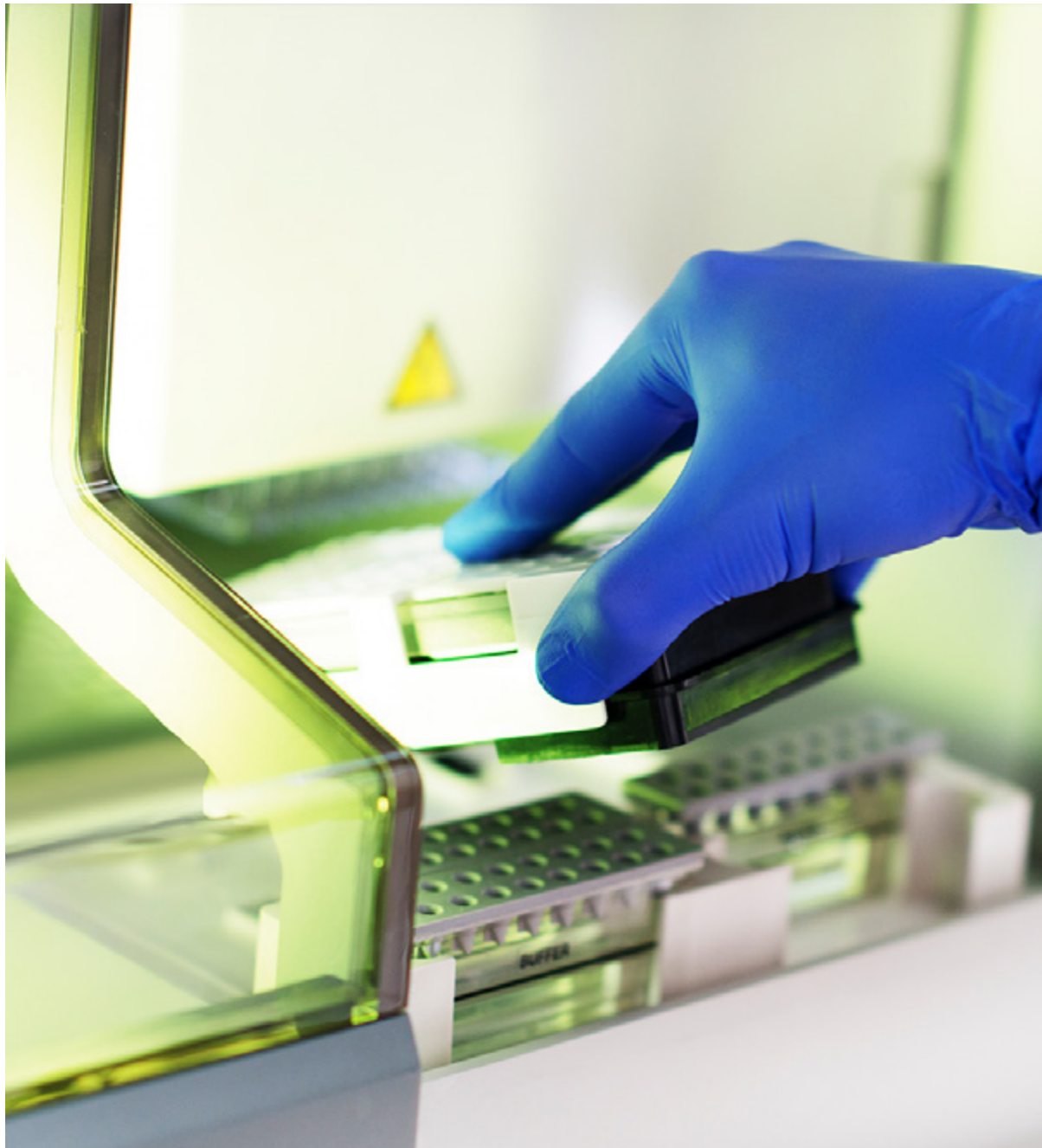
Some discussions related to the social function of schools and the recommendations formulated concerned the training of social and civic competences of students, synergy of education with the city's social environment, education towards tolerance and integration, or safety at schools. It should also be emphasised that the conclusions from the diagnosis and the recommendations concerning education contained in the economic diagnosis are important not only for economic, but also social development.

Some findings in the area of good neighbourhood, which integrate various topics concerning the immediate environment. Social development includes such postulates as the creation of places for meetings, activity and self-help which are accessible and co-organised by the inhabitants, local co-creation of the nearest neighbourhood by the residents, and increasing the availability of housing, e.g. by introducing instruments for non-developer housing supply.

Some of the findings in the area of sports also covered issues important for social development and the quality of life of Lublin residents. The city's strengths in this area include the increased number of sports facilities, making a good use of the existing city infrastructure, increasing the physical activity of

residents, implementation of various sports projects and cooperation between various sports-related entities. On the other hand, the weaknesses identified included a shortage of qualified coaching staff (particularly in some areas), inadequate school sports facilities and the poor accessibility of some facilities to residents. At the same time, with regard to infrastructure, the need for its further development and more even distribution in neighbourhoods was pointed out, with the participatory process of sport development in Lublin strengthened. Priority was given to the improvement of sports infrastructure around Zemborzycki Lake and activities aimed at increasing the number of children and young people taking part in sports. It is worth emphasising that the diagnosis developed by the experts and the in-depth recommendations in this area cover many aspects related to professional and academic sport, financing and management of sport that should be included in the form of a sectoral strategy.

One of the themes discussed in the academic-quality area concerned the positive influence of universities on the development of the city and its inhabitants. The strengths of Lublin in this area included the involvement of students in the cultural life of the city, the scientific, organisational and cultural potential of the university, and the various projects of the university aimed at schools and residents. The chances of winning the title of *European Youth Capital 2023* were also highlighted, as well as the need for the universities (also students themselves) to be more involved in interaction with society, the Lublin City Office and other institutions (e.g. cultural ones), and better promotion of existing initiatives.



## Economic diagnosis

### What does the economic diagnosis of Lublin cover?

This part of the document is a synthesis of results and recommendations of a comprehensive economic diagnosis of Lublin. The first major component of this diagnosis is specialist studies and the report *Economic Specialisations of Lublin – In the New European System of Economic Interdependence (In the Perspective until 2030)* [10]. It is complemented by the monograph *Lublin 2030 – A European Metropolis?* [11] published in 2018, which plays the role of both a mid-term evaluation of the Lublin 2020 Strategy and a prospective economic diagnosis of Lublin in the perspective until 2030. The third element was the conclusions from the diagnoses included in the Final Report from the work of the Thematic Working Groups [7]. As in the case of the social diagnosis, this pillar of the diagnosis is complemented by the analyses included in the local government reporting documents: *Report on the State of the City of Lublin for 2020* [8] and periodical reports entitled *How is Lublin developing?* monitors the implementation of the Lublin 2020 Strategy [9].

The second pillar of the economic diagnosis is the findings from social research and participatory activities. The diagnosis is based primarily on the findings of 90 interviews conducted by Lublin City Office employees with entrepreneurs and managers of companies and local business support institutions [12], and 15 individual in-depth interviews conducted with managers of large enterprises, entrepreneurs from IT and creative industries, owners of innovative start-ups, small local companies and people running their own businesses [1].

The third major component of the diagnosis is a synthetic review of economic development trends identified in European and national strategic documents and benchmarking showing economic potential and financial standing of Lublin in comparison with a group of voivodeship cities in Poland.

The way of combining various sources, research approaches and perspectives of many stakeholders and experts is a creative adaptation of the process of entrepreneurial discovery of territorial capital of the city – an approach recommended by the European Commission to create a strategy of smart specialisations RIS3, which is a central element of the contemporary regional innovation policy of the EU.



### Economic development of Lublin – state and perspectives

#### Context of contemporary concepts and trends

Economic development is one of the three pillars of sustainable urban development, alongside social and environmental development. Moreover, nowadays, the interdependence of those pillars is being increasingly emphasised – which is reflected both in changes in the way economists think about economic growth (e.g. the idea of post-growth, concepts of inclusive growth, eco-development, sustainable development) and in the political agenda, such as the UN *Agenda 2030*. Its goals include promoting stable, sustainable and inclusive economic growth, full and productive employment and decent work for all, as well as building stable infrastructure, promoting sustainable industry and supporting innovation. The change in thinking about economic development can also be seen in the formulation of targets for responsible consumption and production. Furthermore, the Agenda points to the need to provide quality education and promote lifelong learning and reduce social inequalities. Also, the Agenda's Objective 11 dedicated to cities (sustainable cities and communities) is a manifestation of an integrated approach to urban development – that is, integrating social, economic and environmental development, including spatial aspects.

The need for cities to achieve the *2030 Agenda* goals is also highlighted in the *Urban Agenda for the EU*, including the *New Leipzig Charter* approved in 2020. The scope of the EU agenda includes building partnerships in areas of economic development such as jobs and skills

in the local economy, or digital transformation. Further economy-related partnerships – the circular economy and energy transition – are addressed in the conclusions of the spatial diagnosis, which integrate environmental issues. The *New Leipzig Charter* emphasises that one of the three dimensions of European cities should be the productive city – whose transformative power is based on a diversified economy providing jobs and a financial basis for balanced urban development. The paper points out that cities can become attractive, innovative and competitive business locations with a skilled workforce, infrastructure and affordable and transportable space. It highlights the need to create and promote multi-functional neighbourhoods with small businesses and low-carbon emission. A lot of attention was paid to digitisation – its potential to provide high-quality public and business services in cities and its key role in building the competitiveness of the EU economy as a whole. It is worth noting that digitisation and respect for the environment are (together with innovation and a skilled workforce) key areas of the New Industrial Strategy for Europe adopted by the EU. Also the *European Commission's Foresight*<sup>5</sup> or the *Foresight Poland 2035* by the Polish Economic Institute<sup>6</sup> emphasise both the need to increase the resilience of supply chains and the economy to various shocks and the importance of environmental challenges as well as opportunities and threats resulting from the high pace of development of technology and the digital economy.

A similar line of thinking about economic development can also be seen in the most recent national strategic documents – especially in the *Productivity Strategy*

<sup>5</sup> C. Cagnin, S. Muench, F. Scapolo, E. Stoermer and L. Vesnic Alujevic, *Shaping and securing the EU's Open Strategic Autonomy by 2040 and beyond*, Publications Office of the European Union, Luxembourg 2021.

<sup>6</sup> K. Dębkowska, U. Kłosiwicz-Gorecka, A. Szymańska, P. Ważniowski, K. Zybortowicz, *Foresight Poland 2035. Experts on the future through the prism of pandemics*, Polish Economic Institute, Warszawa 2020.

*2030 (Strategia Produktywności 2030)* or the *National Recovery Plan (Krajowy Plan Odbudowy)*. In turn, the process of developing the *National Urban Policy 2030 (Krajowa Polityka Miejska 2030)* emphasised the need to coordinate economic development and investments in metropolitan areas, attracting and retaining human capital (including foreigners) and changes in city financing.

The above postulates should also inspire the *Lublin 2030 Strategy*, but it is worth supplementing them with the context of the contemporary, territorially oriented regional policy. If the economic development strategy of Lublin is to draw on its best practices, the first step should be a diagnosis of the territorial capital resources of the city – tangible and intangible resources belonging to its territory (endogenous), which determine the potential and competitive advantages of the city. Since the decisive growth factors in the modern economy are knowledge and innovations, intangible resources are of key importance. An alternative approach to stimulating local economic development is characterised by broadening the basis for economic development – today it is not enough to invest in technical infrastructure, a well-functioning subsidy system of supporting small and medium enterprises or even the inflow of foreign investors to achieve sustainable economic success of a city. The local economic development strategy should above all create and support an environment conducive to innovation and ambitious entrepreneurship. The strategy should therefore be characterised by a focus on the business environment as a key factor in economic competitiveness of the area – which has been at the heart of such recognised approaches as the concept of industrial districts, clusters, learning regions, regional innovation

systems, or the currently developed concepts of entrepreneurship ecosystems and innovation ecosystems.

Today, saying that cities are centres of innovation creation, development of entrepreneurship and economic growth, seems no longer controversial. Drawing on research to date, the authors of the report [10] state that cities are perceived as systems generating innovations due to the fact that they offer proximity, density and diversity to provide an optimal environment for processes of creation and diffusion of new knowledge. The impact of the urban environment on innovation processes can be twofold. On the one hand, urban centres constitute a reservoir of specific tangible and intangible resources (e.g. technical infrastructure, intellectual property resources, human capital), which are necessary for the implementation of innovation processes. On the other hand, the urban environment offers innovators access to specialised formal and informal networks and institutions, which can be of key importance in different phases of the innovation process, starting from the stage of idea generation and ending with the stage of commercialisation and diffusion of innovation.

In the context of Lublin, it is worth noting that city size may not play such a significant role in its economic development prospects as it is commonly believed. Unlike in the USA or Asia, among the cities of Western Europe, large metropolises are not characterised by a significant advantage over smaller urbanised areas, neither in terms of population growth nor the dynamics of productivity or change in the contribution to economic growth.<sup>7</sup> Explanations for these trends can be found in both the problems encountered by large cities and the growing strengths of smaller urban areas.

<sup>7</sup> L. Dijkstra, E. Garcilazo & P. McCann, *The economic performance of European cities and city regions: Myths and realities*. *European Planning Studies*, 21(3), 2013, pp. 334–354.

In larger metropolises, for instance, transport disruption, noise, lower safety levels, rising property prices or environmental pollution create obstacles to benefiting from agglomeration effects. Smaller cities experience these negative effects on a much lesser scale, yet, they can provide access to high-quality social services (education, health care, culture) and – which is particularly important in Western Europe – they are increasingly better connected with other cities.<sup>8</sup> From this perspective, the current population potential of Lublin and the Lublin Metropolitan Area should not be seen as a barrier to the benefits of agglomeration and the development of its innovative and economic potential, and the development prospects of the Lublin agglomeration depend more on the local territorial capitals, the quality of management and the connections with other cities than on Lublin's position in the settlement hierarchy of national metropolises.

### City benchmarking

The presented development trends and a review of local economic development indicators used in economic literature provided a reference point for selecting 14 development indicators. As in the case of the social diagnosis, it was decided that the analysis should be comparative and reflect Lublin's position in relation to all voivodeship cities, which implies the need to use comparable data from public statistical sources.

Figures 2a and 2b (the so-called box-and-whisker diagrams) present a synthetic description of Lublin's position in terms of economic development and the finances of the local government compared to other provincial capitals in Poland. The 100% level for each indicator

represents the median (central value) for 18 voivodeship cities, the box covers half of the cities with relatively small deviations from the median (i.e. between 1<sup>st</sup> and 3<sup>rd</sup> quartile), the whiskers – distances to the cities with the highest and lowest values of the indicator, and the dot – the position of Lublin. The first chart presents 4 indicators for assessing the financial management of the local government. The second chart includes the results of 10 indicators of the local economy development whose high values are generally considered more favourable.

Generally speaking, Lublin's economic situation (Figure 2b) is average in comparison with other voivodeship cities in Poland: the values of five statistics are above the median, four are below and one is at the median level. Lublin is distinguished by very good results in the quality and quantity of its human capital, measured by the percentage of adults participating in life-long learning (3<sup>rd</sup> position in the country), the number of university graduates per 1,000 inhabitants (5<sup>th</sup> position) or the secondary school graduation results (6<sup>th</sup> position). The potential of Lublin in comparison with other cities was also maintained in earlier years. The advantage of Lublin in terms of human capital is also confirmed by more comprehensive analyses and its maintenance and strengthening in the following years is considered a necessary condition for the acceleration of economic development and the development of Lublin's metropolitan functions [11]. The number of people employed per 10 thousand inhabitants in Lublin is equal to the median and gives the city the 10<sup>th</sup> position in the group of provincial cities. The poorer result of Lublin in this aspect should be explained not so much by the

<sup>8</sup> Connectivity with other metropolises should be understood not only in terms of transport accessibility, but more broadly as the development of functional links enabling the flow of various resources, including intangible ones.

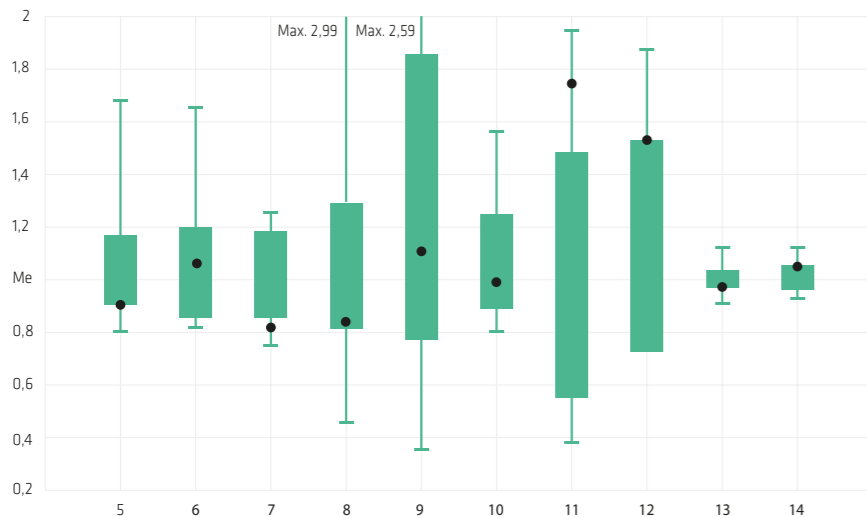
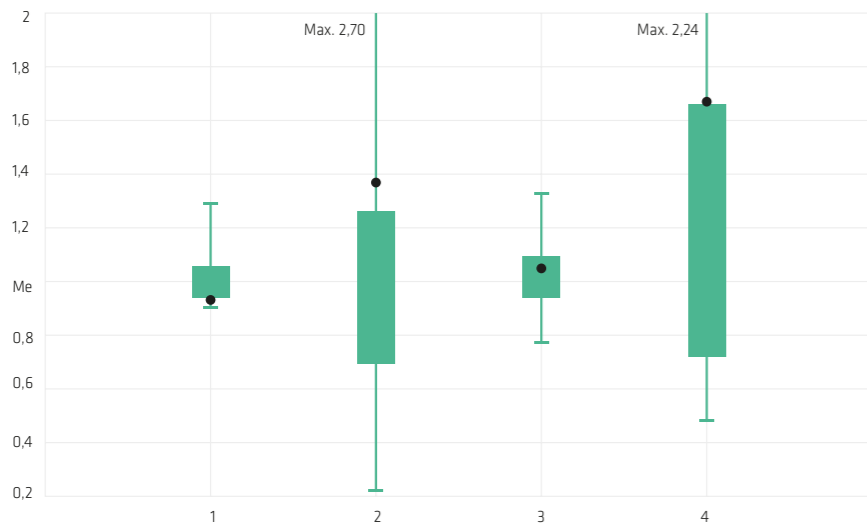
supply-side barrier on the labour market (i.e. insufficient number of economically active people or, in particular, lower quality of labour resources), but by weaker creation of new jobs and – in the case of industry – structural mismatches in the professional and qualification aspect [11]. Consistent with this interpretation are also the results of the social diagnosis – relatively low wages and increased unemployment. This diagnosis is important from the point of view of the directions of interventions aimed at improving the situation on the labour market. Support in the form of traditional instruments of active labour market policy should be treated only as assistance for the unemployed who are more distant from the labour market, while increasing employment will be fostered above all by creating an environment conducive to the creation and growth of enterprises and strengthening links between education (in particular vocational schools and universities) and employers.

The city also scores well for industry – the sold production of industry per capita constitutes 110% of the median of provincial cities, which gives Lublin the 8<sup>th</sup> place in this group. It is worth noting that Lublin has clearly improved its position in this aspect in recent years – as recently as in 2012 the production volume per capita in Lublin was lower than the median. At the same time, the production of Lublin's industry appears to be based on activities characterised by relatively low capital intensity, which is indicated by a relatively low level of investment outlays in enterprises. The weaker results in terms of investment expenditures do not, however, give grounds for formulating an unambiguous assessment, as they may indicate not only worse capital endowment of the Lublin companies in relation to their industry competitors, but also a greater significance of those industries which, due to the specificity of the production process, are characterised by lower capital intensity (the so-called composition effect).

The analysis of data on business entities entered in the REGON register provides interesting conclusions. The level of entrepreneurship measured by the number of business entities per 10 thousand population is low in comparison with other voivodeship cities (14<sup>th</sup> place). On the other hand, the assessment of this reading is distorted by the fact that many REGON-listed companies have stopped their business activity. A better measure of entrepreneurship is the number of entities newly registered in the REGON register per 10 thousand inhabitants – whose reading for Lublin is already slightly higher than the median and gives the city the 7<sup>th</sup> position. It is worth stressing that both measures of entrepreneurship show a clear improvement in Lublin's situation in recent years. The data from the register also reveal that the enterprise sector in Lublin is slightly more fragmented than in other cities – the share of medium-sized and large companies is noticeably smaller, and the percentage of micro-entities and sole proprietors is slightly higher than the median. Both such a structure of enterprises and the development path of Lublin's economy so far indicate the validity of the vision of development based on competitive networks of small and medium enterprises operating in business eco-systems rather than on the success of large companies – champions. Against this background, Lublin's poor performance in terms of the number of business environment institutions – BEIS (15<sup>th</sup> position) should be noted. Although the quality of business support institutions is more important for the creation of a favourable environment for the creation and development of enterprises than the number of them, this reading indicates the need to strengthen the institutional system of entrepreneurship support in Lublin.

An important determinant of the implementation of development policy by local governments is their





Figures 2a and 2b

Lublin's position against other voivodeship cities in terms of selected indicators of economic development

Legend: 1. City budget revenue per capita. 2. EU funding for programmes and per capita (2014–2020 average). 3. Share of investment expenditures of municipalities and counties in total expenditures (2014–2020 average). 4. Expenditure in section 757, "Public debt service per PLN 1,000 of total budget revenue". 5. Entities entered in the REGON register per 10,000 population. 6. Entities newly registered in the REGON register per 10,000 population. 7. Business environment institutions per 10,000 national economy entities. 8. Investment expenditures in enterprises per 1 inhabitant (entities with more than 9 employees). 9. Sold industrial output per 1 inhabitant (entities with more than 9 employees). 10. Employed persons per 1,000 inhabitants (entities with more than 9 employees). 11. Adults participating in education or training aged 25–64 (entities with more than 9 employees). 12. Share of graduates of master's degree studies and graduates of second-degree studies in the total population. 13. Pupils per 1 grade in primary schools. 14. Pass rate of the matura exam (after all sessions).

Note: Data for 2020 except indicators 2, 3 (mean value from 2014–2020) and 8, 9, 11–13 (data for 2019).

Source: Own study based on data from Statistics Poland and Regional Examination Commissions (indicator 14).

finances (Figure 2b). Income-wise, the situation of the city is difficult – Lublin ranks 17<sup>th</sup>. A clear deterioration in the income situation occurred in 2019 and 2020, which confirms the higher than in other cities sensitivity of Lublin's finances first to changes in personal income tax and then to the effects of the pandemic.<sup>9</sup> The implementation of ambitious development plans requires adequate revenues of the local government, which – in conditions of progressing erosion of the financial independence of self-government – is extremely difficult to achieve without changing the direction of policy pursued by the central authorities.

Compared to other voivodeship cities, Lublin is characterised by a slightly higher share of investments in budgetary expenses than the median (9<sup>th</sup> position), standing out positively among other cities in terms of the amount of EU funds spent per capita (3<sup>rd</sup> position).<sup>10</sup> Experience in the effective application and use of EU funds is a strong point of Lublin and should be skilfully used in the city management process in the following years, especially in the conditions of low own income level. However, two other threats should be pointed out here. The first is the relatively high indebtedness, which is evidenced by the level of expenditure on servicing the public debt (3<sup>rd</sup> place), which is a consequence of the pro-investment policy in the previous EU financial perspective carried out under conditions of low own income. The availability of EU funding and the need to overcome delays in development, especially in infrastructure, justified such a financial policy of the local government.

At present, however, a scenario in which the existing debt limits and, first of all, the failure to address the issue of low own revenues and the long-standing problem of underestimation of the state budget funds in the form of subventions, will adversely affect the quality of public services and the implementation of investment plans in the new EU financial perspective<sup>11</sup> seems highly probable. The low income of the self-government should be considered one of the main threats to the implementation of the *Lublin 2030 Strategy*.

#### Findings of specialised studies

A more detailed diagnosis of Lublin's economic situation and the city's development prospects is presented in the report on Lublin's economic specialisations [10]. The conclusions from the diagnosis are presented in the following sections: the development of the enterprise sector, Lublin's economic openness, evaluation of existing economic specialisations and the city's economic ecosystem, the innovation support system, and the local economy's resilience to the effects of pandemics. The diagnosis is complemented by the results of the work of the Thematic Working Groups [7], presented in the last part of the conclusions of the economic diagnosis.

As regards the development of the business sector, a multi-criteria evaluation using the TOPSIS taxonomic method was conducted separately for industry, services and knowledge-based sectors. Both in the industry and

<sup>9</sup> A broader analysis of the financial situation of cities in the pandemic era, including the situation of Lublin, is presented in the study: *Zmiany dochodów własnych JST w 2020 roku. Ranking*, Wspólnota, www.wspolnota.org.pl.

<sup>10</sup> Due to strong fluctuations of these two indicators and their relation to the programming period of EU funds, the analysis uses average values of the indicators in the period 2014–2020.

<sup>11</sup> Such a diagnosis is also formulated by independent academic and local government experts: M. Bazylak, P. Churski, A. Dawydzik, R. Dutkiewicz, J. Erbel, J. Hausner, ... I. Zachariasz, *Alert samorządowy 12: Finanse samorządów*. Open Eyes Economy, Kolegium Gospodarki i Administracji Publicznej Uniwersytetu Ekonomicznego w Krakowie 2020.

services sectors the situation in Lublin turned out to be relatively weak in comparison with other voivodeship cities (values of the aggregated index below the average and the median), with a slightly smaller distance to the average measures for service enterprises. In turn, the assessment of the convergence of entrepreneurship in the group of voivodeship cities in 2010–2018 indicates a strong process of “catching up” with cities better-developed in industry and a weaker convergence in services.

On the other hand, entrepreneurship in knowledge-based sectors fares much better – the average value of the index for this group of entities in 2010–2018 corresponded to the average value for provincial cities, but the value of the index in individual years was characterised by high variability. It is worth noting that in 2016 and 2017 Lublin was one of the leaders in this category, mainly due to the dynamic growth of the number of new entities in the high-tech industry. The high-tech business sector in Lublin was also characterised by a strong process of catching up with the best developed cities.

In terms of simple indicators of creative entrepreneurship development included in the report [10], the city scores average. Compared to other voivodeship cities, Lublin ranks 9<sup>th</sup> in terms of the number of registered entities in the creative and cultural sectors and the share of companies from this sector in the total number of entities, and 12<sup>th</sup> in terms of the ratio of newly registered companies in the creative and cultural sector to newly registered entities in total. However, this data should be interpreted with great caution, since – as indicated by a more in-depth study<sup>12</sup> – the creative sector turns out to be strongly diversified in terms of forms of activity, with a noticeable share of

freelancers executing orders under civil law contracts. The authors of this analysis point to the high development potential of the sector, resulting, among others, from the presence of universities, the existing cultural events market, the development of the IT industry in the city and the broadly understood friendliness of the city. The development of the sector is hindered by relatively low demand, including few large business orders, while an opportunity – resulting from the specificity of the sector – is the possibility to operate on a nationwide or even international scale. Strategic support for the development of this sector should include integration of the environment, strengthening cooperation links between entities from creative industries and other sectors, assistance in acquiring business knowledge, promotional and financial support, and also development of various types of creative spaces.

Economic openness refers to the inflow of direct foreign investments and foreign trade. The value of foreign capital invested in Lublin per capita in 2019 was PLN 3,587 – 178% more than in 2011. Lublin's situation is average in comparison with other cities with county rights. In comparison with voivodeship cities of the Eastern Poland macroregion, the amount of foreign capital per capita is higher than in Białystok, but lower than in Kielce or Rzeszów. A disturbing fact is that the growth rate of foreign investments is lower than in other cities of Eastern Poland, which indicates the need to improve the strategy of attracting foreign investors. On the other hand, it should be noted that domestic investors are much more interested in Lublin, and as a result – a relatively good position of Lublin as a total direct investment destination (i.e. domestic and foreign). In this context it is also worth mentioning that the dynamics of these

<sup>12</sup> R. Mącik, M. Ratajczak, O. Smalej, *Analiza stanu przemysłów kreatywnych w Lublinie*, Lublin 2018.

investments in the coming years may meet the barrier of the available supply of investment land in the city [11].

Available statistical data also enabled the evaluation of changes in the export volume of Lublin companies. It turns out that the export potential of Lublin is growing faster than the potential to attract foreign capital. The export volume of industrial companies in Lublin in 2019 amounted to PLN 1.342 billion (0.13% of national exports) and was almost 5 times higher than in 2009. During this period, there was a significant increase in the number of countries that bought products from Lublin and an increase in the share of exports to the markets of Western countries. In comparison with the rest of the country, Lublin's industry has a comparative advantage mainly in the production of food, chemical products as well as machinery and equipment [10].

The diagnosis included in the report [10] also contains an evaluation of development of sectors indicated in the *Lublin 2030 Strategy* as Lublin's economic specialisations, which takes into account data on entities from the REGON register, data on employees and various measures of Lublin's scientific and research potential. On the basis of the analysis, the authors of the report came to the conclusion that economic specialisations play an important role in the economy of Lublin and to a large extent correspond with the scientific and research potential of the city. The analysis confirms that Lublin is a strong centre of ICT and medical services compared to other regional cities. A significant competitive advantage in these sectors is indicated by the dynamic growth of the number of business entities<sup>13</sup> in the years 2010–2019, a significantly higher employment growth rate than in the country, high location rate of business entities, high patenting activity (especially

in ICT), a relatively large number of scientific publications in prestigious scientific journals (especially in medical sciences) or educational specialisations of Lublin universities (a higher than nationwide percentage of students in ISCED 06 and especially 09 groups).

The findings also point to Lublin's high potential in the automotive and engineering industries and in the food industry. The advantages of Lublin in these segments seem to be less significant than in ICT and medical industries, but in the first years of the last decade they had the greatest share in the city's exports. As regards the automotive and machine industries, their situation was clearly worse than the national average, and the low location coefficient indicated a low concentration of companies in the city. Due to the particularly high dynamics of the number of entities and a strong increase in employment at the end of the decade, the results of this sector of industry in Lublin reached or exceeded the national reference values. The development of the enterprise sector in this industry was accompanied by a significant improvement in patent activity and a high publication activity, as compared to other voivodeship cities, which testified to the growing potential of the scientific base. As for the food industry, its good condition is illustrated by the higher than nationwide dynamics of changes in the index of economic entities and a high scientific potential evidenced by high measures and indicators of scientific publications, while employment in the industry does not show an upward trend and the index of location of economic entities remains at a low level.

The report confirms a growth in business outsourcing in Lublin, pointing to a large and growing share of the sector in the group of economic entities, a high location

<sup>13</sup> The number of entities entered in the REGON register per 10,000 population of working age.



rate of entities, high employment dynamics and a large share of graduates from studies in the group of business, administration and law (ISCED 04). However, the sector is internally diverse – it consists of both large centres of modern business services (including, increasingly, Knowledge Process Outsourcing [KPO] / Information Technology Outsourcing [ITO] companies), and a large number of local micro-enterprises and self-employed persons performing legal, accounting and bookkeeping activities; it also does not have such a strong scientific and research background as the previously described specialisations.

The TSL sector (transport – spedition – logistics) plays a significant role in the local economy, as indicated by the high percentage of companies from this sector among enterprises and the large and growing share in employment. However, in comparison with the rest of the country, this sector is characterised by a lower growth rate of the number of business entities, average values of the localisation index and poor scientific and research facilities. It is worth mentioning that the perspectives of this sector are to a large extent conditioned by the finalisation of works on the transport infrastructure of Eastern Poland, especially the S19 route, which is part of the Via Carpatia international route [11].

Biotechnology and pharmacy have a special status in Lublin. The diagnosis included in the report [10] confirms that these industries have distinctive advantages in terms of research potential, both in comparison with other specialisations in Lublin and with biotechnology and pharmacy facilities in other Polish cities. Moreover, pharmacy was characterised by the highest location index of the number of business entities among Lublin's specialisations. On the other hand, the role of these industries, measured by their share in economic entities is small (0.4% for pharmacy, no data for biotechnology



due to statistical secrecy), and employment indicators did not show an upward trend and were only slightly lower than the indicators nationwide. One can therefore conclude that this narrow, albeit very innovative and productive, specialisation has not yet reached a critical mass to enter a phase of dynamic growth. However, a note should be made that the situation may change due to the COVID-19 pandemic and its consequences. In the case of the renewable energy sector, measures of the potential of research and development facilities were relatively good, while the number of businesses and employment proved to be too low to be obtained and analysed without breaching statistical confidentiality.

The development of economic specialisations (industry or technology) may lead to the formation of business ecosystems. It should be emphasised that the formation of a business ecosystem is not only determined by its critical mass – understood in terms of the number and growth of innovative companies, but also by the emergence of a network of strong interdependencies between business entities, which are based on both competition and cooperation. A constitutive feature of the ecosystem are also interdependence bonds with other entities representing business environment institutions, universities and training institutions, self-government and government institutions or the non-profit sector – bonds based on cooperation and mutual exchange of resources.<sup>14</sup> The city of Lublin has developed and is implementing a concept of supporting the processes of creating business ecosystems called Lublin Uplands (Lubelskie Wyżyny), which include: the IT sector, medicine,

<sup>14</sup> The concept and elements of business ecosystems in the *Lublin 2030 Strategy* document are specified and developed by, among others, the works of: E. Stam & A. van de Ven, *Entrepreneurial ecosystem elements*, *Small Business Economics* 56(2), 2021; B. Wurth, E. Stam, & B. Spigel, *Toward an entrepreneurial ecosystem research program*, *Entrepreneurship: Theory and Practice*, 46(3), 2022.

biotechnology, automotive and engineering industry and the aviation industry [11]. Analyses of the functioning of these ecosystems included in the report [10] confirm not only a growing number of entities, but also more and more intensive cooperation of the members of the Lublin Uplands ecosystems. Joint promotional activities and cooperation with employees of Lublin's universities were also mentioned as strengths. Identified deficits in the functioning of the Uplands include deficits in cooperation within the value chain,<sup>15</sup> lack of joint research and development activities or international projects. In conclusion, it can be stated that in terms of both the critical mass of the entities and the level of cooperation realised, the most mature economic ecosystems operating in Lublin are the Lublin IT Upland and the Lublin Medical Upland.

The key recommendation formulated in the report [10] was to identify economic specialisations of Lublin in the perspective to 2030. The specialisations were selected on the basis of a diagnosis of the city's innovative potential, taking into account the previous and current paths of the city's development and the involvement of entrepreneurs themselves in accordance with the idea of entrepreneurial discovery. The applied multi-criteria approach is based on rooting in the local economy, links with the scientific and research potential of the city, economic openness and resistance to economic shocks. The identification of specialisations should also take into account intersectoral links and affinity of industries. Such an approach is based on endogenous theories of regional development and corresponds closely with the methodology recommended

by the European Commission for the creation of a system to identify, verify and support areas of smart specialisation. The analyses conducted made it possible to identify seven potential basic economic specialisations of the city:

- automotive and engineering industry
- healthy society
- smart networks and ICT
- automated food processing and functional food
- chemical processes and specialty chemicals
- modern business services
- innovative logistics.

Another element of the Lublin diagnosis contained in the report [10] is the evaluation of the innovation support system. The institutional system of innovation support in the area of Lublin consists of the startup entrepreneurship ecosystem, the Lublin Subzone of the Special Economic Zone EURO-PARK Mielec, the Lublin technopolis and the economic ecosystems partly discussed above (Figure 3).

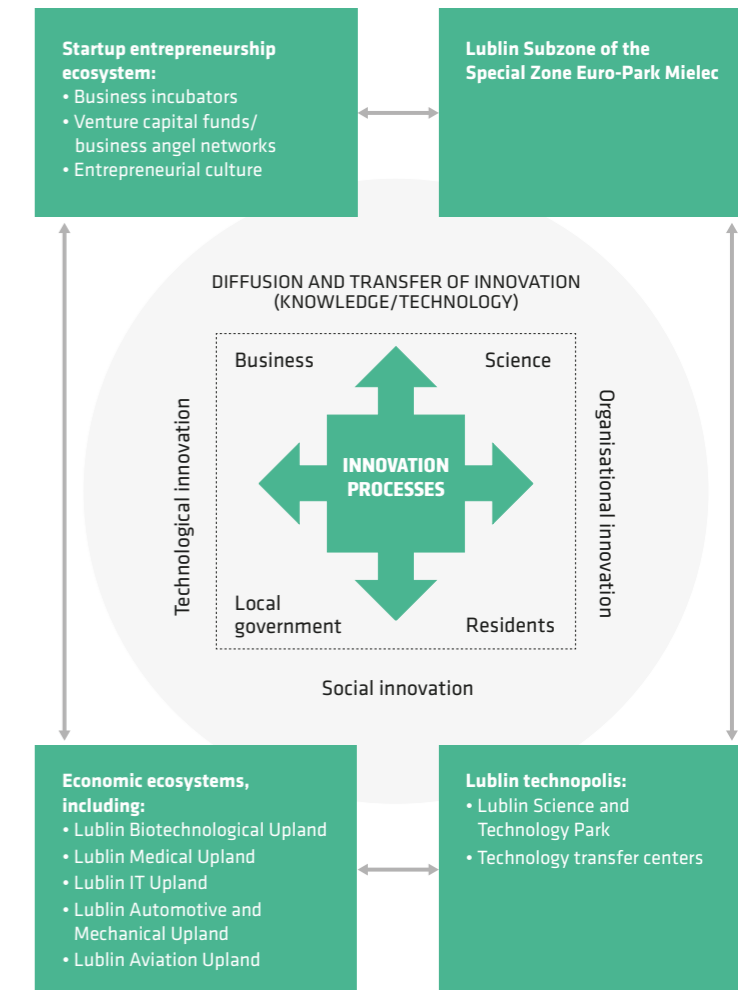
Lublin is one of the largest start-up ecosystems in the country – it is characterised by a high density of start-ups (their in relation to the population), a high level of optimism about the availability of financing and a relatively large share of entities operating in the field of edutech, robotics and electronics, CRM and ERP, the “Internet of Things”, artificial intelligence/machine learning and Big Data.<sup>16</sup> A strong point in this respect are the projects of the city and Lublin universities that foster entrepreneurial culture in children and young people of different ages and at different levels of

<sup>15</sup> In management practice, Porter's value chain concept is often reduced to a value-added chain and was probably interpreted in this way in the interviews and surveys carried out for the report [10].

<sup>16</sup> *Polskie Startupy 2020: COVID Edition Startup Poland*, Fundacja Startup Poland, Warszawa 2020.

education. On the other hand, some companies indicate problems with capital support from public institutions – low level of subsidies and high aversion to risky projects. Innovative and promising enterprises find it hard to access large investment aid in the latest technologies, which limits the chances of keeping breakthrough technologies in the country and advancing in the global value added chain. Capital support offered by venture capital funds and the network of Business Angels does not always ensure the availability of financial assets sufficient for the realisation of innovative projects.<sup>17</sup>

Another element of the innovation support system is the Lublin Subzone of the Special Economic Zone EURO-PARK Mielec. It should be stressed that investors obtaining permits to operate in the Lublin Subzone most frequently declared that they would implement investment projects closely related to research and development activities, characterised by high innovation. Most of these entities represented industries compatible with the city's specialisations: metal and machinery, biotechnology and food industries. In mid-2021, 69 companies operating in the Lublin Subzone employed 5,828 people (4,593 of whom got newly created jobs) and the volume of their investments amounted to nearly PLN 2.3 billion. The report [10] emphasises that investors in the Lublin Subzone have been relatively active in submitting applications for inventions and industrial designs and carrying out research and development work jointly with universities. It should also be noted that in 2018 the rules for receiving public aid have changed. The possibility of obtaining preferences for investments made outside the already



**Figure 3** Innovation support system in Lublin

Source: *Specjalizacje gospodarcze Lublina – w nowym europejskim układzie współzależności ekonomicznych (w perspektywie do 2030 r.)*, Urząd Miasta Lublin, Lublin 2021, p. 73.

<sup>17</sup> Cf. M.J. Radło, M. Sagan, *Awans krajów Europy Środkowo-Wschodniej w łańcuchach wartości przed pandemią i po jej wygaśnięciu – szanse i wyzwania na przyszłość*, in: *Raport SGH i Forum Ekonomicznego 2021*, SGH, Warszawa 2021.



full Lublin Subzone, new criteria for obtaining aid and the size of exemptions have a positive impact on the investment attractiveness of Lublin.

The last element of the innovation support system is the Lublin Technopolis, which consists of the Lublin Science and Technology Park S.A. (LPNT) and technology transfer centres of five Lublin public universities. The evaluation of LPNT activity in the report [10] is generally unfavourable. On the one hand, the number of new start-ups/spin-offs (incubations and developed business plans for contractors) in the park grew dynamically, as did the number of companies located in the LPNT. On the other hand, the number of technology transfers in the LPNT was relatively small and remained stable, and there was a regressive trend in the number of R&D cooperation projects. The report [10] indicates that the LPNT performed poorly in comparison with other parks in the country in terms of the number of tenants and did not link its specialisation with National Smart Specialisations. Moreover, in reports for the years since 2018, the LPNT stopped publishing non-financial performance indicators, and the own analysis of projects implemented by the Park after 2018 (not covered by the report [10]), indicates a clear regression in the pro-innovation activity of this entity.

With regard to academic technology transfer centres, it should be noted that their primary task is to lead to the commercialisation of new solutions and inventions. Based on the survey carried out for the report [10], it can be established that in 2015–2019 Lublin university centres led to the commercialisation of more than 500 results of scientific research and development work, transferring technology by transferring to buyers the property rights to intellectual property, granting licences, and least often – by establishing spin-out companies affiliated with the university. The report also indicates

that the highest commercialisation potential characterises such areas as: chemical sciences, life sciences, management and quality sciences, mechanical engineering, environmental engineering, mining and power engineering, civil engineering and transport, agriculture and horticulture, automatics, electrotechnics and electronics, pharmacy, medical and health sciences.

The economic ecosystems described in the previous section also constitute a favourable environment for innovation creation. Institutionalised clusters function within the four uplands: Lublin Medicine – Medical and Wellness Cluster, Motor and Machinery Upland Cluster, Lublin Biotechnology Cluster and Lublin Cluster of Advanced Aviation Technologies. The results of the survey conducted for the purposes of the report [10] show that the cluster which had the greatest impact on the innovativeness of its members was the one of medical and health services; the cluster of automotive and machine industry supported the implementation of process innovations, whereas in the case of the last two clusters membership does not translate directly into innovativeness of associated companies.

To complete the diagnosis of the city's innovativeness some of its measures are worth highlighting. The synthetic measure of innovativeness presented in the report [10] calculated (due to the availability of data) for the whole Lubelskie voivodeship places the region at an average level among Polish voivodeships. With regard to Lublin itself, the city's strength lies in public investment in R&D&I. It should be noted that the value of projects concerning this kind of activity subsidised from EU funds for the 2014–2020 programming period amounted to PLN 1.35 billion, and the value of these projects per 1 entity entered in the REGON register was twice as high as the average for voivodeship cities and gave Lublin the third place in the country. The

innovative potential of the city is also clearly confirmed by the highest patent activity index for Lublin.<sup>18</sup> The largest number of patents was recorded in the following categories: medicine or veterinary medicine and hygiene, mechanical metalworking, as well as measurement and testing. However, Lublin is characterised by a relatively large number of patents obtained by universities, given a weaker representation of economic operators, and a short life cycle of patents.

The crisis caused by the COVID-19 pandemic, so different from the economic shocks experienced in recent decades, is certain to significantly affect the development of Lublin in the coming years. From the perspective of local economies, the sectoral diversity of the impact of the crisis is particularly important. The restrictions introduced to counteract the effects of COVID-19 have hit the cultural, entertainment, tourism and catering industries extremely hard. For other industries, such as IT, medicine and biotechnology, the pandemic provided an opportunity for accelerated growth. Domestic industry, on the one hand, suffered from the disruption of international supply chains and, on the other, became a more attractive partner for EU business partners who, in an effort to shorten and increase the resilience of supply chains, look for partners from safer and closer locations.

The report [10] evaluates the resilience of the Lublin economy to the effects of the pandemic on the basis of data from the first three quarters of 2020. The main conclusion from the analysis of company survival on the basis of de-registrations of business entities from the REGON register was that the local economy has been extremely resistant to the first crisis wave. A clear

impact of the pandemic on the dynamics of company closures was noted for two sectors: sports, entertainment and recreational activities, and accommodation. Also interviews with business representatives [12, 1] and the current contact of the local government with companies in Lublin confirm that the situation in the enterprise sector (especially medium-sized and large ones) was relatively stable, and a number of companies (e.g. representing IT industry, food industry, or metal and machinery industry) significantly improved their sales and financial results in that period. Only 9% of the respondents admitted to redundancies or stopping recruitment, while over 40% took steps to reduce costs and increase savings [12]. It is worth noting that, favourably for Lublin, that the city's economic specialisation to date has been characterised by a fairly high resistance to economic disruption caused by the pandemic.

The economic diagnosis of Lublin is complemented by the findings of the *Final Report of the Thematic Working Groups* [7]. The most relevant are the results of the work of the Innovation and Sustainable Economy Group, although it is also worth noting the results of the work of the Culture and Creative Industries, Tourism, Academia, Education and Metropolis Groups.

Discussions in the area devoted to the economy were conducted in eight problem categories defined by the group: labour market, entrepreneurship (separately for micro and larger companies), internationalisation and international trade, investment attractiveness, innovativeness, diversification of the economy and network economy. Although the opinions of the group members were often divergent and the results were

<sup>18</sup> Measured by the number of patents per 1 million inhabitants.

not conclusive,<sup>19</sup> the strong points of Lublin's economy were unanimously considered to be the city's location in terms of transport and trade connections and its academic potential. Among the weaknesses, the low level of cooperation of enterprises with other entities, the grey market and low ethical standards in business as well as image deficits of Lublin in economic terms were particularly often mentioned. The recommendations formulated referred to the impact on the labour market, improvement of competitiveness and innovativeness of enterprises, creation of a support system for micro-enterprises. There was also a need for institutional support for internationalisation of enterprises, improvement of attractiveness of the city's investment offer, implementation of smart specialisation strategies and strengthening of network relations.

The advantages of the creative industries in Lublin, in the opinion of the TWG members, is the inclusion of culture and creative industries in the strategic activities of the city and the existing knowledge capital and human capital; as disadvantages one can list insufficient demand for goods and services of these industries or deficits in cooperation within the sector and with entities from the surrounding area. The city's activities in the area of industry development were rated ambivalently – they were indicated both as strengths and weaknesses of industry development. Recommendations included the development and implementation of diversified mechanisms (both financial and non-financial ones) of support for the sector, building a network of associations of creative industry entities and coordination of the city's activities in this area.

The past decade was characterised by an improvement in the tourist offer and an increasing number of visitors to Lublin [9], which was reflected in the creation of the Thematic Working Group on Tourism. Among the strengths and potentials of tourism in Lublin, the members of the group mentioned the city's rich history, its multicultural character, high-quality regional products, an attractive offer of festivals and a rich gastronomic and accommodation base. As weaknesses they indicated insufficiently developed promotion of the city and limited tourist information (which translates into low recognition of contemporary Lublin), the condition of the current railway and bus stations and some isolated infrastructure deficiencies. The main recommendations concern the development of the tourist offer and tourist promotion of the city, completion of tourist and recreational infrastructure while respecting the aesthetics of the city, creation of the tourist image of the city and development of links between tourist industry entities.

In the findings of the group dedicated to academism, the academic potential of Lublin was recognised as one of the key factors in the city's economic development. Some of the recommendations – such as those concerning the transfer and commercialisation of knowledge and technology, links and synergies between school education, universities and entry into the labour market, or strengthening links with the creative industries sector – directly concern the economic dimension of development. Others, such as those related to the internationalisation of academic Lublin or the city-forming role of academies, affect both the economic and social development.

<sup>19</sup> This is explicitly stated in the final report of the Thematic Working Groups.

It is similar with the findings of the group in the field of education, where five out of six discussed problem categories correspond with the economic pillar of development, namely: quality of education, educational infrastructure, extracurricular and informal education, synergy of education with the city's academia as well as business and adult education. The strengths of education in Lublin were mainly the high level of education reflected in good examination results, the availability of places in educational institutions and the closeness of academic facilities. Among the weaknesses, mentioned particularly often, were staff and competence deficiencies among Lublin teachers (especially in the area of “future competence” and modern teaching methods), insufficient quality of school infrastructure and equipment and a poor teaching offer of additional activities. There is also the problem of insufficient level of cooperation with other entities (business, government, universities). Recommendations formulated on the basis of the diagnosis include the creation of a municipal teachers' training centre, an educational-rehabilitation-cultural centre, the Science and Experimentation Centre, a municipal cooperation programme with business and a cooperation programme with universities.

Issues of economic development were linked to the TWG Metropolis. The group discussed such issues as the extension of Lublin city boundaries, building a network of international cooperation, Lublin's role as the leader of the Lublin Metropolitan Area, building the Lublin brand, and Lublin's metropolitan functions. The extension of Lublin's boundaries may be the answer to the problem of the city's shrinking investment areas. Cooperation both within the Lublin Metropolitan Area and with cities in Poland and abroad may prompt exchange of resources facilitating the development of

Lublin's agglomeration economy; the strong brand of Lublin has a positive influence on economic openness, and the metropolitan functions cover both some of the economic sectors (especially those identified as Lublin's economic specialisations), as well as education and science (including Lublin's universities).

### Diagnosis of Lublin – the perspective of business representatives

#### Lublin's strengths

Over 100 interviews with business representatives in Lublin [12, 1] enabled an identification of Lublin's assets and the positive changes taking place in the city. Although the strengths concern not only the city's economy, but also the social and spatial conditions of doing business, it was decided to discuss the opinions of business representatives jointly in this part of the diagnosis.

The most frequently indicated strength of Lublin was the presence of its academic background (38% of respondents in the study) [12] – praised both for the supply of qualified graduates and for the possibility of cooperation in research and development. Against this background it is worth noting that 71% of the surveyed companies already had an experience of cooperating with universities. The second most important advantage of Lublin is its “climate” (29% of respondents), which was, however, understood in various ways. For some it was associated with the size of the city, thanks to which Lublin offers numerous advantages available in large urban centres, though without the inconvenience of the largest agglomerations. For others the ambience was connected with the offered choice of leisure activities, the historical and cultural heritage, or the large representation of young people among the inhabitants.



The third important advantage was the availability of skilled labour force (26%). It is worth noting that this corresponds to the relatively low number – compared, for example, with the results of other cities – of indications of problems with the lack of specialists. Another strong point of Lublin are the relatively low operating costs of enterprises (20%) – due to, among others, a competitive labour market and favourable prices of commercial property. The last category indicated as an advantage was Lublin's location and accessibility – due mainly to the proximity of the capital with convenient expressway and railway connections, and also the presence of an airport.

Business representatives were also asked to evaluate the changes that have taken place in Lublin in the last decade. In their opinion, the attractiveness of Lublin as an economic centre has increased [1, 12]. A positive assessment of the changes was formulated by 90% of the surveyed, with 9% neutral assessments. The business representatives most often indicated positive changes in the road infrastructure of the city, improvement of transport connections (better communication with Warsaw, presence of the airport), development of culture, recreational infrastructure and increased comfort of living in the city, as well as improvement in the quality of investor services [12].

The surveyed companies were not a representative sample,<sup>20</sup> so the interpretation of certain conclusions should not be generalised to cover all companies. Nevertheless, several findings concerning the surveyed companies merit our attention. Firstly, the representatives of these companies indicate their solid connection with the city – they plan to continue their activities

in Lublin and, if expanding, to maintain important company operations in this area. Secondly, the surveyed companies are characterised by a high level of cooperation with the environment – other companies, universities, vocational schools or the local government (e.g. within the framework of the Lublin IT Upland project or the Lublin Medicine – Medical and Wellness Cluster), as well as a high innovative potential. Thirdly, a high level of acceptance of the principles of sustainable development can be observed in many statements, which is confirmed by a number of pro-environmental actions taken by the companies themselves. Fourthly, the statements of the respondents on the development perspectives of various sectors in Lublin confirm the conclusions of the diagnosis in terms of economic specialisations of the city.

#### Lublin's weaknesses and recommendations

When asked about the weaknesses of the city and barriers to doing business in Lublin, the business representatives surveyed most often indicated problems connected with the insufficient number of enterprises (30% of respondents) [12]. From the perspective of job seekers, this translates into unfavourable job prospects compared with other cities [1], and from the perspective of business entities – into difficulties in finding partners, business clients or investors [12]. Some of the respondents also indicated the problem of low inclination of Lublin entrepreneurs to form consortiums or cooperation in cooperative networks. In the context of the situation of the enterprise sector, it was also indicated that there was too high a share of companies creating semi-finished products, occupying a low position in the

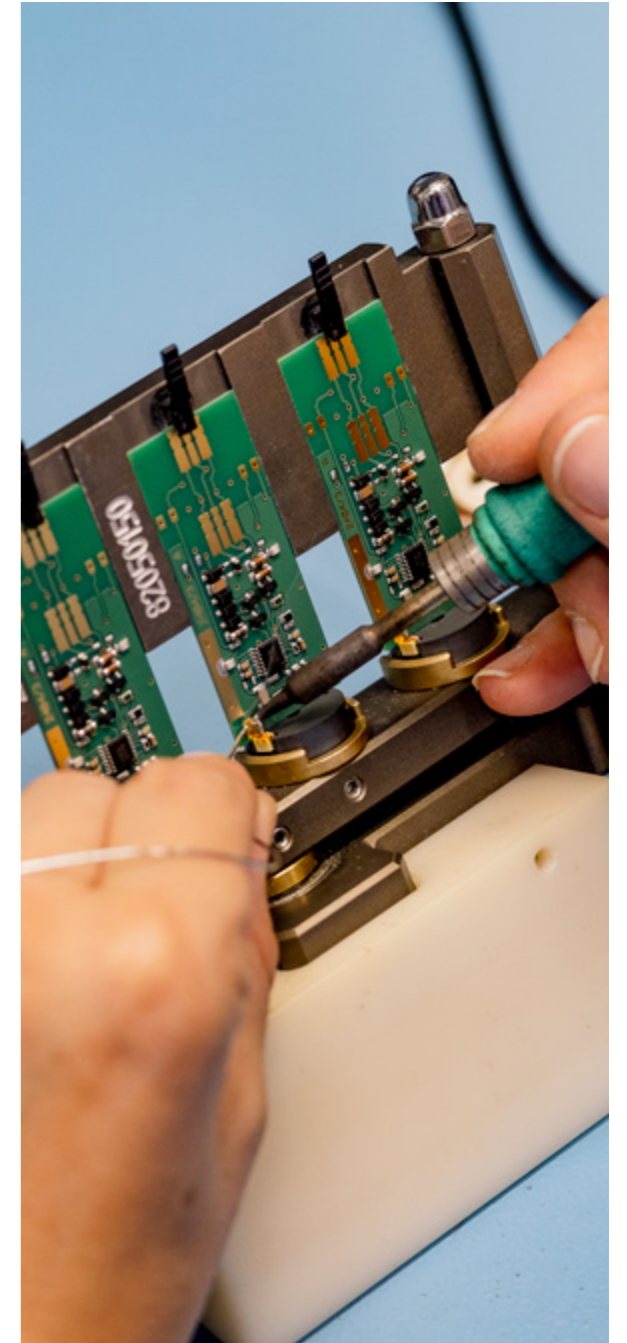
<sup>20</sup> For example, overrepresented were representatives of medium and large companies or industries indicated as priorities in the Lublin 2020 Strategy.

value added chain, and still a low number of companies producing final goods under their own brand [12].

Other problems were indicated much less frequently. For 16% of the respondents mentality issues were pointed out, including aspects such as considerable distrust, low readiness for innovation and change or the excessive role of acquaintances or personal connections. Problems related to city communication were indicated by 11% of respondents, and problems with recruitment of qualified employees were indicated by less than every 10<sup>th</sup> respondent [12].

Business representatives [12] were also asked to formulate recommendations in various areas which were mostly related to the problems encountered in Lublin. In terms of infrastructure, every third respondent indicated the need to improve the functioning of public transport, especially in terms of adapting the network of links to the new layout of the city and better communication of economic activity zones. On the other hand, 10% of the respondents suggested developing a network of air links and indicated the need to designate new investment areas, with the second postulate most often indicated by representatives of manufacturing companies. In this context, one of the solutions considered was the extension of the city boundaries, to which most respondents gave a positive (55%) or neutral (40%) opinion. It is worth noting that the expectations of increasing the supply of investment areas were often accompanied by statements indicating the need for greater care taken of the spatial order in the city.

In other areas, the need for better coordination of cooperation between universities and business (especially in the field of internships and apprenticeships), the need to develop vocational education and the system of apprenticeships for students of these



## Spatial diagnosis

### What does the spatial diagnosis of Lublin cover?

The in-depth diagnosis relating to the shaping of Lublin's space was based on expert thematic diagnoses prepared for the purposes of the existing sectoral strategies and thematic reports covering spatial development and urban planning, shaping of urban green spaces and adaptation to climate change, energy security and urban mobility. The main pillar of this part of the *Lublin 2030 Strategy* included the diagnoses contained in the following urban strategic documents:

- *Study of the Conditions and Directions of Spatial Management of the City of Lublin (Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Lublin)*
- *Lublin Climate Change Adaptation Plan until 2030 (Plan adaptacji do zmian klimatu Miasta Lublin do roku 2030)*
- *Circular Strategy for Lublin (Cyrkularna strategia dla Lublina)*
- *Analysis of the State of Municipal Waste Management of the City of Lublin for 2018 and 2021 (Analiza stanu gospodarki odpadami komunalnymi miasta Lublin za rok 2018 i 2021)*
- *Environmental Protection Programme for the City of Lublin for 2021–2024 with a 2028 perspective (Program ochrony środowiska dla Miasta Lublin na lata 2021–2024 z perspektywą do roku 2028)*
- *Low-Carbon Economy Plan for the City of Lublin (Plan gospodarki niskoemisyjnej dla Miasta Lublin)*
- *Assumptions for the Heat, Electric Energy and Gaseous Fuels Procurement Plan for the City of Lublin for the Years 2019–2033 (Założenia do planu zaopatrzenia w ciepło, energię elektryczną i paliwa gazowe dla miasta Lublin na lata 2019–2033)*
- *Strategy of Electromobility Development in Lublin (Strategia rozwoju elektromobilności w Lublinie)*
- *Municipal Programme for the Protection over Monuments of the City of Lublin for 2021–2024 (Gminny Program Opieki nad Zabytkami Miasta Lublin na lata 2021–2024)*
- *Urban Regeneration Programme for Lublin for 2017–2023 (Program Rewitalizacji dla Lublina na lata 2017–2023)*
- *Communal Regeneration Programme for the City of Lublin for 2021–2030 (Gminny program rewitalizacji dla miasta Lublina na lata 2021–2030)*

- *Environmental Protection Programme Against Noise of the City of Lublin (Program ochrony środowiska przed hałasem miasta Lublin)*
- *Mobility Plan of the Lublin Functional Area for 2017–2025 (Plan Mobilności Lubelskiego Obszaru Funkcjonalnego na lata 2017–2025)*

The second essential component of the spatial diagnosis contains the findings of social research and participatory activities. Full analyses of these opinions are included in the following reports: *Lublin 2030 Diagnosis. Report on qualitative research and participatory activities (Diagnoza Lublin 2030. Raport z badań jakościowych i działań partycypacyjnych)* [1], which summarises the results of 123 individual interviews (IDI) and 11 group interviews (FGI) conducted in 2020 with representatives of various social groups of different ages, performing different social and professional roles,<sup>21</sup> as well as the findings of 40 meetings with residents (open thematic meetings or street interviews); *Lublin 2030 Strategy. Survey report (Diagnoza Lublin 2030. Raport z badań ankietowych)* [2], prepared on the basis of a representative<sup>22</sup> survey carried out in autumn 2020 using the mix-mode method on a sample of 1,053 Lublin residents; *Let's Invent Lublin Together. Conclusions from the Qualitative Analysis of Materials Collected in Mobile Points (Wymyślmy wspólnie Lublin 2030. Wnioski z jakościowej analizy materiałów zebranych podczas Punktów Mobilnych)* [3], summarising interviews with 677 residents in late 2019 and early 2020, conducted by the Lublin Research Group at 15 Mobile Points; A series of reports entitled *Opinions of Lublin residents about their city (Opinie mieszkańców Lublina o swoim mieście)* [4], prepared in 2016–2019 on the basis of annual surveys carried out using the PAPI technique in the Residents' Service Centres on representative samples of Lublin residents;<sup>23</sup> three reports on online surveys carried out during voting for the *Participatory Budget* (2019 and 2020 editions) [5]; *What does Lublin need? Report of the survey on the quality of life in the districts of Lublin (Czego potrzebuje Lublin? Raport z badania jakości życia w dzielnicach Lublina)* [5a], which was developed on the basis of the responses of 5,753 residents who voted for the *Participatory Budget* 2019. Two others: *Let's Invent Lublin Together 2030. Report on the Analyses of Open Questions of the Online Survey (Wymyślmy wspólnie Lublin 2030. Raport z analiz pytań otwartych ankiety internetowej)* [5b] and *Lublin 2030 Diagnosis. Report on a survey of living conditions in the districts (Diagnoza Lublin 2030. Raport z ankietowego badania warunków życia w dzielnicach)* [5c], presenting the results of analyses of opinions and evaluations of nearly 3,000 respondents; and the conclusions of the diagnoses contained in the *Final Report of the Thematic Working Groups* [7].

The third pillar of the diagnosis consists of a synthetic review of economic development trends identified in European and national strategic documents and benchmarking showing selected development indicators for Lublin against a group of voivodeship cities in Poland.

<sup>21</sup> Children, secondary school students, university students, adults of different ages – with and without children – seniors, entrepreneurs from different segments of economy, foreigners (both students and working people), emigrants from Lublin, returning migrants, people with disabilities, people at risk of social exclusion, residents of municipalities near Lublin, and in some cases also members of organisations cooperating with the above-mentioned groups.

<sup>22</sup> Based on an address and housing survey.

<sup>23</sup> The diagnosis preferred the results of the survey carried out in 2018 with an increased sample of 1,101 residents. The research was conducted on quota samples representative in terms of gender, labour market status and place of residence.



### Spatial development of Lublin – current state and prospects

#### Context of contemporary concepts and trends

2020 was a landmark year for urban policies. That was the time when the *New Leipzig Charter* and the *Territorial Agenda 2030* were adopted – two of the key documents defining strategic principles and directions for city management after 2020.

These documents suggest that an integrated approach should be taken into account when programming the development of urbanised areas, including functional areas. In an integrated approach, the key component is the process space. A report published in 2017 summarising 10 years of the Leipzig Charter found that its provisions are still relevant and can still guide the formulation of urban policies. However, given the new conditions and challenges facing European cities, it is necessary to take steps to update the Charter. The *New Leipzig Charter* emphasises the need to transform cities into just, green and productive cities, drawing attention to the inseparability of these components.

According to this approach, just cities provide their residents with equal access to all its services. The transformation towards green cities is a key action to combat global warming – providing universal access to a clean environment and its components. Measures in this area are aimed at achieving climate-neutral energy – in buildings, transport, as well as in the protection of biodiversity and greenery in cities. The productive city, on the other hand, prioritises effective spatial planning, which takes into account the infrastructure necessary for economic development. The special role of active and sustainable spatial planning in dealing with the challenges of modern cities is exposed in one of the fields of action: an active and strategic land policy and

land use planning. The authorities recognise the need for a change in the approach to land use, including the need for local authorities to be more active and decisive. Space is a limited good. It must therefore be managed wisely – shaping healthy, safe and accessible spaces for all, based on multifunctionality.

The *Territorial Agenda 2030* points to major economic, social and environmental challenges facing cities. It draws attention to the increasing divergence of areas across Europe that reinforces these problems – these differences are reflected in access to services, technological development and thus in the quality of the natural environment. The *Territorial Agenda 2030* complements the provisions of the *New Leipzig Charter* with measures for the transformation of the linear economy to the circular economy, which, combined with the development of zero-emission intermodal transport, is a key action for achieving climate neutrality and building resilience to climate change. Cities should be shaped on the basis of their cultural heritage as a potential for local development. What is particularly important from the perspective of spatial planning is the protection of material heritage – architectural objects, urban layouts, as well as spherical panoramas and gigapanoramas. These documents are consistent with overarching European policies in relation to UN Sustainable Development, the *European Green Deal*, the *Convention on Biological Diversity*, the *European Landscape Convention* and the *New EU Forest Strategy*, the *Paris Agreement*, the *EU Biodiversity Strategy for 2030*, and the *Urban Agenda for the EU*. What is more, provisions of the those documents are reflected in superior national documents determining directions of development of Polish cities: *Development Strategy for Lublin Voivodeship until 2030 (Strategia Rozwoju Województwa Lubelskiego do roku 2030)*, and with the

provisions of the *Strategy for Responsible Development until 2020 (Including the Perspective up to 2030)* and the *National Strategy for Regional Development 2030*.

#### City benchmarking

The presented development trends and an overview of local development indicators provided a reference point for the selection of spatial development indicators (Figure 4). The analysis is of a comparative nature and shows Lublin's position in comparison with all voivodeship cities by means of a box-and-whisker diagram, which implies the need to use comparable data from sources of public statistics. The level of 100% for each indicator represents the median (middle value) for the voivodeship cities, the box covers half of the cities with relatively small deviations from the median (i.e. between 1<sup>st</sup> and 3<sup>rd</sup> quartile), the whiskers cover the distances to the cities with the highest and lowest values of the indicator, and the dot indicates the position of Lublin.

The coverage of the urban area by local spatial development plans has a direct impact on the optimal and efficient use of urban space. The average spatial development plan coverage of the analysed cities was 44.4% and the median was 51%. The indicator for Lublin exceeds these values and is equal to 53.8%. For comparison, the highest value among voivodeship cities is 68.7% (Gdańsk) and the lowest is 15.9% (Rzeszów).

When it comes to shaping urban space, green areas play an important role. In public statistics, there are no good and comparable measures of biologically active areas in cities, but only of cultivated green areas, including parks, greenways, greenery in road lanes or cemeteries. The benchmarking of voivodeship cities included an analysis of the share of such defined green areas in relation to the city area: its average value was 4.7%,

the median was 4.4%, the highest value was 13.4% (Rzeszów), and the lowest value was 0.8% (Zielona Góra). Compared with other voivodeship cities, Lublin was ranked 6<sup>th</sup> with a rate of 5.3%. The average value of the share of protected areas in the total urban area among the voivodeship cities was 12.7% and the median was 6.0%. For this indicator, Lublin stands above the mean and median, with a value of 17.2%. The highest level of protected areas is found in Kielce (62.0%) and the lowest in Rzeszów (0.1%). It is worth noting that the most numerous group of cities reaches the value in the range of 1.0–6.0% and they include: Białystok, Gorzów Wielkopolski, Katowice, Olsztyn, Poznań, Szczecin and Wrocław. Also, forest lands have important environmental functions. The comparison shows the urban forest cover indicator, i.e. the share of forest area in the total urban area, for which the average was 17.6% and the median was 15.5%. The highest rate was achieved by Zielona Góra (53.5%) and the lowest by Rzeszów (2.9%). Lublin came 12<sup>th</sup> in this ranking with a result of 11.1%, which is comparable to such cities as Warsaw (14.0%), Poznań (13.7%), Opole (10.2%) or Łódź (9.0%).

A well-kept and clean public space is one of the key issues in the development of a modern and environmentally friendly city. The indicator chosen to compare cities is the recycling rate, which according to EU regulations should reach 50.0% in each EU member state by 2020. In the case of voivodeship cities, the level of selectively collected waste in relation to total waste reached a mean value of 37.9% and a median of 36.5%. Gdańsk achieved the highest recycling rate (53.5%) and Lublin took 6<sup>th</sup> place (43.4%). Voivodeship cities with the lowest recycling rates included Zielona Góra (23.3%), Olsztyn (28.4%), Szczecin (29.5%) and Toruń (30.1%). In the case of another indicator, the amount of mixed waste generated per capita, the cities with the

lowest values perform best in the benchmarking. In this ranking, Lublin, with the result of 217.6 kg, was ranked 14<sup>th</sup>, which means it was among the 5 voivodeship cities that generate the smallest amount of mixed waste per capita. For comparison, the cities that collect the highest amount of mixed waste are: Katowice (315.2 kg), Zielona Góra (302.9 kg) and Wrocław (297.6 kg). The best performers on the list are: Gdańsk (162.7 kg), Białystok (185.9 kg) and Bydgoszcz (203.9 kg).

For public health and a good quality of life, it is essential to have access to clean water. In 2020, the average per capita water consumption for voivodeship cities was 99.0 m<sup>3</sup> and the median was 57.8 m<sup>3</sup>. The cities with the lowest per capita water use are: Białystok (48.2 m<sup>3</sup>), Toruń (49.0 m<sup>3</sup>) and Kielce (49.7 m<sup>3</sup>). The per capita water withdrawal rate in Lublin was 56.2 m<sup>3</sup>, which is significantly lower than the average consumption and slightly lower than the median. The values of the highest use of water resources were achieved by such cities as Szczecin (450.6 m<sup>3</sup>), Opole (247.4 m<sup>3</sup>) and Warsaw (145.4 m<sup>3</sup>).

The quality of life in the city is also influenced by the purity of the air inhaled, which can be assessed by examining dust pollution emissions from particularly onerous establishments measured in tonnes per km<sup>2</sup>. The voivodeship cities with the highest emissions in 2020 were: Opole (2.38 t/km<sup>2</sup>), Kielce (1.34 t/km<sup>2</sup>), Lublin (1.11 t/km<sup>2</sup>). The mean value of dust emissions was 0.70 t/km<sup>2</sup> and the median was 0.58 t/km<sup>2</sup>. The cities with the lowest dust pollution were: Zielona Góra (0.12 t/km<sup>2</sup>), Łódź (0.20 t/km<sup>2</sup>), and Gorzów Wielkopolski (0.22 t/km<sup>2</sup>).

One of the pillars of sustainable mobility is cycling. In Lublin, the density of cycling routes is 122.7 km per 10 km<sup>2</sup>, which places the city in a high, 5<sup>th</sup> position among voivodeship cities. The densest network of

cycling routes is found in Białystok (155.6 km/10 km<sup>2</sup>), while the city in the worst situation in this respect is Zielona Góra (25.0 km/10 km<sup>2</sup>).

What is also important from the point of view of transport network development is the TomTom Traffic Index 2020, developed for the 11 largest voivodeship cities (Bydgoszcz, Białystok, Gdańsk, Katowice, Kraków, Lublin, Łódź, Poznań, Szczecin, Warsaw, Wrocław). This indicator is based on data from GPS users, determining how many percent longer it takes to drive through a city compared to when there are no traffic jams on the road. Therefore, a good road situation will be indicated by low index values. In 2020, the highest traffic volume index was shown by Łódź (42.0%), followed by Kraków (36.0%) and in third place by Wrocław (35.0%). Lublin was ranked 9<sup>th</sup> with an index of 26.0%. The average traffic volume for the cities analysed was 29.3%. Only Katowice (16.0%) and Białystok (22.0%) had lower traffic volumes.

Additional information on the development of the transport network is provided by the length of bus lanes. Voivodeship cities with the most developed network in 2020 included: Warsaw (68.9 km), Kraków (30.9 km), and Wrocław (27.4 km). In Lublin, the length of bus lanes was 10.4 km. However, the differences between cities are largely due to differences in city area and the length of public transport routes. Despite this, the ratio of bus lane length to city area for Lublin is lower than both the median and the city average.

Other important information from the point of view of urban spatial development is the adoption of urban planning standards and a landscape resolution. The introduction of urban planning standards by cities influences the ordering of space and the rational management of land in the city. Out of 18 voivodeship cities, 13 have adopted such standards. Lublin is one of

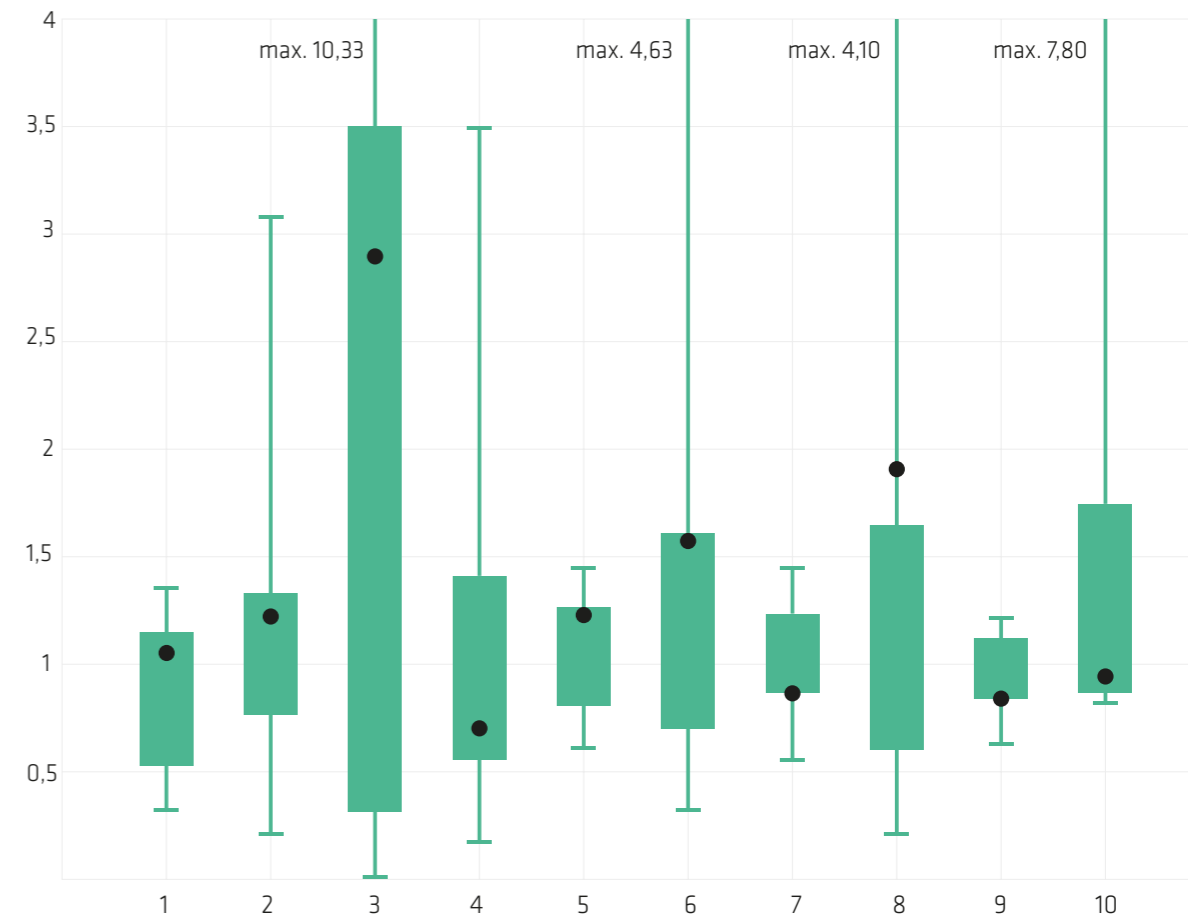


Figure 4 Lublin's position in comparison with voivodeship cities in terms of selected indicators of spatial development

Legend: 1. Share of city area covered by local spatial development plans. 2. Share of green areas in total city area. 3. Share of protected areas in total city area. 4. Share of forest lands in total city area. 5. Recycling rate. 6. Density of cycling routes per 10 km<sup>2</sup>. 7. Traffic index (volume). 8. Dust pollution emissions (per km<sup>2</sup>). 9. Mixed waste per capita. 10. Water consumption in m<sup>3</sup> per capita.

Note: Data for 2020 except for indicator no. 2 (data for 2019). Data for 18 cities except for indicator no. 7 (TomTom Traffic Index 2020 available for 11 largest voivodeship cities).

Source: Own elaboration based on data from Statistics Poland and TomTom Traffic Index 2020 (indicator no. 7).



five cities that do not have such a document. The same is true of the landscape resolution: only 6 voivodeship cities have adopted it.

### Diagnosis of Lublin – the residents' perspective

The best source of knowledge about the quality of functioning of urban space is its users. In order to diagnose Lublin's strengths and weaknesses in terms of space shaping, social surveys and participatory activities carried out between 2018 and 2020 were used. The analysis made it possible to identify the 4 thematic areas most frequently raised by residents: greenery and ecology, tourism and recreation, technical road infrastructure including urban mobility and urban planning. For each of them, the strengths and weaknesses in the subjective assessment of the residents are summarised.

#### Greenery and ecology

All studies, regardless of methodology, confirm the growing environmental awareness of the residents and the need to make environmental issues a higher priority. Surveys show that most residents are satisfied with green spaces. Depending on the survey and the adopted methodology, the percentage of surveyed residents assessing this aspect positively ranged from 60% to 80%, while negative answers were given by 10 to 20% of the surveyed residents of Lublin [2, 4]. On the other hand, the ratings of green areas vary across districts: the ratings of residents of e.g. Węgliń Południowy, Ponikwoda, Sławinek or Kośminek are worse in this respect [5]. The results of qualitative research and participatory activities [1, 3, 5b] afford a better understanding of the results obtained: on the one hand, available green areas in the urban space are considered by the

residents as an important asset of Lublin, distinguishing it from other cities. In particular, Lublin's redeveloped parks and landscaped park-like gullies and ravines are an important asset for the city. The residents also appreciate the numerous flower meadows. On the other hand, they articulate the need to increase the amount of green areas and to take care of the existing greenery: among the respondents there is a perceptible concern for the shrinking of green areas and cutting down of trees in the urban space, especially in the central parts of the city. The residents also pointed out the need to improve the landscape of the Bystrzyca Valley and the surroundings of Zemborzycki Lake: the need to clean them up, incorporate them into the urban fabric and add infrastructure for leisure and recreation.

Another important theme raised by the residents was clean air. In surveys [2, 4] (despite methodological differences), positive evaluations were formulated twice as often as negative ones. However, air quality varies greatly in terms of space: it is more often assessed as good by residents of districts with a large number of residents, e.g. Czuby, Rury, Czechów Północny or Felin, while the worst assessments come from residents of districts with a more developed industrial function or single-family housing, e.g. Za Cukrownią, Dziesiąta, Kośminek or Sławinek [5]. Residents participating in qualitative research and participatory activities complained about air pollution and ways to combat urban smog [1, 3]. In their opinion, measures to protect the environment – improving air cleanliness, but also noise protection – should become both urgent and long-term tasks for the city authorities.

During interviews and meetings, residents often brought up the topic of waste. On the one hand, most of the residents surveyed (from 55% to nearly 70%) indicated that the cleanliness of the city has been

improving in recent years [4, 2] and the organisation of the waste sorting system [2] is improving. However, one in three residents pointed to the frequent problem of littering in inappropriate places [4]. As for the participants in the qualitative research and participatory activities, they pointed out both the insufficient level of waste sorting and the insufficient number of waste bins at housing estates, as well as the low ecological awareness of the residents.

#### Road technical infrastructure and urban mobility

Residents appreciate the development of road infrastructure in Lublin. Nearly 90% of respondents note an improvement in the upgrading of the street network in recent years, with 40–45% noting a definite improvement [2, 4]. The respondents also notice improvements in the provision of road safety, renovation of estate roads, car parks and pavements or the construction of cycle paths: progress in these areas was reported by less than 70% to more than 90% of respondents [2, 4]. The majority of residents have a good opinion of the communication with other cities [2]. In their opinion, the improvement of infrastructure was ensured by the construction of the city bypass and new streets [1, 3, 5b].

In terms of mobility, the city is rated very well in terms of getting around on foot (with positive ratings from almost 80% to 90% of respondents) and by public transport (from almost 80% to 90% of respondents) [2, 4]. The same survey rated Lublin less favourably in terms of cycling (between 55% and 75% of positive responses). Clearly, worse ratings apply to travelling around the city by car: in earlier surveys carried out before the pandemic, the majority of residents assessed Lublin negatively [4], while in a survey carried out in autumn 2020 such assessments were given by every fifth respondent [2]. As regards the observation

of those results, it should be noted that the experience of Polish, and in particular European cities, proves that it is not possible to simultaneously realise the postulate of a compact city – which is friendly to pedestrians, cyclists and public transport users – and a city comfortable for individual motorisation users. Therefore, economic and environmental considerations speak for the development of sustainable mobility. In Lublin, the most popular means of transport for commuting to work, university or school is still the car: before the pandemic, 40% of respondents used this method [4], and according to a survey conducted in autumn 2020, it was almost half of the respondents [2]. In both surveys, public transport was chosen by around 35% of respondents and cycling by between 3% and 4%. Between less than 15% and 20% of respondents travelled to school or work on foot [2, 4].

Interviews and meetings with residents [1, 3] and a questionnaire survey [5b] provided additional information on the reasons for such assessments. In terms of strengths, residents often pointed to modern fleet and stop infrastructure as well as a growing number of alternatives to traditional means of transport. A lot of criticism, however, concerned the city's traffic jams, the difficulty of finding parking spaces, the blocking of pedestrian routes by parked cars, and the lack of a cycle route network, especially in central parts of the city. Residents recognise the development of routes outside the city boundaries, but signal the need to further strengthen communication with the municipalities belonging to the Lublin Metropolitan Area. They also pointed to the need for greater integration of the available forms of communication. A very important problem mentioned both in the interviews and in the meetings with residents is the need for changes in the timetables: increasing the frequency of services (especially during

rush hours) and changes that make it possible, on the one hand, to shorten the travel time and, on the other hand, to improve the connections of some districts, especially the economic activity areas with workplaces. As regards the accessibility of the city, residents positively evaluated the communication with the capital and availability of an airport. However, they pointed to the need to improve communication with other cities, to develop the network of air connections and to develop communication between the airport and the city.

### Urban planning

Nearly three quarters of the residents participating in the survey [2] noticed an improvement in the local government's concern for the aesthetics of the space, with almost one in three seeing a definite improvement. On the other hand, the accessibility of the space for people with disabilities was assessed much worse: negative opinions prevailed in this element [2]. Summarising the surveys on aspects of living conditions in the districts [5a, 5c], we can say (although at a very high level of generality) that Lublin and the vast majority of its districts are positively assessed in terms of living comfort, availability of various services and meeting places. However, these studies show inter-district differences that require the attention of city authorities.

More in-depth assessments – both positive and critical – are provided by qualitative analyses [1, 3, 5b]. Among Lublin's strengths, the greatest emphasis was placed on aspects related to the city's size: the city is perceived as compact, which provides ease of movement, convenient access to basic services and the opportunity to build relationships with others. The residents' attention is also focused on the Old Town, which is a very important point in the urban fabric for the residents as a distinctive, recreational and identity

point. Residents speak positively about low-rise buildings in the city centre. In their opinion, Lublin is a city that is visually attractive (e.g. Litewski Square) and architecturally interesting, and its aesthetics have improved considerably. One unquestionable advantage is the presence of urban art in the public space (graffiti, installations). It was noted that Lublin has grown, expanded in various directions and that new housing estates have been built in the city.

Interviews with residents, and especially meetings that were part of the participatory process, pointed also to Lublin's weaknesses with regard to urban management and planning [1, 3]. Criticism was expressed regarding the large number of advertisements obstructing the space and buildings, the lack of uniformity in the style of the buildings and even their ugliness (e.g. the façade of the Center of Oncology of the Lublin Region). A much-discussed topic in the interviews was the disastrous condition of the existing PKS bus station and its surroundings and the need to revitalise some districts (Tatary, Bronowice, Dziesiąta). Residents were concerned about the poor condition of some of the buildings in the Old Town or Śródmieście district.

The housing policy and urban expansion were important topics. Lublin residents complain about high housing prices. They support the construction of new housing estates, but have a negative view of their implementation: dense blocks of flats, fences closing off the space, lack of greenery, lack of continuity of pedestrian routes and insufficient infrastructure for services, education and culture (e.g. lack of crèches, kindergartens, schools, libraries, community centres). To sum up, they call for a more planned and sustainable city development based on a coherent concept, a well-thought-out urban planning ensuring the fulfilment of the residents' needs [1, 3, 5b].

### Tourism and recreation

In interviews and an online survey [1, 5b], residents highlighted the tourist attractions of Lublin – the presence of many historical monuments, memorials and places of worship. They pointed out the uniqueness of the Old Town, appreciated the redeveloped Litewski Square with its multimedia shows and festivals organised in the city space. The history of Lublin and the culture associated with it was of great value to the residents surveyed. At the same time, they pointed out that Lublin's tourist potential should be better promoted.

Lubliners positively assessed the functioning of cultural institutions, sports fields and swimming pools [2, 4]. In most districts, positive evaluations of recreational areas and playgrounds prevailed, although some districts in Lublin need more support [5a, 5c]. The great need to create new, high-quality public spaces connecting generations has also been revealed by qualitative research and participatory activities [1, 3, 5b]. Also noteworthy are the diagnoses contained in the *Final Report of the Thematic Working Groups* [7]. Spatial issues were most strongly present in the results of the groups in the themes "green city", "urban planning" and "urban mobility", and to a slightly lesser extent also in the findings of the good neighbourhood group.

Discussions on the "green city" theme were conducted in 7 problem categories defined by the group: combating climate change, shaping ecological attitudes, sustainable transport, renewable energy sources, greenery in the city, urban planning, regeneration of ecological areas, as well as water and sewage and waste management planning. Among the weaknesses, residents particularly often raised problems related to the low environmental awareness of Lublin residents, the low share of energy from renewable sources and spatial planning. In the latter case, they drew attention in particular to the insufficient

coverage of the city by spatial development plans and the inadequate planning of urban greenery. As Lublin's weaknesses, they also mentioned issues related to individual transport – the attachment to personal means of transport or inadequate parking standards. Lublin's strengths in the area of green city are mainly its attractive location in terms of nature and the high-quality of urban greenery. It has also been pointed out that the number of attractive alternatives to traditional modes of transport is constantly increasing.

The group working on the thematic area "urban planning and urban mobility" defined 8 problem categories: the social role of urban planning and management, the balance between compactness and metropolitanity, the quality of public transport and the integration of transport networks, the protection of monuments and urban regeneration, the protection of greenery and green infrastructure, attention to the aesthetics of the city, ecology and sustainable urban development, the implementation of urban spatial development policy. Weaknesses were mainly related to infrastructural inconsistencies and the lack of a holistic planning approach, including: lack of visual coherence and urban standards, incoherence of infrastructure adapted to new mobility, lack of continuity of public spaces, the existence of buildings spoiling the cityscape, as well as littering the cityscape with advertisements and incoherent aesthetics of urban spaces. Among the strengths identified were elements relating to the city's historical and cultural heritage, progress in the development of public transport and aspects relating to urban greenery.

Much attention to urban space issues was paid by members of the good neighbourhood group. Among the problem categories analysed (already formulated as postulates) were the strengthening of the district infrastructure (including communication, schools, greenery,



common spaces and available services), widely available and co-organised by the residents of the districts places for meetings, activities and self-help, co-creation of the neighbourhood or taking care of the quality of newly created spaces. Repeatedly mentioned strengths of Lublin in the area of good neighbourhood were issues related to the maintenance of urban greenery, the urban layout and self-sufficiency of old housing estates, as well as the existence of opportunities to co-create the closest environment, although this is accompanied by low awareness of these opportunities among residents. The residents pointed out flaws mainly in the spatial development of the new neighbourhoods: low quality of green areas and common spaces, limited public transport and communication that promotes individual transport and increases traffic.

### Conclusions from diagnoses prepared for the municipal sectoral documents

An in-depth diagnosis in relation to the shaping of the space of Lublin was based on expert thematic diagnoses developed for the needs of the existing sectoral strategies and thematic reports, covering spatial development and urban planning: *Study of the Conditions and Directions of Spatial Management of the City of Lublin (Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Lublin)*, the report *Directions for the Spatial and Investment Development in Lublin (Kierunki rozwoju przestrzennie-inwestycyjnego Lublina)*, *Revitalisation Programme for Lublin for the years 2017–2023 (Program Rewitalizacji dla Lublina na lata 2017–2023)*, *Municipal Programme for the Protection of Historical Monuments in the City of Lublin for the years 2021–2024 (Gminny Program Opieki nad Zabytkami Miasta Lublin na lata 2021–2024)*, *Programme of Protection against Noise (Program*

*ochrony środowiska przed hałasem)*; the shaping of urban greenery and adaptation to climate change: *Circular Strategy for Lublin (Cyrkularna strategia dla Lublina)*, *Analysis of the State of Municipal Waste Management in Lublin (Analiza stanu gospodarki odpadami komunalnymi miasta Lublin)*, *Lublin Environment Protection Programme for the years 2021–2024 with the Perspective up to 2028 (Program ochrony środowiska miasta Lublin na lata 2021–2024 z perspektywą do roku 2028)*, *Plan of Adaptation to Climate Change in the City of Lublin until 2030 (Plan Adaptacji do zmian klimatu Miasta Lublin do roku 2030)*; energy security and urban mobility: *Low-Stack Emission Economy Plan for the City of Lublin (Plan gospodarki niskoemisyjnej dla Miasta Lublin)*, *Assumptions for the Heat, Electric Energy and Gaseous Fuels Procurement Plan for the City of Lublin for the Years 2019–2033 (Założenia do planu zaopatrzenia w ciepło, energię elektryczną i paliwa gazowe dla miasta Lublin na lata 2019–2033)*, *Strategy of Electromobility Development in Lublin (Strategia rozwoju elektromobilności w Lublinie)*, *Mobility Plan for the Lublin Functional Area for the years 2017–2025 (Plan Mobilności Lubelskiego Obszaru Funkcjonalnego na lata 2017–2025)*.

Administratively, Lublin is divided into 27 districts and 9 planning regions. Nearly 54% of the city area is covered by local spatial development plans. For the remaining area land development conditions decisions are issued, which, as a planning tool, do not guarantee the formation of sustainable land development, and even pose a threat in this regard and contribute to the uncontrolled urban sprawl, i.e. the spreading of urban developments on less urbanised areas.

Lublin is located in close proximity to the city of Świdnik and 7 rural municipalities: Wólka, Niemce, Jastków, Konopnica, Niedzwica Duża, Strzyżewice and

Głusk. These municipalities are a desirable destination for migration thus aggravating the problem of urban sprawl, contributing to the creation of chaotic spaces with low quality development. This is also reflected in the increasing urban pressure on environmentally valuable areas and in the devastation of the landscape. In Lublin, the effects of the suburbanisation process have not yet reached the crisis level, so it is particularly important to be aware that all the residents of the mentioned municipalities participate in the costs of suburbanisation (whether environmental, social or economic) in order to stop this process.

*The Lublin Regeneration Programme for 2017–2023 (Program Rewitalizacji dla Lublina na lata 2017–2023)* analyses the city for the occurrence of, among others, spatial, functional and technical crisis phenomena. The study covered urban units in which negative social phenomena were diagnosed. As a result, a regeneration area of 491.7 ha (constituting 3.34% of the city area) – the Old Town, the railway station, Kunickiego St., Kalinowszczyzna St., Śródmieście, Podzamcze St. and Czwartek St. – was delimited. The designated areas are spatially and functionally differentiated. What they have in common is the occurrence of a crisis in the spatial and functional, technical, and environmental spheres, i.e. the lack of care for old, often historical, buildings, the state of public spaces and greenery. The main problems include noise pollution, low planning coverage, poor condition of façades and a huge number of outdoor advertisements, degradation of buildings, low quality of public spaces and fragmentation of space. At the same time, it is pointed out that despite the state of degradation, this area has the greatest development potential and, thanks to its central location, among others, is of great importance for Lublin's development. This potential results from, for example,

the tangible and intangible cultural heritage present not only in the regeneration area. The *Municipal Programme for the Protection over Monuments of the City of Lublin for 2021–2024 (Gminny Program Opieki nad Zabytkami Miasta Lublin na lata 2021–2024)* points to the very high potential of the city due to its preserved cultural heritage, rich history and exceptionally important historical events for Poland. The problem is the poor technical condition of some of the resources (the main reason for which is the lack of financial resources or the unregulated legal status of the property) and insufficient protection of the cultural landscape.

The main threats to spatial development and urban planning listed in the *Study of the Conditions and Directions of Spatial Management of the City of Lublin (Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Lublin)* include:

- development and transformation of areas designated for protection, valuable both in terms of nature (including river and dry valleys) and culture (constituting the identity of the city);
- development of areas that are not favourable for building (including those at risk of flooding);
- overgrowth of the transport system in relation to the areas served;
- excessive dispersion of development and its spread into suburban areas;
- unfavourable and conflicting distribution of functions, including a deficit of public functions in new housing estates, mono-functionality of districts and moving service functions to the outskirts of the city – which increases the traffic load and is one of the reasons why the centre is “dying out”;
- excessive intensity of new multi-family development with no provision for public spaces and green and recreational areas;

- poor quality and mismatch between new development and its surroundings;
- inadequacy of development to human scale: the city is subordinated primarily to car users;
- private investment in areas that are essential for public functions, infrastructure or transport systems, preventing the satisfaction of these needs in the future or significantly increasing their cost.

A very important aspect from an urban planning perspective is accessibility, especially for the disabled, but also for groups with special needs, including senior citizens. For several years, Lublin has been implementing the principles of the so-called universal design in urban investments. At this point, we should mention the adaptation of sports and recreational infrastructure, including the equipping of playgrounds with facilities that can be used by children with different types of disabilities, including those in wheelchairs. In terms of technical infrastructure, a positive trend has been observed for several years. It consists in:

- lowering of kerbs in the area of pedestrian crossings;
- installation of tactile ground surface indicators on the pavement near the entrance to the roadway;
- providing thick-layer road markings at pedestrian crossings;
- using white and yellow symmetrical indicator tiles and yellow tactile indicator tiles at bus bays;
- the use of white symmetrical indicator tiles, yellow tactile indicator tiles, white asymmetrical indicator tiles, white separating indicator tiles and systemic kerbs at pedestrian crossings;
- the use of traffic lights with acoustic signals and pictograms on buttons;
- gradually increasing the number of unpaid parking spaces;
- successive removal of barriers in public buildings.

It is also worth mentioning that in 2020, a coordinator for accessibility of the Lublin City Office and organisational units of the City of Lublin was appointed, as well as a project team for accessibility of the Lublin City Office and organisational units of the City of Lublin.

Another important issue is the shaping of urban greenery and adaptation to climate change. The city is crossed by the valleys of the rivers Bystrzyca, Czechówka, Czerniejówka and Nędznica (Krężniczanka). The Bystrzyca river valley splits the city into two parts, different in terms of landscape: the left bank, characterised by a very varied relief with deep valleys and loess ravines, and the right bank, with a flatter and more monotonous relief. Within the city, forests cover an area of 1,674.29 ha or 11.35% of its total area. They are located in the southern and western parts of the city. The majority, i.e. 1,324.10 ha (forest area of 1,298.51 ha), are state-owned forests of the Świdnik Forest Division, mainly covering two large forest complexes: Dąbrowa and Stary Gaj. Private forests cover an area of 350.19 ha. There are 13 parks and gardens in Lublin with a total area of 195.75 ha. Most of them are in need of thorough regeneration. Urban greenery includes not only walking and recreational parks, but also greenways, housing estate greenery, street greenery, which together cover an area of 1,305 ha, i.e. 8.85% of the city area.

Urban greenery is of great importance for improving air quality in the city and for the climate, so it is essential to look after and maintain green areas. The biological role of greenery is reflected in the retention of dust, especially along busy traffic routes and in the vicinity of dust-emitting industrial plants. Plants also influence the composition of the atmospheric air by absorbing large quantities of harmful gases such as sulphur oxides, hydrogen sulphide, carbon dioxide, sulphuric, hydrochloric and nitric acids vapours and

dispersing them by the continuous movement of the crowns. It has been shown that in cities, the level of harmful gases in the air over large parks is 2–3 times lower than over densely built-up areas. Plants also have a filtering function: they trap exhaust fumes, accumulating heavy metals. Therefore, in highly contaminated zones, only non-food crops should be grown. Plants not only clean the air of gases and dust, but also enrich it with oxygen. It is therefore positive that the area of street greenery in Lublin is gradually increasing. In 2019, it covered 530 ha, which represents a 13% increase compared to 2013.

In the southern part of the city, there is the Czerniejowski Protected Landscape Area, the Stasin nature reserve. In addition, the city has 60 natural monuments and a small fragment of Natura 2000 areas, Bystrzyca Jakubowicka. There are 7 ecological sites and 2 landscape-nature protected complexes planned for creation. The Czerniejów Protected Landscape Area was designated on 23 March 1990 and covers an area of 19,510 ha. It lies in the south-eastern part of Lublin Voivodeship and is connected to the Krzczonowski Landscape Park. Stasin nature reserve was established on 1 January 1984 and covers an area of 24.4 ha. The aim of protecting the reserve is to preserve a fragment of deciduous forest with a high proportion of black birch. The Natura 2000 Bystrzyca Jakubowicka area is located in the Lublin Upland, in the north-eastern part of Lublin and in the municipality of Wólka. It covers a fragment of the Bystrzyca Valley, an estuarine section of the Ciemięga Valley with forks of both rivers, as well as fragments of valley slopes. The Bystrzyca river, a tributary of the Wieprz, drains the central part of the Lublin Upland. Its catchment area is 1,315.5 km<sup>2</sup> and its total length is 70.3 km. The area of its sanctuary is mostly covered with meadows. In some places there are also

clumps of shrubs and patches of riparian communities. Within the city, to the north-east of Kolonia Łysaków, there is a small fragment of the Ciemięga River Valley Protected Landscape Area. It includes the valley of the Ciemięga River to the north of Lublin, in the municipalities of Jastków, Niemce and Wólka. Its area is 2,627.0 ha. It forms part of the Nałęczów Plain, crossed by loess ravines. The predominant landscape is agricultural, with wet meadows, riparian forests, thermophilic grasslands on the slopes of the Ciemięga valley and numerous ravines. The areas classified as eligible for legal protection in the *Study of the Conditions and Directions of Spatial Management of the City of Lublin*:

- planned ecological sites: Derkaczowe Łąki, Zadębie;
- planned landscape-nature protected complexes: Górki Czechowskie, Dolina Cieku spod Konopnicy, Wąwóz Węglinek, Dolina Środkowej Czechówki, Dolina Jakubowicka, Dolina Trześniowska, Jakubowice Murowane, Majdan Wrotkowski, Łysaków, Skarpa Jakubowicka, Meandry Bystrzycy, Uroczysko Krężnickie;
- planned natural monuments.

The *Lublin Climate Change Adaptation Plan until 2030* identifies the main threats resulting from climate change, the sensitivity of the city due to its changes, the adaptation potential, the vulnerability of the city resulting from climate change, as well as opportunities and risks. Climate changes, both observed and projected in the Lublin area, translate into increasingly hot summers and milder, wetter winters: the average annual temperature, maximum temperatures in summer and minimum temperatures in winter are increasing, the number of hot days, tropical nights and the duration of hot spells are increasing, while the duration of snow cover is decreasing and the number of days with freezing temperatures or ground frost is less. Annual precipitation



and the number of days with precipitation are increasing, but the number of hot periods without precipitation is significantly on the rise. There are more and more days with strong gusts of wind, especially in winter, as well as summer storms. However, exposure to extreme precipitation increases only slightly, and there is no increase in drought risk. The most dangerous phenomena related to climate change for Lublin are: heat, frost, drought, intense precipitation, wind and storms. These phenomena pose a serious threat to the proper functioning of the city and to the health and lives of its residents. The number of hot days and the intensity of heat waves are expected to increase. A downward trend in adverse cold weather events in winter is also forecast. In the case of the number of days with precipitation and the amount of annual precipitation, values are expected to increase.

The vulnerability of the city to climate change is a relatively static characteristic, as it is determined by the permanent physical elements of the city. One of these permanent elements is the functional and spatial structure. Taking it into account in the assessment of the city's vulnerability is justified by the spatial variation of responses to climatic phenomena. This variation is primarily dependent on the proportion of built-up areas and biologically active areas, as well as architectural and urban forms closely related to the function of the development. Analysing the functional and spatial structure of Lublin makes it possible not only to identify vulnerable places, but also to indicate places for future adaptation interventions.

The state of water and sewage management within the city and the production facilities determines the quality of the aquatic environment. In 2020, 99.2% of residents used the water and sewage system, of which 95.1% had access to the sewage system and 95.8% to the water supply system. A wastewater agglomeration

is an area where population or economic activity is sufficiently concentrated for the proper circulation of wastewater. Lublin agglomeration of 571,515 PE covers Lublin, Świdnik, Głusk, Jastków, Konopnica, Niemce and Wólka with Hajdów Lublin urban sewage treatment plant.

Information on the state of waste management is provided annually by the *Analysis of the State of Municipal Waste Management in Lublin*. The municipal waste management system operating in Lublin since 1 July 2013 is based on the provisions of the Act on Maintaining Cleanliness and Order in Municipalities (Ustawa o utrzymaniu czystości i porządku w gminach), which means that Lublin has taken over the obligation to organise the collection of municipal waste from all property owners in the commune. The city has a decentralised system of points of selective collection of municipal waste, whereby different types of waste are accepted at many points located throughout the city.

In 2020, all properties (inhabited and uninhabited) in the area of the City of Lublin generated 147,742.2 t of municipal waste. For comparison, in 2018, this amounted to 132,397.27 t of waste. In 2020, 26,975.05 t of raw material waste (i.e. paper and cardboard, plastics, glass and textiles), 22,080.42 t of biodegradable waste, 72,160.72 t of non-segregated waste, 8,700.02 t of construction and demolition waste and 6,828.036 t of other waste were collected from inhabited and uninhabited properties. In 2018, this was 23,407.66 t of raw material waste, 9,309.96 t of biodegradable waste, 82,355.84 t of non-segregated waste, 7,769.68 t of construction and demolition waste and 9,554.13 t of other waste.

The amount of waste delivered to the municipal waste selective collection point (PSZOK) has increased significantly. In 2020, PSZOKs received 2,890.64 t of waste. In 2018, this was 1,649.46 t. The increase in the weight of waste being delivered indicates

an improvement in the ecological awareness of the city's residents and the effectiveness of education and information activities undertaken. PSZOKs are fulfilling their role better and better. Their functioning is firmly established in the minds of the city's residents.

Mixed waste in 2020 accounted for nearly half of all waste collected, i.e. 72,160.72 t. The achieved level of recycling, preparation for reuse and recovery by other methods of non-hazardous construction and demolition waste in Lublin in 2020 was 87.02%, while the applicable statutory level was 70.00%.

The *Environmental Protection Programme Against Noise of the City of Lublin* is a strategic document presenting the current state of the environment in the city and indicating the main environmental protection problems. This document defines the objectives and directions of actions for improving the state of the environment within the analysed areas of intervention in the adopted time perspective. This document determines, among other things, the influence of wind directions and speeds, the structure of buildings and the topography of the surface on the ventilation of the city, and thus on the state of air quality. The characteristic relief of Lublin's terrain makes it possible to ventilate the city. The dry valleys located in its western part are of particular importance here. The sun heats up the walls of the gullies, causing warm, polluted air to rise, while cold clean air flows into the gullies. The movement of air flowing out of the gullies ventilates the city.

Lublin, the capital of Lublin Voivodeship, is the largest city in Eastern Poland and is located at the intersection of important national transport routes – S12, S17, S19, DK82, LK7, LK68 – and in the complementary Pan-European Transport Corridor TINA, along the route of Gdańsk–Warsaw–Lublin–Kovel/Lviv–Odessa/Bucharest. Lublin's accessibility is also enhanced by the Lublin

Airport, which has been operating since 2012 and is part of the national air cargo services market. International trade is focused mainly on three sectors, i.e. agri-food, industry (machinery, automotive and aerospace) as well as wood and furniture. A great advantage of the airport is its central geographical location in the region with a well connected route to Lublin. The airport is connected to Lublin Główny station by rail (temporarily suspended during the COVID-19 pandemic). The terminal station of the railbus is located at the airport terminal, which is the only such solution in Poland.

Lublin's accessibility and urban mobility are going to be enhanced by the construction of the Integrated Transport Centre (Metropolitan Railway Station) and the reconstruction of the transport system, which are among the largest investments in recent years. The new transport centre is designed to integrate various forms of transport, including urban, suburban and long-distance buses and rail, in one part of the city.

Rail transport is an alternative to car transport and has been described as the most environmentally friendly means of travel. Rail travel plays an important role in public transport for reasons of safety of movement, ecology and transport capacity. In order to improve train connections, PKP Polskie Linie Kolejowe is executing an extension to the modernisation project for rail route no. 7 between Warsaw and Lublin, thus contributing to increased regional and central capacity. Work is also underway to develop a concept for the Lublin Agglomeration Railway, which will improve regional connections to Chełm, Biłgoraj, Puławy and Parczew, among others.

The organiser of public transport in Lublin is the budget unit of the Lublin Municipality – Zarząd Transportu Miejskiego w Lublinie (ZTM). At the request of ZTM, transport in the area of Lublin and

municipalities with which an agreement has been concluded is conducted by: Miejskie Przedsiębiorstwo Komunikacyjne Lublin Sp. z o.o., Lubelskie Linie Autobusowe, and the consortium of Meteor and IREX-1. Public transport in Lublin is served by 265 buses with combustion engines and 159 with electric drive, including 138 trolleybuses and 21 electric buses, which means that Lublin already meets the 30.0% threshold for the share of zero-emission vehicles in the entire fleet with a ratio of 37.5%, being at the forefront of electromobility systems in Poland and even in Europe. This requirement stems from the Act of 11 January 2018 on Electromobility and Alternative Fuels and concerns ensuring the share of zero-emission buses in the vehicle fleet in use. There are currently 50 bus lines – plus 5 depot return lines and 3 night lines – and 12 trolleybus lines – plus one depot return line.

Photovoltaic panels have been installed on the roofs of 157 buses powered by diesel engines and operated by MPK Lublin Sp. z o.o. They are an additional source of electricity for the buses. In 2021, ZTM has decided to introduce the New LUBIKA Ticket System. On a national scale, Lublin was the first city in Poland to adopt an innovative solution in the form of a comprehensive system comprising stationary tickets, EMV ticket validators with contactless payment, mobile tickets, recharging terminals, readers for ticket controllers, as well as a dedicated mobile application and website.

The number of passenger cars registered in Lublin is gradually increasing. For example in 2018 it was 189,281 and in 2019 it was 196,347. Between 2014 and 2019, the number of registered passenger cars in Lublin increased by 24%. In order to reduce private vehicular traffic, the city introduced carsharing services in 2018. Thanks to

the car-sharing economy, not only is the number of cars circulating in the city reduced, but it also makes a significant contribution to creating pro-environmental and pro-social attitudes. Since 2018, the carsharing service has been provided in Lublin by Panek s.a., which offers more than 150 cars in 15 different models.

In October 2011, the Lublin City Council adopted by resolution the Lublin City Cycling Policy, which is one of the strategic documents of the city in the field of transport. The policy helps to build the vision of a city that ensures a high-quality of life. It assumes the reduction of transport nuisance for the environment and residents and ensuring traffic safety as well as lowering the economic and social costs of transport. The Lublin city bike system is operated by Nextbike Polska. The infrastructure of the system consists of 700 bicycles (12 are children's bicycles), operating at 127 stations (82 standard ones in Lublin, 5 standard ones in Świdnik, 2 stations for children in Lublin, 38 passive ones in Lublin). During the winter period, i.e. from 1 November to the end of March, the fleet is reduced and 210 bikes remain on the road. According to the data of the Lublin City Office, in 2020 the total of cycling routes amounted to 181 km, including more than 160 km in the road lane. It is significant that their length increased almost 3 times during the period of the completed *Lublin 2020 Strategy*.

An important issue in regional transport is the operation of public transport in both the Lublin Metropolitan Area (Lubelski Obszar Metropolitalny, LOM) and the entire voivodeship. A coherent public transport system requires the development of integrated transfer nodes that allow the streamlining and better use of all means of transport. The organisation and optimal location of interchange infrastructure (e.g. stations, stops and car

parks) as well as the accessibility of bus, trolleybus and rail transport are of particular importance in this respect. Public transport in the Lublin Functional Area includes the following local government units: Głusk, Jabłonna, Jastków, Konopnica, Lubartów, Mełgiew, Niedrzwica Duża, Niemce, Spiczyn, Świdnik, Wólka. Currently, one of the largest and most important investments related to the integration of different forms of transport within the LOM is the construction of the Integrated Transport Centre. In the case of rail transport, the main transport line is route no. 7, which runs from Lublin in north-western direction through Puławy to Warsaw. It also connects Lublin and the municipalities of the Lublin Metropolitan Area with the east, running through Chełm to the border crossing with Ukraine at Dorohusk. This is a line of international importance which is part of the TEN-T comprehensive network. Lublin's position as an economic and educational centre, in the context of the ongoing suburbanisation processes, influences the development of transport connections enabling Lublin to communicate with its neighbouring municipalities.

Energy planning and ensuring energy security is the own duty of the municipality based on the Act of 10 April 1997 – The Energy Law and is implemented on the basis of the provisions of the local spatial development plan or, if there is no such plan, on the basis of the spatial development conditions and directions study and the relevant air protection programme.

The Lublin heating system consists of a heating network managed by Lubelskie Przedsiębiorstwo Energetyki Ciepłej s.a. and two combined heat and power plants: PGE Energia Ciepła s.a. Elektrociepłownia w Lublinie Wrotków Branch and Elektrociepłownia Megatem EC-Lublin Sp. z o.o. As regards electricity, the

distribution network operators in the Lublin municipality are: Polska Grupa Energetyczna Dystrybucja s.a., Towarzystwo Inwestycyjne "Elektrownia-Wschód" s.a. and PKE Energetyka s.a. The operator of the natural gas transmission system is Operator Gazociągów Przesyłowych Gaz-System s.a. The distribution of natural gas is handled by Polska Spółka Gazownictwa Sp. z o.o. In addition, there are 3 electricity and heat generation units operating in the Lublin area: Megatem EC Lublin Sp. z o.o., Polska Grupa Energetyczna Energia Ciepła s.a. Elektrociepłownia w Lublinie Wrotków Branch and Miejskie Przedsiębiorstwo Wodociągów i Kanalizacji w Lublinie Sp. z o.o.

Lublin's demand for energy is constantly growing. Between 2008 and 2018, electricity consumption in Lublin increased from 745,688.99 MWh to 951,445.55 MWh, representing a 27.60% increase. One of the largest consumers of energy is industry. In 2018, this sector consumed more than 41.00% of the energy. Over 27.00% of the energy is consumed in residential facilities and over 26.00% is consumed in trading and service facilities. The lowest share of energy consumption is represented by municipal non-residential buildings – 1.73%. The municipal public lighting and public transport consume 2.56% and 1.19% of energy respectively.

Lublin has very favourable conditions for the development of energy based on renewable energy sources (RES), particularly solar energy. Lublin supports the possibility of developing RES in accordance with the Spatial Development Conditions and Directions Study for the City of Lublin. Detailed solutions for this type of installation are provided in the emerging local spatial development plans, adequately to the intended use of the land. According to the data from the *Report on the*



*Implementation of the Low-Carbon Economy Plan for the City of Lublin*, in 2019 the amount of energy coming from renewable sources was 14,102.50 MWh/year. A high share of investment in renewable energy sources is held by Miejskie Przedsiębiorstwo Wodociągów i Kanalizacji w Lublinie Sp. z o.o., in which Lublin holds 100% of shares. The company operates the Hajdów sewage treatment plant in the eastern part of the city. The result of the sewage treatment process is biogas, from which electricity and heat are produced, ensuring the entire heat demand of the plant and more than half of the electricity demand of the treatment plant. In addition, electricity generation is supplemented by a photovoltaic farm launched in 2020 with an estimated peak power of 1,998.36 kWp.





**The future of Lublin:  
vision and mission**







## Vision

Lublin in 2030 is a medium-sized Polish and European metropolis, positively perceived at home and abroad, distinguished as an academic centre, a city of culture and a space for the development of a modern economy. Lublin is a city appreciated by its multigenerational and diverse community, effectively managed, full of greenery and opportunities for various activities, a place to live, where one can fulfil their educational, professional and creative aspirations, raising their children and aging with the satisfaction of living in favourable conditions. The pride of Lubliners is built on the unique atmosphere of the city, where everyone is welcome.

## Mission

Lublin's mission is to strive to create the best possible place for living, education, work and leisure by implementing a number of programmes and projects for and by its inhabitants. Sustainable development of the city meets the expectations of the multigenerational community and is based on values such as hospitality, openness to diversity, readiness for change, localism as well as respect for nature and care for the ecosystem. The health and well-being of its residents is a priority.

The vision constitutes an image of Lublin's future, expressing dreams and presenting overarching goals to be achieved. The vision for Lublin in 2030 is reflected in the development areas of the *Lublin 2030 Strategy*. The first area is Lublin as a creative, academic and entrepreneurial city. The second area emphasises the vision of Lublin as a green and sustainable city and the third area as an open, multigenerational and socially engaged city. The above-mentioned areas of development correspond to the three pillars of sustainable city development: economic, environmental and social. This concept is complemented by two further development areas: Lublin as an inventive, active and hospitable place and Lublin as a metropolitan city. Each of these areas should pursue the vision of a city that is attractive to live in, resilient to climate change, smart and well-managed.

The mission statement describes the direction of development to be pursued by Lublin and provides answers to the following questions: What should be achieved? What needs should be satisfied? What actions should be taken to that end?

The vision and mission of Lublin were formulated in a few short sentences and constitute a synthesis of ideas for the future of the city expressed directly by several thousand inhabitants of Lublin in a long and complex consultation process. It was based on





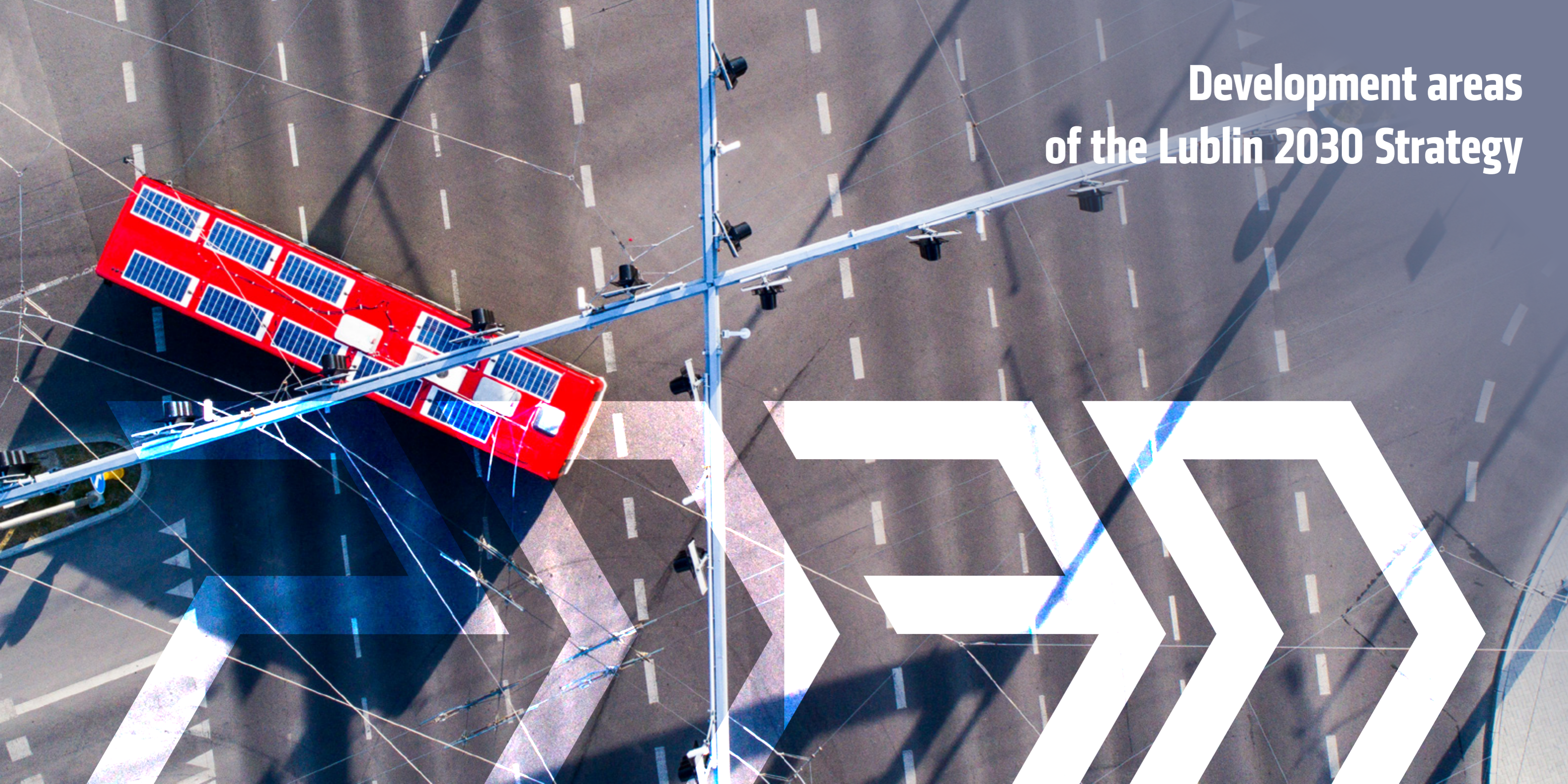
the assumption that the image of the future of the city should be created with the full involvement of Lublin's community and legitimised by the awareness, understanding and acceptance of the community of Lubliners. Their perspective is complemented by the input from experts involved in the process of developing the *Lublin 2030 Strategy*. The visions of the future and the opinions expressed by the residents became one of

the most important sources of inspiration for the expert Thematic Working Groups, which, among other things, on the basis of the information and opinions gathered in the dialogue with Lubliners, developed a catalogue of recommendations concerning the directions of the city's development and detailed visions for each of the 12 analysed strategic areas, laying the foundations for the skeleton of the *Lublin 2030 Strategy*.





# Development areas of the Lublin 2030 Strategy





# Lublin – creative, academic and entrepreneurial

Economic as well as social and environmental development make up one of the three pillars of sustainable development and play a fundamental role in ensuring a high-quality of life and prosperity for Lublin residents. They are well aware of this fact – the desired vision of the future as outlined in the social assessment is for Lublin to be a city offering attractive jobs and development opportunities. Today, however, the economic development cannot be seen through the prism of production growth, as a simple result of increasing labour and capital expenditure, quantitative growth of investment and consumption. Development is even no longer the sum of individual successes of people and companies, or the presence of a large company achieving global success. The foundations of economic success are knowledge, creativity and entrepreneurial culture, fostered in kindergarten, school or college education, or in companies, but also in social organisations, peer groups and in the digital world. School and extracurricular education, universities and the business sector – as important and mutually supporting subsystems – may cause development impulses determining the wealth of Lublin and its residents in the decades to come.





Openness to change, the ability to create innovations and willingness to take risks must be developed in an environment favourable to the development of individuals as well as groups, companies or institutions, by a specific ecosystem offering opportunities for meetings, creative exchange of knowledge and cooperation. It is in this kind of environment (where people and organisations come together) that innovations and entrepreneurial initiatives are most often created and translated into successes in business and science. Cities are the ideal settings for these processes – offering proximity, density and diversity of people and ideas.

Lublin offers resources which, if skilfully used and developed, will enable a dynamic economic development in the present decade. The educational system in Lublin is first rate and the percentage of residents with a university degree is one of the highest in the country. However, it is necessary to ensure high-quality lifelong education, focused more on the development of competences and qualifications rather than knowledge which is so easily available today. The academic character is a well-recognised brand of Lublin and a source of pride for its residents, and the universities themselves play an important role in creating innovation and development of the city's human resources. Further enhancement of Lublin's academic functions requires an increase in its potential as an international education and research centre, and further release of the universities' potential – implementation of their third mission in the area of cooperation with the social and economic environment, together with even greater than before activity of the self-government in this area. These resources constitute the city's assets, thanks to the fact that Lublin's business can achieve competitive advantage, which should result in the improvement of the quality of life of all residents as well as the

increase in prosperity. The self-government can support this process by co-creating innovative and balanced economic ecosystems – connected with the economic specialisations of the city, as well as by developing the culture of entrepreneurship or providing conditions for the creation of the necessary economic infrastructure. These targets are interrelated to such an extent that only progress in each of them will contribute, by creating additional synergies, to increased economic competitiveness of the city.

The success or failure of such a defined vision for Lublin's economic development is in strong interaction with horizontal objectives. Firstly, today, neither individual companies or the whole economy can count on lasting success without taking advantage of the opportunities arising from digital transformation and technological development. Secondly, the economic development must respect the resources of the natural environment, in accordance with the idea of sustainable development, and Lublin should be a precursor in creating and adapting green innovations and increasing its resistance to climate changes. Thirdly, the economic development of the city should bring benefits to all Lubliners, including those less well off. Lastly, in the context of demographic change, economic success is both a factor and an effect of Lublin's high attractiveness, especially the city's potential to attract and retain the most talented individuals.





## A.1. | High-quality education at every stage of life

The education system is the basis of the development of modern countries and regions, and public spending on education is regarded as one of the most productive public expenditures. Particular care for the quality of education has proved to be a key factor in the development of those areas which have successfully made up for their underdevelopment and are now set as role models. Concern for education is also one of Lublin's development priorities, to which the city allocates a third of its budget – ensuring a level of funding that far exceeds the amount of educational subsidies granted by the government. Today, students achieve above-average academic results, Lublin's schools use an integrated IT system, vocational schools tighten their cooperation with local businesses, and Lublin's educational policy is regularly recognised in a nationwide certification programme.

However, many challenges need to be addressed to ensure high-quality education in the years to come. The world is changing faster than school curricula, and technological changes led by digital transformation make it necessary to redefine the education process and the role of its participants. Meanwhile, the teaching profession for many seems to be an increasingly

unattractive career choice, and educational subsidies for local governments are permanently underestimated. These and other challenges seem particularly acute today, when the experiences of the pandemic period and remote education have challenged the hitherto view of priorities in education.

The quality of education – especially of children and young people in public institutions – was a frequent topic raised by Lublin residents during discussions about the future of their city. Many people stressed that it depends on how children are brought up. Lubliners wanted the number of places in nurseries, kindergartens and elementary schools to meet the needs of each district. In their view of the future, kindergartens are well equipped and employ qualified staff, and children spend their time actively, often outdoors, visiting theatres or museums or taking part in interesting workshops. A vision of the school of the future created by the residents of Lublin covers many aspects: a rich offer of classes and individualisation of education (e.g. by running extracurricular classes), a modern didactic base and friendly organisation of school space, with many opportunities to develop social competences. In the opinion of the residents, ensuring high-quality of education

requires the school of the future to be a safe place, supporting emotional development and social involvement of children and youth, with staff caring for the needs and talents of every pupil. In the residents' opinions, the issue of tuition-free education and the benefits of cooperation between schools and other institutions, such as universities, cultural centres or non-governmental organisations, was also frequently raised.

The residents' perspective is complemented and made more specific by the vision of the future of education in Lublin formulated by experts working in the Thematic Working Group on education. The desired vision of the future assumes that students of all Lublin schools learn effectively and do not need to attend tutoring sessions. They participate in attractive lessons taught by competent and friendly teachers who involve all students in their work during class, give them useful feedback on their progress and use modern technologies in teaching. Each school in Lublin offers students an attractive range of extracurricular activities and implements a municipal programme for educating students in social competences and dedicated projects. The professional development system for teachers supports

raising their qualifications, and the municipal teacher motivation programme enables the best teachers to be rewarded and encourages graduates to work in the education sector. A sufficient number of places in municipal nurseries, kindergartens and elementary school are available in each district. Each school in Lublin has modern teaching aids and equipment, as well as ergonomic and modern furnishings. The educational infrastructure has been renovated and expanded, and there are enough places in dormitories for students from outside Lublin. Lublin's extracurricular educational centre, which stimulates interest in science and technology, is very efficient in the city. All secondary schools participate in a system of cooperation with both Lublin universities, whose staff teaches a part of obligatory and optional STEAM subjects (*Science, Technology, Engineering, Arts, Mathematics*), and with cultural institutions. Each secondary school has a municipal entrepreneurship development programme and a career planning programme. Adult residents of Lublin improve their qualifications in various lifelong learning centres, and special emphasis is placed on developing future-oriented competencies, including learning about modern technologies.

## High-quality education at every stage of life

### To achieve this objective, we intend to:

**A.1.1.** Ensure high-quality and effectiveness of education in schools and educational institutions in Lublin, among others, by ensuring adequate staff resources, creating an incentive system and developing methodological competences of teachers, creating a rich and attractive offer of extracurricular activities and using modern equipment and teaching aids.

**A.1.2.** Ensure high-quality competency-based education, including competencies of the future (e.g. STEAM or programming competencies), allowing to adapt to the needs of the changing labour market, and in particular the needs of economic specialisations developing in Lublin – branches of modern industry and knowledge-based services.

**A.1.3.** Provide modern infrastructure (for both in-school and out-of-school as well as informal education) addressing the needs of all residents.

**A.1.4.** Create effective cooperation systems of schools and educational institutions with universities, business, institutions of culture, sports, science, non-governmental organisations and other stakeholders of the education system.

**A.1.5.** Ensure a high level of vocational education and counselling which corresponds to the needs of the changing labour market, i.a. by establishing a municipal vocational counselling system and ensuring highly competent teachers of vocational education, in cooperation with universities and business.

**A.1.6.** Ensure high-quality of adult education in Lublin by creating an offer of perfecting and retraining

(adjusted to the needs of the changing labour market and technological development) and providing highly qualified teaching staff.

### Key tasks and projects

**A.1.k.1.** Establish (on the basis of currently functioning educational facilities and after their retrofitting and funding) a municipal teachers' in-service training centre ensuring a comprehensive offer of competency education for teaching staff, including the development of methodological competency, future competency, social and civic competency.

**A.1.k.2.** Establish the Science and Experimentation Centre in Lublin – a centre promoting science, creativity and innovation of regional and supraregional range of influence, as well as development of its substantive program. This measure should be implemented in cooperation with the voivodeship self-government, universities and business partners.

**A.1.k.3.** Develop and modernize the educational offer and technical-didactic base of vocational schools, educating in sectors important for the regional economy, in particular those identified as smart specialisations of Lublin.

**A.1.k.4.** Develop the offer and infrastructure of lifelong learning centres and promotion of lifelong learning.

**A.1.k.5.** Conduct cyclical analyses of current and predicted demands for places in public nurseries, kindergartens, and elementary schools in particular districts, and then ensure an equivalent number of places for children within equal standards.

**A.1.k.6.** Establish municipal cooperation programmes between schools, universities, business and cultural institutions; the first programme could specify the

participation of university staff in classes for school students and the participation of school students in university classes; the second could specify a framework for entrepreneurship education as well as counselling and vocational training; the third one would stimulate the participation of artists and cultural institution staff in classes at schools and the participation of school students in classes held at cultural institutions.

**A.1.k.7.** Establish municipal career guidance system – in cooperation with universities and businesses.

**A.1.k.8.** Implement grant programme for the organisation of tuition-free extracurricular activities (developing talents and interests, or compensatory activities) in schools and educational centres.

**A.1.k.9.** Establish municipal programme aimed at developing students' extracurricular interests, funding interesting, tuition-free extracurricular activities.

**A.1.k.10.** Implement measures strengthening the bonds between young people and the city; these measures should, in particular, create an opportunity to acquaint young people with Lublin's companies, following the example of the *Enterprising Kids* project (*Przedsiębiorcze dzieciaki*), but also with cultural centres, civic organisations and universities; they should present development opportunities in Lublin and support the start for young entrepreneurs.

### Recommendations and synergies

- A person develops at every stage of life, therefore a diverse educational offer should be available to people of different ages – from the youngest to seniors, both in school and academic institutions (formal education) and beyond (non-formal and informal education). The dynamics of technological progress

and the pace of civilisational changes make the realisation of the idea of lifelong learning a precondition for the development of productive employment and limiting structural mismatches on the labour market.

- The scope of competences of the future is not defined once and for all, as it is a response to the changing predictions about the directions of civilisation changes. Currently, much attention (from the earliest stages of education) is paid to the development of social, civic and emotional competences, learning skills, creativity and entrepreneurship, digital competences in areas related to science, technology, engineering, arts and mathematics (STEAM).
- The implementation of the provisions of the *Lublin 2030 Strategy* should take into account the experience gained in the era of the pandemic, which radically changed the view on priorities in education. Remote learning has given rise to many fears – the exclusion of some students without access to computers and the Internet, students increasingly falling behind, or the social and emotional well-being of children and young people. However, the crisis may become an opportunity for greater digitisation of teaching, modernisation of educational methods and techniques, greater individualisation of education and independence of pupils.
- Lublin performs higher-level functions for the region in terms of secondary education, especially in technical and vocational schools, most of whose pupils come from outside Lublin, and schools offering special education. Both the existing educational infrastructure and those planned for the future (e.g. the Science and Experimentation Centre) will be accessible to students from the entire region and beyond. The role of Lublin as a regional educational centre



creates the need to develop dormitories and boarding schools, and is an important condition for supralocal and regional policies (e.g. in the field of public transport or coordination of vocational education at the regional level).

- The synergy between schools and universities generates additional, mutual benefits: for schools, it provides an opportunity to enrich their offer of compulsory and non-compulsory classes, especially in STEAM disciplines; and for universities an opportunity to attract talented young people to their schools.
- Lublin is an open city, therefore it should create opportunities for immigrants to adapt and integrate, to learn the Polish language and acquire professional qualifications desired on the labour market. Openness also means willingness to develop international cooperation between various educational institutions or study visits (e.g. within the Erasmus+ programme), which promote the exchange of experience allowing to improve the quality of education in Lublin.
- The education system not only influences economic prosperity, but – which is equally important – contributes to social development (e.g. through shaping social and civic attitudes of young people or promoting health and prevention), as well as environmental development (e.g. through dissemination of sustainable consumption patterns).
- Many decisions that are key for achieving high-quality education are taken not by the Lublin city government itself but by the central government administration bodies, for example, the minister responsible for education and upbringing or the Board of Education. This applies in particular to such sensitive areas as education financing or changes to the core curriculum. The City of Lublin declares its openness

to dialogue and readiness to cooperate with the government administration for the sake of high-quality education in Lublin.

#### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) create a municipal centre for in-service teacher training;
  - b) create the Science and Experimentation Centre in Lublin;
  - c) launch a system for analysing demand for places in public crèches, kindergartens and primary schools in the districts;
  - d) create a municipal cooperation programmes with universities, business and cultural institutions;
  - e) develop a municipal career guidance system;
  - f) implement of a grant programme for the organisation of free extracurricular activities;
  - g) create a municipal programme for the development of extracurricular interests of pupils;
  - h) implement of activities strengthening young people's bonds with the city.
2. Analysis of key indicators and criteria:
  - a) children aged 3–5 per one place in a pre-school educational institution;
  - b) average number of pupils per class in schools;
  - c) the number of places in boarding schools and dormitories;
  - d) the pass rate for the secondary-school leaving examination;
  - e) percentage of adults participating in education or training.
3. Additional indicators and monitored data:
  - a) number and percentage of students from schools outside Lublin;



- b) the percentage of students covered by the system of vocational counselling;
  - c) number of secondary and vocational school graduates who do not work and do not continue education;
  - d) number of places in boarding schools and dormitories;
  - e) number of students taking advantage of paid tutoring and number of students taking advantage of free of charge additional activities in schools and outside them;
  - f) median age of teachers.
4. Expert assessments on:
    - a) educational quality results of Lublin schools using the educational value added method;
    - b) human resources of the Lubelskie voivodeship education system;
    - c) teachers' motivational system;
    - d) methodological competences of teachers;
    - e) use of innovative teaching methods;
    - f) projects/programmes in the field of future competence education;
    - g) infrastructure for extracurricular and informal education and the offer of extracurricular activities;
    - h) equipment and teaching aids.
  5. Opinions of residents on:
    - a) quality of education in Lublin.

## A.2. Academic Lublin – international centre of education and research

Academia is still Lublin's brand and its hallmark. For our city, the presence of universities may be an important development factor. An important yet traditionally understood element of influence is the generation of productive and attractive jobs by the academic sector as well as creating broad urban-creative impulses, such as creation of an intellectual base and education of highly qualified personnel for the economy and society. Today, ambitious academic cities are expanding the traditional educational offer to include a dimension of international education and global research. Leading academic centres around the world are attracting international students and participate in the global publication circuit. Since 2011 the City of Lublin has been running an ambitious programme in cooperation with all universities to create an international teaching offer and to attract foreign students. As a result, the city has become a Polish leader in education of foreigners, which brings significant economic effects for the universities and the local economy. Such a policy should be pursued in order to extend the educational programme to other countries, while at the same time increasing the attractiveness and quality of the international offer. This should be accompanied by intensification – supported by the

City of Lublin – of the universities' activities aimed at greater internationalisation of scientific research and joining global research structures. If these intentions are fulfilled, Lublin has a chance to become a recognisable international academic centre with a number of positive social-economic and image-related consequences.

Building the academic brand of Lublin as an international centre of research and education in the coming decade involves a number of challenges and threats. Universities in the modern world have lost monopoly on knowledge and scientific research, which threatens to marginalise the Lublin community unless it takes radical steps to improve the quality of education and scientific research in selected fields of study. These activities should be supported by unconventional promotion and effective communication of the research and educational achievements of the university in the new media. The pandemic has clearly demonstrated that a poor quality of the educational offer influences potential students' decisions to postpone or abandon choosing the path of academic education. This is compounded by problems related to the relatively low attractiveness of scientific careers in Poland, which brings the risk of draining human resources and the creation of a generation

gap. Lublin inhabitants are proud of the universities present in the city, but their future raises many concerns, e.g. about the decrease in the number of students, including foreign students, which could have a very negative effect on both the financial situation of the inhabitants and the dynamics of city life. They therefore point to the need to intensify promotional activities of the city and the universities both in Poland and abroad. Curricula should include the teaching of soft skills and activating methods. Employers, on the other hand, indicated the necessity of flexible education, preparing future employees to function in a world where labour market demands change rapidly. The respondents also stressed the need to intensify efforts to prevent the outflow of talented students from Lublin by launching systemic partnership programmes between universities and secondary schools. In the opinion of Lubliners, it is necessary to prepare new fields of study and to create two universities that are missing in Lublin, such as the Academy of Fine Arts and the Academy of Music. The residents were positive about the rich educational offer in the city, although at the same time they underscored that the methods and content of education need to be revised.

Experts involved in the work on the new strategy for the city formulate concrete visions and recommendations regarding academic Lublin in 2030. First of all, a rise in the number of students is expected, especially foreign students, thanks to the allocation of considerable funds for the promotion of the Study in Lublin programme, both by the universities, the city and the region. It is possible for Lublin's universities to become leaders in innovative programmes based on digital technologies, using and filling remote education platforms in the Teaching Design formula. According to the vision outlined by the experts, the universities also offer a very broad and attractive offer of vocational education, both for the Polish and global markets. In 2030, thanks to, among others, the consolidation of some of Lublin's universities, the academic Lublin has a university of a very high research level, while the city itself has maintained the position of one of the five leading academic centres in Poland. Lublin's universities have definitely improved their position in key international rankings, including the Shanghai list.



## Academic Lublin – international centre of education and research

### To achieve this objective, we intend to:

**A.2.1.** Strengthen Lublin's academic research capacity to deliver the highest quality, internationally recognised research.

**A.2.2.** Co-create a model of high-level university vocational education according to international standards.

**A.2.3.** Achieve a level of internationalisation of education similar to leading OECD countries.

**A.2.4.** Lead Lublin to become a globally recognised and advanced ecosystem in the Teaching Design sector, enhanced by creative industries.

**A.2.5.** Achieve the status of *European Student Capital* in the areas of culture, sports, entrepreneurship and creativity.

### Key tasks and projects

**A.2.k.1.** Support the process of strengthening and institutionalising the cooperation of Lublin universities which implement joint international scientific, teaching and promotional projects, as well as pro-efficiency consolidation of scientific disciplines.

**A.2.k.2.** Implement the project *Visiting Professors in Lublin*, coordinated by the Lublin City Office with cooperation of all Lublin universities (with joint financing from all partners) and its international promotion.

**A.2.k.3.** Implement the *Academic Lublin Programme* (coordinated by Lublin City Office) in the part supporting science and internationalisation of education.

**A.2.k.4.** Prepare a strategy for the participation of all Lublin universities in the consortia of European universities and development of European consortium projects with the involvement of Lublin and European universities.

**A.2.k.5.** Select and access international accreditation of strategic university courses in vocational education (international education consortia).

**A.2.k.6.** Construct a model of vocational education at Lublin's universities, which will enable the inclusion of more business practitioners in vocational education, the development of an internships system abroad for students, and the development of subjects in the course grids that include students – workshops, debates, creating new solutions.

**A.2.k.7.** Implement the *Study in Lublin 2.0* programme coordinated by Lublin City Office in collaboration with all Lublin universities (with joint financing from all partners) and the development of an internship system for foreign students.

**A.2.k.8.** Support universities in the development of a quantitative and qualitative offer of English-language majors in cooperation with foreign partners, the organisation of international summer schools and obtaining international accreditation for the English-language offer of Lublin universities. Development of the English language offering in connection with the city's smart economic specialisations.

**A.2.k.9.** Foster cooperation between the city, the university, business and international partners in creating new fields of study in Teaching Design and acquiring new staff to conduct teaching on the newly created courses.

**A.2.k.10.** Stimulate collaborative activities of the city, universities, business and international partners for the digitisation of Lublin's universities, local government,

municipal institutions, hospitals and other stakeholders (the Lublin Digital Union programme).

**A.2.k.11.** Joint activities of the city, universities, business and cultural circles to create new directions of artistic, theatrical and creative education, which are missing in Lublin's offer (Academy of Arts and Creative Industries).

### Recommendations and synergies

- Although Lublin is not the governing body for universities located in the city, since 2011 it has been actively coordinating, by mutual agreement, many common projects with universities aiming to develop the academic community, the city, business and local communities. Despite the autonomy of the universities, it is possible to carry out activities for the common good initiated by the city. Nowadays, close cooperation of science, local government, business, residents and non-governmental organisations is the hallmark of Lublin in Poland and we should take joint action to further strengthen that.
- One of the conditions for attracting Polish and foreign students to Lublin, apart from attractive fields of study and opportunities to find attractive employment after graduation, is the *genius loci* of the city academic city. The development of students' passions, taking up a first job or other forms of social and cultural activities of young people are crucial for their intellectual formation. The academic city, the city of *genius loci*, with its unique character, but also with its wide offer for students, not only enables them to experience their studies as the most beautiful period in life, but also helps them to make decisions with Lublin as their place on earth. In order to maintain such character of the city, synergy

of activities with all strategic areas of *Lublin 2030 Strategy* is necessary.

- Students from all over the country study in Lublin, although the vast majority of them come from the eastern, southeastern, and southern parts of the country. The influence of the Lublin centre should remain supraregional, and attempts should be made to extend it to the central and northern part of the country, and attract high school graduates from large academic centres in western Poland who are interested in the offer of niche studies in Lublin. This should be supported by the promotion of the city's academic potential as well as improving transport accessibility of the city for young people coming from the region and from outside Lubelskie Voivodeship.
- Lublin, as a global education centre, gathers students from over 100 countries worldwide, which proves the high international attractiveness of the city and Lublin universities. Lublin's target markets are the countries of Eastern Europe, Scandinavia, the USA, selected Asian and African countries. Geographic specialisation is optimal today, but it will require strategic adjustments related to educational trends and economic migration.
- The requirement for maintaining a favourable situation of Lublin in terms of its position on the international educational market is the reception and integration of foreign students with the city in various areas: the labour market, culture, sports and social activities.
- Lublin should take the opportunity of winning the title of *European Youth Capital 2023* to promote itself as a European academic city, which is why its projects should include universities and students and foreign students.

- A necessary but long-term process to strengthen the scientific potential of universities is to promote academic careers among the most talented students and to support young scientists. The City of Lublin can support universities in this area by implementing the *Visiting Professors in Lublin* and *Academic Lublin Programme*, the implementation of the municipal programmes of scholarships for students and doctoral students, initiating cooperation with business and stimulating the commercialisation of science or promotional activities.

- c) number of new fields of study in artistic disciplines (e.g. drama, music), new fields of study in design (e.g. game development, 3D graphics, multimedia, interior design, industrial design).
- 4. Expert assessments on:
  - a) research potential of the university;
  - b) university model of vocational education;
  - c) quality of teaching offer and living conditions for foreign students in Lublin.
- 5. Opinions of residents on:
  - a) presence of foreign students in Lublin.

#### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) implement the *Visiting Professors in Lublin* programme;
  - b) implement the *Academic Lublin Programme*;
  - c) implement the *Study in Lublin 2.0* programme;
  - d) found the Academy of Arts and Creative Industries.
2. Analysis of key indicators and criteria:
  - a) proportion of foreign students in the total student population in Lublin;
  - b) number of English-language majors offered and launched at Lublin's universities;
  - c) number of universities with very high research potential in Lublin in 2030;
  - d) number of foreign scientists and doctoral students in the *Visiting Professors in Lublin* program;
  - e) number of international accreditations of higher vocational education in Lublin.
3. Additional indicators and monitored data:
  - a) number of consortia of European universities with the share of Lublin universities;
  - b) number of professors from Lublin who are presidents of international scientific societies;





## A.3. Synergy of the city and the university

The symbiosis of the university with the city and its inhabitants is today one of the cornerstones of the development of modern academic cities, as well as one of the three missions of modern universities. In Lublin, the process of building intensive relations in the city–university–business–citizen system started after 2010, as part of the implementation of the previous strategy of city development. Today, the city is nationally perceived as a leading centre of multidimensional contacts in the above-mentioned systems of interdependence, and the Lublin local government skilfully initiates, coordinates and manages many projects at the junction of the quadruple helix of various stakeholders. Culture of cooperation between the above mentioned entities started to be something natural in the city and an object of appreciation, attention and sometimes envy on the part of other academic cities in Poland. This should be maintained and strengthened through smart institutionalisation and creating new networks of cooperation between the city and the universities, and further support of the universities in building relationships with business and local entities. This process is becoming more and more natural and is beginning to resemble the one from the most advanced

in city–universities–business cooperation of European cities and ecosystems.

The increased complexity of urban and city-coordinated structures over the past decade has resulted in simultaneous increase in the dysfunction of some institutions, which will require smarter solutions, for example, in the form of platforms that “handle” the growing complexity of relationships at the interface between the university, the city and business. Additionally, not all universities’ departments, local government institutions and certainly not all businesses participate in these synergy processes. In order to change this dynamic, it will be necessary to continue organic work of the community to expand relationships and sustained stakeholder collaborations in the urban ecosystem of cooperation with universities, conducted with the support of local government. On one hand, this cooperation must be pro-business, therefore increasing competitiveness of local enterprises through facilitating channels of commercialisation of innovations created at universities and flexible creation of new fields of study, practical subjects and using the system of internships and apprenticeships. On the other hand, universities have much greater potential to implement projects for

the inhabitants in other areas: education, sports, culture, social care and health, which should be developed into projects and implemented. Speaking of residents, we also think of foreign graduates of Lublin’s universities who have chosen Lublin as their place on earth.

During discussions with the inhabitants about the future of cooperation of Lublin universities with the city and business, many expectations have been articulated. Challenges begin at the campus and the universities themselves, which despite enormous investments in scientific infrastructure, still, according to Lubliners, do not sufficiently take care of micro amenities for students. The internship system is still flawed, and too few practitioners from the socio-economic environment are involved in university teaching. Business representatives note that there is too little implementation research, the commercialisation of knowledge and inventions is faulty and the cooperation between universities and employers should be broader – for this purpose, it is worth organising regular meetings between academics and business in order to better understand their needs.

Experts in academia have formulated many desirable visions for the future in the area of city–university

synergy. First of all, there is a need to introduce a new model of commercialisation of universities’ research, focused primarily on the financial effect, as well as the integration of apparatus potential and its better use for the needs of implementation research and research services. It is necessary to create a transparent financial system, which will discourage academics from engaging in unofficial cooperation. It is recommended that the city of Lublin attracts national and international investment capital, which will be financially involved in spin-off companies and innovative ideas. Academic Lublin 2030, in full synergy with the city and business, provides an opportunity for universities to get involved in all the city’s problems, create with it the Science and Experimentation Centre and support sport and culture as well as migrants, seniors and people with disabilities. Lubliners are fully aware of the benefits of an academic sector that is strong and open to cooperation with the environment. Due to its deep connection with the fabric of the city, numerous joint projects and visionary activities, academic Lublin is becoming the capital of student culture, sport, social and civic activity and innovative entrepreneurship.

## Synergy of the city and the university

### To achieve this objective, we intend to:

- A.3.1.** Develop an academic Lublin – engaged and open to the needs of residents in the city and the Lublin Metropolis.
- A.3.2.** Develop flexible education courses in areas related to smart specialisations of the city and the Lublin Metropolis.
- A.3.3.** Implement a new model of effective commercialisation of research projects done at Lublin universities – for business partners from Lublin, the region, Poland and abroad.
- A.3.4.** Take joint action as the city, universities and business to attract more prestigious scientific projects by Lublin universities (especially those compatible with the smart specialisation of Lublin).
- A.3.5.** Develop sports education in Lublin and at its universities, integrating the scientific community, sports clubs, local government, and business around this idea, and to take action to attract academic faculty from outside Lublin.
- A.3.6.** Enhance student culture by developing non-commercial offerings aimed both at students of all universities and those co-created by the academic community.
- A.3.7.** Consistently promote the academic (student and scientific) Lublin among the residents, showing the benefits and effects of the operation of the city's large academic sector.

### Key tasks and projects

**A.3.k.1.** Create the Science and Experimentation Centre (Exploratorium) in Lublin – a centre popularising

science, creativity and innovation of regional and supraregional range of influence, as well as the development of its substantive program; this should be implemented in cooperation with the provincial government, universities, schools and business partners.

**A.3.k.2.** Develop and promote the Lublin Science Festival.

**A.3.k.3.** Implement the *Academic Lublin Programme* (coordinated by the Lublin City Office) supporting academic initiatives for the benefit of the residents, institutions, non-governmental organisations and business in Lublin.

**A.3.k.4.** Organize joint activities of the city, universities and business in order to create new, future-oriented studies corresponding to smart specialisations of the city and the metropolis, as well as their evaluation and updating.

**A.3.k.5.** Engage more business practitioners to educate in areas related to smart specialisations of the city and attracting experts and practitioners from abroad to educate in Lublin.

**A.3.k.6.** Implement the *Spin-off in Lublin programme* (coordinated by the Lublin City Office in cooperation with all Lublin universities, with joint financing from all partners) and its international promotion.

**A.3.k.7.** Organize joint action of universities and local government encouraging scientists/innovators to set up companies alongside the universities and attracting business angels and venture capital investing in spin-offs and start-ups created at the universities in Lublin.

**A.3.k.8.** Involve scientists from Lublin in expert and advisory bodies of the Lublin local government, its organisational units and municipal companies.

**A.3.k.9.** Introduce the academic subject "Project Management and Entrepreneurship", run as a workshop compulsory for all fields of study in Lublin universities.

**A.3.k.10.** Develop a joint programme of internships and apprenticeships in cooperation with Career Offices operating at universities and using the business contacts of the Lublin local government (MATCH project<sup>24</sup>).

**A.3.k.11.** Develop scholarship programmes for outstanding students and PhD students of Lublin's universities, as well as implementation of the Competition of the Mayor of Lublin for the best thesis on the economic development of the city.

**A.3.k.12.** Implement a consistent doctorate programme for the Lublin's local government and for priority sectors of the Lublin economy.

**A.3.k.13.** Establish in Lublin, in cooperation with the city's universities and government administration, an AI research and implementation centre.

### Recommendations and synergies

- The synergy of the city and the university is to a large extent the synergy of the academia and business. It becomes necessary to carry out continuous and uninterrupted projects in Lublin's ecosystem to stimulate entrepreneurship among students, graduates, PhD students and research workers. These programmes should be created at the intersection of the Lublin Science and Technology Park and academic knowledge transfer centres, business incubators, start-up platforms, local government, business organisations and business itself.
- Developing an academic Lublin should include specific initiatives in various areas of life. One of the potential sources of synergy between universities and the local government should be the use of the opportunities of the research and development infrastructure of

Lublin universities for the implementation of various goals of the *Lublin 2030 Strategy*. Inspiring examples of such synergy may be the further development of research in the field of animal therapy (including hippology), together with the expansion of the hippotherapy and horse riding offer for inhabitants and tourists, as well as the organisation of international horse riding events (Cavaliada Lublin), or the development of biotechnological research on plants, which may help to maintain greenery in urban conditions.

- Knowledge transfer from universities to business requires not only the existence of special, dedicated and university-based business undertakings, but also good urban infrastructure, both entrepreneurial and broadly defined infrastructure of quality life. Innovations and unique ideas are often created not in laboratories, but in co-working spaces, urban innovation labs, and also in inspiring public places, restaurants or green areas.
- More than 75% of graduates of Lublin's high schools and technical schools choose to study at Lublin's universities. This is a high rate and a great starting capital for the future. To maintain these proportions, there needs to be a stronger connection between the city's universities and local high schools through alumni programmes and other forms of collaboration, involving business and local government. Youth, who already at primary and secondary schools will be encouraged to participate in local projects, will be easier to anchor and keep in the city. These projects will be increasingly technological in nature, also to create and test new services for the local inhabitants.
- The city-forming role of the academia, the real academic Lublin for the residents, means creating

<sup>24</sup> The MATCH project focuses on networking students from art faculties and departments with business representatives.



thousands of links, solutions and activities created by the universities for Lubliners, regardless of their age, social status and the area they reside in. These solutions should make life easier for them, improve public common spaces, optimize business solutions, and build pride in the city.

- The model synergy of the city and the university is not only the city-forming role of the academic environment in various dimensions, but also the situation when the graduates of Lublin's universities want to stay in the city in order to fulfil their life aspirations: family-oriented and professional, and this stay is not limited to the first few years after graduation. In other words, a city that is well integrated with universities offers its residents at each stage of their life interesting projects and solutions, a good and sometimes unique atmosphere, inspiring people at your side, and a sense of self-fulfilment and happiness. Lublin, where as recently as in 2010, 10% of graduates stay here (and now the rate has increased to 40%), still has a lot of room for improvement. In modern cities, the choice of place to live is no longer determined solely on salary and professional criteria, but with a set of different factors, among which one can find curiosity about the city and its inhabitants, quality of life, and openness to cooperation. Synergy of the city and the university is a key factor for the simultaneous occurrence of the elements mentioned above.

#### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) create the Science and Experimentation Centre (Exploratorium) in Lublin;
  - b) implement the *Academic Lublin* programme;
  - c) implement the *Spin-off in Lublin* programme;
  - d) introduce the subject "Project Management and Entrepreneurship" in all fields of study in Lublin;
  - e) develop a joint programme of internships and practices of Lublin's universities;
  - f) establish an artificial intelligence centre in Lublin.
2. Analysis of key indicators and criteria:
  - a) percentage of graduates of Lublin secondary schools undertaking studies in Lublin;
  - b) proportion of BA graduates taking up MA courses in Lublin;
  - c) percentage of graduates of Lublin's academic institutions taking up employment in Lublin after their studies;
  - d) number of spin-offs created at universities in Lublin and in the whole Lublin innovation ecosystem;
  - e) number of projects acquired in the framework of prestigious national scientific programmes (connected with smart specialisations of the city).
3. Additional indicators and monitored data:
  - a) number of implemented technology transfers with the participation of Lublin's universities;
  - b) number of initiatives promoting student and scientific Lublin among the inhabitants;
  - c) number of projects acquired within the framework of prestigious national scientific programmes (connected with smart specialisations of the city);
  - d) number of students in fields of study related to smart specialisations of Lublin;



- e) number of implementation and commissioned doctorates related to smart specialisations of Lublin.
4. Expert assessments on:
    - a) the model of commercialisation of research projects done by Lublin's universities and the quality of conducted technology transfers with their participation;
    - b) impact of Lublin's universities on the socio-economic environment;
    - c) development of academic sport and student culture.
  5. Opinions of residents on:
    - a) the scientific and academic potential of Lublin;
    - b) influence of universities on the development of Lublin.

## A.4. Innovative and sustainable economic ecosystems

Lublin was one of the first cities in Poland to start managing its development through economic ecosystems. The experience of the last decade has confirmed that this was the right direction. Innovative and sustainable management of economic ecosystems has been one of the key successes of the most prosperous cities and regions of the European Union, especially of its German manufacturing core. It is therefore necessary, drawing on these concepts, to pursue public policies for economic development based on well-defined innovation ecosystems that emanate from smart specialisations. Lublin, which has defined 8 priority industries in its strategy until 2020, will develop 7 priority ecosystems until 2030, of which as many as 6 will be a continuation, which proves the continuity of the economic strategy and accompanying action programs. These will be both industrial and service industries, with an emphasis on their technological and engineering nature. This part of the Strategy, due to a certain maturity of selected economic ecosystems in Lublin, is devoted to supporting mainly companies already well-established in the Polish and foreign markets.

Between 2011 and 2020, Lublin attracted more than 80 companies, including international ones, which

created more than 5,000 new workplaces despite the very limited transport accessibility. In the new reality, with the ongoing construction of the expressway routes S12, S17 and S19, the city is becoming a key business location centre in Eastern Poland and is expected to strengthen this position. This opens up the possibility of acquiring a much larger number of new investor projects and the continuation of reinvestments by businesses already settled in the city. This is also supported by the fact that economies and companies from Central and Eastern Europe are moving up the global value chains, which is accompanied by a parallel trend of high-tech industrial companies. It is a great challenge for Lublin to join in attracting at least some of this significant stream of investment capital, much of it coming from the German economy. To be successful, the city must focus on attracting and developing business that is receptive to constant changes in technology and has the greatest potential to create new professions in the future. These processes are reinforced by accelerating robotisation and automation in industry, new AI applications and the boom in e-commerce. The city should start creating its unique competence domains in the beginning of the strategic period. A big challenge for

smart ecosystems in Lublin will also be to accelerate the creation of innovations at the interface with universities, but also to join the processes of energy transformation and development of renewable energy sources, to develop circular economy, which postulates minimising the use of raw materials and waste generation, and to implement the idea of resource-based economy – the concept of using technology and development of common resources to increase the range of free goods and services. In turn, managing economic development will not be possible without a huge amount of data, which makes it necessary to build in Lublin a horizontal ecosystem for creating, acquiring and using unique economic data – a metropolitan data ecosystem.

Lubliners appreciate the economic changes that have taken place in the city since 2011. The developing Lublin Subzone of the Special Economic Zone EURO-PARK Mielec, the numerous successful Lublin companies and brands in Poland and abroad are things to be proud of. Still, the perception of the city's economic situation is not satisfactory. The residents point out the relatively low wages in the city and the still small number of enterprises with high innovative potential. In their

opinion, there are still not enough large companies to fully stem economic migration to other cities in Poland. Moreover, Lubliners indicate that the business potential in the city is not yet strong enough to keep most university graduates here.

Experts' perception of Lublin's business situation is noticeably better than that of its inhabitants. In their opinion, in Lublin in 2030, the unemployment rate will amount to 4% and will be similar to the natural unemployment rate. The city will significantly strengthen its potential in terms of education in numerous practical fields, while at the same time becoming a nationally recognised centre of IT, bio-tech and medicine. As a result of more and more efficient cooperation of science and business the city will be a place of creation of numerous innovations, especially product and process innovations. Thanks to its unique location, the city is also becoming an export and business (including logistics) hub in this part of Central and Eastern Europe. Lublin 2030 is also a very strongly networked place, with business stakeholders cooperating intensively with each other. Companies creating and using sophisticated, ecological solutions are also developing intensively in the city.



## Innovative and sustainable economic ecosystems

### To achieve this objective, we intend to:

- A.4.1.** Develop Lublin's economy in a sustainable way, based on the defined smart specialisations of the city, conducting for this purpose an intensive investment promotion in Poland and on international markets – in order to attract new enterprises to the city.
- A.4.2.** Build innovative economic ecosystems around the city's smart economic specialisations – Lublin Economic Uplands (automotive and machinery industry, healthy society, intelligent networks and ICT, automated food processing and functional food, chemical processes and specialty chemical products, modern business services, innovative logistics). The development of ecosystems will be based on high technologies (for example med-tech, foodtech or bio-tech ecosystem).
- A.4.3.** Adapt the labour market to the needs of intelligent and sustainable economy, e.g. by ensuring a high-quality educational offer in accordance with the current and forecasted demand for competences, assistance for the unemployed through promotion of employment, entrepreneurship and support for the process of professional activation of Lublin residents who are looking for a job, or provision of professional job placement services for employers.
- A.4.4.** Support the competitiveness and innovativeness of enterprises from Lublin and the Lublin Metropolis, i.a. by creating opportunities for cooperation with the local business environment, science or local government, competence support, promotion of the achievements of the most innovative enterprises from Lublin and networking them with business partners at home and abroad.

**A.4.5.** Attract external investors to Lublin and the Lublin Metropolitan Area – with investment promotion and investment process support focused on innovative companies with a high potential to become established in the local economy, whose presence will strengthen the economic ecosystems developed in Lublin and positively influence the pace of the city's green and digital transformation.

**A.4.6.** Create an institutional system of support for the internationalisation of enterprises in Lublin, offering professional information support and promotion, in the first instance, of small and medium-sized enterprises operating within the identified smart specialisations of the city.

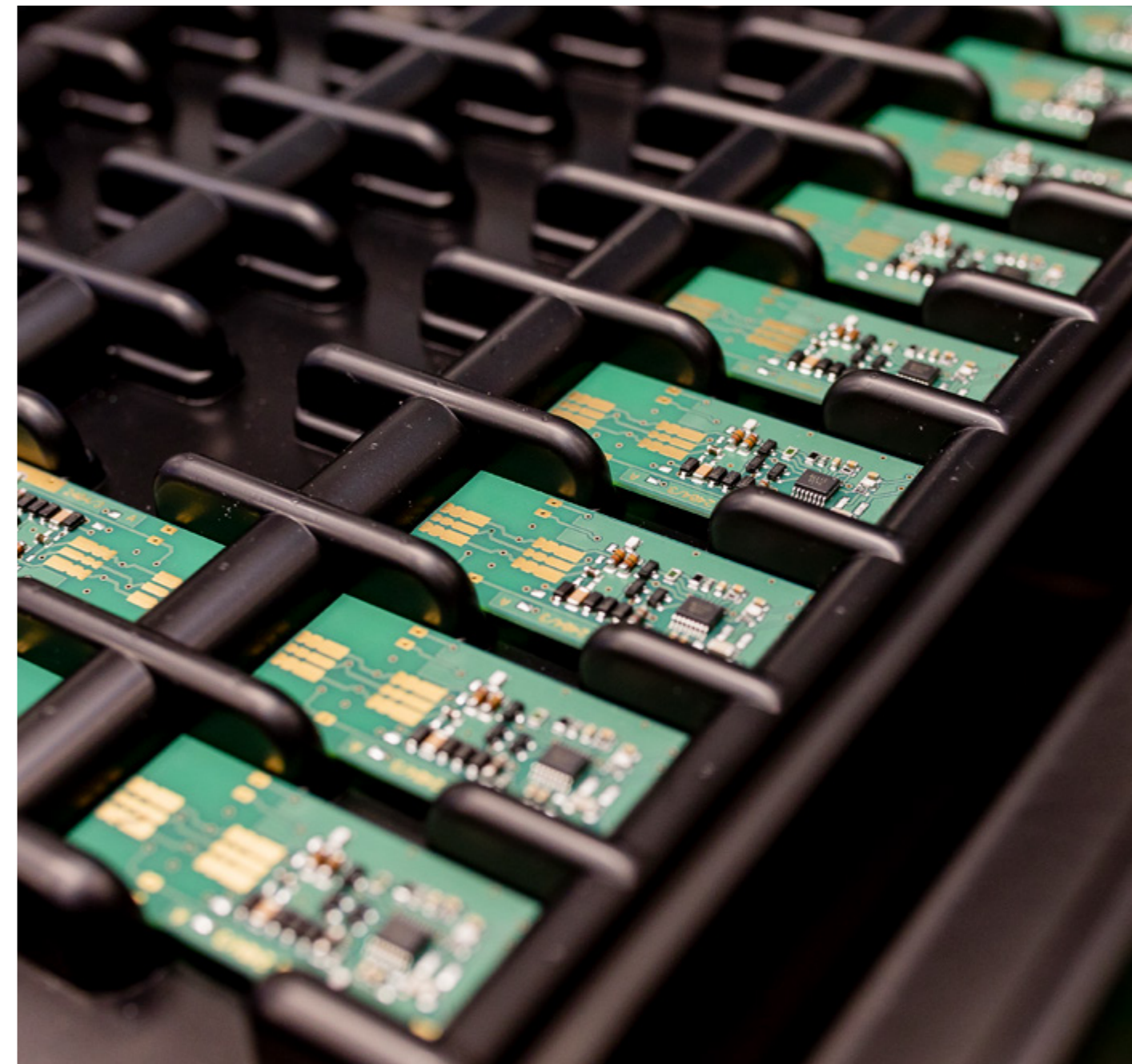
**A.4.7.** Create conditions for the development of a sustainable, networked and digital economy.

### Key tasks and projects

**A.4.k.1.** Develop the *Lublin IT Upland* programme – an innovative ecosystem created by the Lublin local government in 2011, in cooperation with IT business from Poland and abroad, universities, schools managed by the city, and business environment institutions.

**A.4.k.2.** Develop the medical ecosystem in Lublin on the basis of the Lublin Medicine – *Medical and Wellness Cluster* (established in 2014), jointly managed by the Lublin City Office and the Medical University of Lublin (together with the promotion of the Lublin centre as a prospective medical tourism destination in Europe).

**A.4.k.3.** Build cooperative links between biotechnology companies and other entities operating within the city's economic specialisations: healthy society, automated food processing and functional food, and chemical processes and products of specialised chemistry, e.g. through the development of the Lublin Biotechnology Cluster.







**A.4.k.4.** Develop the automotive and machinery ecosystem, based on the *Automotive and Machinery Upland Cluster* created in 2018.

**A.4.k.5.** Build and develop innovative economic ecosystems for the remaining four smart specialisations of the city (food processing and functional food, modern business services, chemistry and logistics) in a manner adapted to the specifics of each of these specialisations – resulting from the type of production, the number and size of companies, the resources they need to develop, or their tendency to innovation and cooperation.

**A.4.k.6.** Organize and promote an international cycle of technological conferences in Lublin (*LubTech*) connected with smart economic specialisations of the city.

**A.4.k.7.** Link the educational system in the city with the needs of the economy (involvement of employers by the city to the co-development and realisation of educational programs) and promotion of education and careers in priority industries, compatible with the smart economic specialisations of the city.

**A.4.k.8.** Develop a programme for attracting external investors to the Lublin Metropolitan Area, which takes into account various forms of economic promotion, indicates preferences and boundary conditions regarding the types of attracted investments and investment areas.

**A.4.k.9.** Establish an institution, with the participation of the city, supporting the internationalisation of Lublin-based enterprises.

**A.4.k.10.** Implement the *Employment Promotion and Labor Market Activation Programme for the city of Lublin* with priority given to actions moderating youth unemployment and to practice and trainings enabling the acquisition of qualifications and professions in deficit and those related to smart specialisations of the city.

**A.4.k.11.** Support through municipal grant systems non-governmental organisations aiming at increasing the competitiveness and innovativeness of microenterprises and young companies.

**A.4.k.12.** Develop and implement a programme for integration of foreigners – graduates of Lublin universities and economic migrants, as well as Polish citizens returning to the country – into the labor market.

**A.4.k.13.** Competence-support enterprises in Lublin (e.g. through grant mechanisms for non-governmental organisations) in the field of increasing business abilities to adapt to megatrends of civilisation (green order, energy and digital transformation, robotisation).

**A.4.k.14.** Create institutional mechanisms facilitating cooperation between the city – business – universities.

#### Recommendations and synergies

- The City of Lublin should support in its current projects all the activities of the academic community creating scientific solutions and educating for the needs of smart specialisations. Additional factor that will create successful smart ecosystems is the cooperation of all stakeholders in ecosystems. It is built through joint projects, discussions and debates, direct and indirect financial, educational and promotional support, cluster activities and lobbying.
- The development of particular economic ecosystems, the Lublin Economic Uplands, is characterised today and will be based in the future on different contextual strategies for individual priority sectors. These operationalised documents should be adopted in the said strategic period. This means that the activities of the City of Lublin and its partners supporting the ecosystem will have institutionalised to a greater or lesser extent, with varying degrees of intervention



and support from the Lublin self-government. The development of Lublin's smart economic ecosystem is also closely dependent on the availability of investment land and office space, research and development infrastructure, utilities, communication infrastructure, including aviation. References to the above-mentioned factors are included in the Strategy in objectives A.5. and E.2. Intersectoral cooperation between economic ecosystems and enterprises operating within them is also a very important element, as it generates contact innovations, extremely important in a smart economy.

- One of the basic conditions for the city's economic success, apart from attracting external investors to Lublin, is a better linkage between the systems of education, retraining and labour market inclusion of economically inactive people. It is also necessary to increase efforts to attract new employees to the city's rapidly growing economy from the entire Lubelskie Voivodeship and neighbouring regions, as well as from outside Poland. The future for the city also lies in hiring employees from outside Lublin (from all over the country and abroad) using remote working tools.
- Smart specialisation strategy is in essence a strategy of diversification of the local economy based on local competitive strengths. Lublin's economy has been built since 2011 according to a diversified participation of small, medium and large enterprises and local and international companies from 8 priority industries. This strategy has proven successful, as the city's diversified economy has withstood pandemic challenges and even increased its potential during the COVID-19 pandemic. Domestic, Lublin-based companies with Polish capital played a key role in this. By 2030, further measures need to be

taken to support especially local small and medium-sized companies so that they can grow rapidly by increasing assets, revenues and employment, and to support their foreign expansion processes. These actions are synergistic with the creation of new investment areas, metropolisation and entrepreneurial culture.

- Development of innovative and sustainable economic ecosystems will contribute to the strengthening of Lublin's metropolitan functions in the economic dimension. The spread of positive economic effects into the area of Lubelskie Voivodeship will be facilitated by the strengthening of economic links within the Lublin Metropolitan Area and between Lublin and smaller towns in the region, and in particular – the development of transport infrastructure which increases the transport cohesion of the region.

#### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) elaborate a programme to attract external investors to the Lublin Metropolitan Area;
  - b) establish an institution supporting the internationalisation of enterprises in Lublin with the city's participation;
  - c) develop and implement a programme for labour market integration of foreigners – graduates of Lublin's universities, economic migrants and return migrants;
  - d) implement an international cycle of technological conferences in Lublin (LubTech).
2. Analysis of key indicators and criteria:
  - a) the number of new firms within smart specialisations and the share of these firms in the total number of enterprises;

- b) the number of enterprises in medium-high and high-technology sectors;
  - c) the number of enterprises offering products manufactured with pro-environmental production processes;
  - d) the number of new investors (international and Polish) attracted to Lublin and the number of new jobs created by them;
  - e) indicators of internationalisation of enterprises from Lublin;
  - f) number of key clusters in Lublin in the year 2030
  - g) number of companies in Lublin cluster and ecosystem initiatives;
  - h) entrepreneurial outlays in the R&D sphere.
3. Additional indicators and monitored data:
    - a) unemployment rate and employment level in Lublin;
    - b) enterprise revenues and employment (including industrial enterprises) within the smart specialisations of the city of Lublin;
    - c) investment outlays of Lublin's enterprises.
  4. Expert assessments on:
    - a) the development and maturity of economic ecosystems, including the quality of cooperation between their participants (especially business–university);
    - b) investment promotion of Lublin and assessment of local investments in terms of synergy with existing ecosystems, innovation and environmental impact;
    - c) the city's activities in supporting the internationalisation of enterprises;
    - d) compatibility of the educational offer with the situation and forecast changes in the labour market;
    - e) accuracy of the selection of the city's economic specialisations (in the second half of the Strategy's implementation period).



## A.5. Entrepreneurial culture and modern business infrastructure

Creating favourable conditions for the establishment of new companies and providing them with proper business infrastructure is one of the most important tasks that cities have to face. For Lublin, struggling in the post-transformation period with the collapse of industry and regression of entrepreneurship, and very poor infrastructure for business, the last decade was a breakthrough period, during which it was possible to prepare not only developed economic activation areas, but also change the attitude of many inhabitants and students, who were more and more willing to set up their own microenterprises. Global trends in the creation of foundations for setting up local companies are unequivocal: the role of cities and regions is to create comprehensive solutions stimulating entrepreneurial behaviour among young people, students and inhabitants in order to take the risk of business activity and choose an entrepreneurial career path. Only in such a model are urban centres not fully dependent on an inflow of external capital, for which there is a global competition in an exponentially growing number of locations around the world. This scheme enables the incubation of competitive enterprises, some of which may become large international players on an international scale.

The crucial challenges in this regard include consistent formation of both a friendly entrepreneurial ecosystem and encouragement given to more and more people in the city to set up their own businesses, while at the same time implementing broad programmes to support them. This should concern three main groups of micro-entrepreneurship: traditional businesses, start-ups and creative companies, which are developing very fast worldwide. In order to achieve the set goals and make Lublin an above-average entrepreneurial city it is also necessary to undertake activities connected with institutionalisation of pro-business projects and to create places where new business, including creative companies, will find support. The city should also develop its investment areas for production, logistics and service activities, otherwise it will lose entrepreneurs to the neighbouring municipalities. Despite the development of the concept of remote working and the growing number of digital nomads, global forecasts for the office space market are optimistic, which results, among others, from the emergence and rapid growth of new companies in the IT, fin-tech and medical services sectors. Therefore, the current reserve for office investments in Lublin must be maintained in the provisions of local spatial development plans.



The inhabitants of Lublin positively evaluated the potential of the city in the area of entrepreneurship, pointing out the extensive educational facilities, high-quality creative social capital, a large number of students (including those from sciences and from abroad), which makes the city a large resource of potential employees and entrepreneurs. In order to strengthen Lublin's entrepreneurship, it is necessary to take into account the needs of different social groups. People taking their first steps in business believe that there is too little free training on running a business in terms of legal and financial aspects and raising funds for development. On the other hand, the representatives of established business believe

that the city should carry out activities to stimulate entrepreneurship through favourable tax policy, creating new economic activity zones, or designating new locations for office investments. It is also necessary to speed up the procedures of granting investment permits by the city.

The expert vision for this area was formulated in a very measurable way. In 2030, Lublin micro-enterprises will be more profitable, and activities in the shadow economy will cease to be attractive. Lublin will tend to encourage new entrepreneurs with its wide accessibility and quality of human resources, while thanks to optimal transport connections it will definitely improve the investment attractiveness of the city.



## Entrepreneurial culture and modern business infrastructure

### To achieve this objective, we intend to:

**A.5.1.** Create an educational framework and tirelessly work on promoting entrepreneurial attitudes in Lublin.

**A.5.2.** Create an effective support system for all micro-entrepreneurship, integrating actions of various institutions operating in the city and region that support business, and including micro-companies into the networks of cooperation, relationships and economic ecosystems of Lublin.

**A.5.3.** Develop an ecosystem of innovative entrepreneurship – startups.

**A.5.4.** Support companies and non-governmental organisations from the creative industries sector.

**A.5.5.** Develop investment lands and supporting infrastructure to meet the needs of manufacturing companies and companies from the logistics sector (in close cooperation with municipalities from the Lublin Metropolitan Area).

**A.5.6.** Develop investment land and supporting infrastructure for various projects: office, research and development, hotels, entrepreneurship incubators and technological parks.

**A.5.7.** Revitalize existing, often degraded areas of economic activation, to prepare them for new economic functions.

### Key tasks and projects

**A.5.k.1.** Ensure that primary and secondary schools provide high-level education within the fields of entrepreneurship, programming and digital competencies.

**A.5.k.2.** Create a metropolitan platform that integrates actions of various stakeholders in terms of supporting new companies: traditional, startups and creative companies.

**A.5.k.3.** Implement the *Startup in Lublin* programme intended for all participants of the startup life in Lublin.

**A.5.k.4.** Promote Lublin as one of the leading startup ecosystems in Poland in order to acquire new young companies and talents.

**A.5.k.5.** Support the development of private investment projects (e.g. angel investors, venture capital funds) aimed at young entrepreneurs, and also supporting micro-entrepreneurs, startups and creative companies through an indirect mechanism of grants for non-governmental organisations.

**A.5.k.6.** Further realize tasks specified in the *Strategy for the Development of the Creative Industries Sector in the City of Lublin and Lublin Functional Area for the Years 2020–2030 (Strategia rozwoju sektora przemysłów kreatywnych w Lublinie i Lubelskim Obszarze Funkcjonalnym na lata 2020–2030)*, including the creation of the Centre for Creative Industries as a place of incubation and development of the creative environment in Lublin, including the project *The Creative Ones 2.0 (Kreatywni 2.0)*.

**A.5.k.7.** Develop infrastructure that supports micro-entrepreneurship, innovative entrepreneurship and creative businesses (medialabs, innovation laboratories, co-working spaces, creative spaces) by placing it within urban institutions (community centres, libraries, senior centres) that exist in various districts.

**A.5.k.8.** Create an Urban Innovation Lab (Miejskie Laboratorium Innowacji), as an important element of the startup ecosystem, that creates unique development conditions for Lublin and its stakeholders.

**A.5.k.9.** Develop the Hajdów-Zadębie economic area through the construction of the connection between Turystyczna and A. Grygowej Streets, and also reinforcement, construction of roads and the supporting infrastructure.

**A.5.k.10.** Develop an economic zone and opening of investment areas at Zemborzycka and Abramowicka Streets.

**A.5.k.11.** Develop infrastructure for office investments in the area of Nałęczowska St., Wojciechowska St., Solidarności Ave., T. Szeligowskiego St. and the area situated near the Integrated Communication Centre (Zintegrowane Centrum Komunikacyjne) (near the Metropolitan Station).

**A.5.k.12.** Revitalize the economic land of the former Daewoo Motor Polska factory.

**A.5.k.13.** Redevelop and build new infrastructure investments in the remaining economic zones in Lublin (zones: Bursaki, Wrotków, Chemiczna-Pancerniaków, Lublin Subzone of the Special Economic Zone EURO-PARK Mielec at Felin, Zadębie Zone).

### Recommendations and synergies

- Supporting culture of entrepreneurship, inspiring and building interest among young people towards undertaking entrepreneurial activities, and providing those who are interested with the necessary competencies – this is a many-years-long process, without a clearly marked horizon. It requires the involvement of many entities participating in the above actions, both urban educational centres, but also higher education institutions, entrepreneurs, parents and mentors. Only a complete synergy and perseverance in the realisation of such a goal will enable Lublin to enter the premier league of entrepreneurial cities in Poland.
- Many public and private institutions conduct activities in Lublin that are aimed at supporting

entrepreneurs who are making their first foray into the world of business, both traditional entrepreneurs, as well as innovative and creative entrepreneurs; there is no complex coordination of these actions at a whole city level. Lublin's local government appears to be the best entity to undertake the activities concerning the coordination and management of distributed resources, which will require the institutionalisation of the project and a consensus of the entire business supporting environment in Lublin.

- Lublin, as one of the leading startup environments in the country, has already succeeded in developing an early stage of this ecosystem. It is, therefore, necessary to initiate the comprehensive project Startup in Lublin, which will help develop the existing young ecosystem of startups in the correct direction, an ecosystem that is present in the city. On the one hand, it must integrate actions of the present stakeholders of this ecosystem, and on the other hand it must create new events that promote innovative companies from Lublin, incorporate them into the relationship network with already developed businesses and public institutions (contact innovations), advertise in Poland and abroad in order to acquire an inflow of fresh blood and talents, and also support the investment of private businesses in innovative companies.
- Creative industries are a sector in Lublin that is developing at an increasingly higher rate, born at the intersection of culture, art, IT, craft and new media. It is advised to undertake new forms of institutionalisation, support and cooperation for the benefit of young creative companies, and this will require a full synergy on the part of urban cultural institutions, creators, tech businesses and artistic education, including new, emerging higher-education institutions and fields of study (goal A.2). In addition, it is advisable to

use the particular locational characteristics of some places in Lublin to meet the needs of creative industries – these places include Podzamcze, Lubartowska St., or the so-called lower Old Town.

- The ecosystem of creative businesses requires further promotion of products and services provided by local companies, and their incorporation into the business networks and order books of larger companies that are already established in the market (the MATCH project). It is advisable to integrate the environments through the creation of a Creative Industries Council (Rada Przemysłów Kreatywnych) by the Mayor of Lublin, and also to secure financing for the *Creative Ones 2.0* programme (creative vouchers, creation of creative spaces, and creation of a dedicated event for the creative industry). Support for the creative sector should also take place by selecting the most prospective of its sub-sectors, exhibiting the highest growth potential in Lublin.
- Development of lands and modern infrastructure for investments – manufacturing, logistics, research and development, and services and offices – should be characterised by its diversification in various parts of the city, so as to avoid concentrating them only in the eastern part of Lublin and the subsequent potential transit-related problems. In addition, it is recommended to undertake intensive cooperation with neighboring municipalities in order to create and mutually promote investment areas, and the metropolitan network of integrated public transport for workers commuting within Lublin (and from beyond). All of these actions should be taken into account during the preparation of high-quality zoning places, for example by avoiding placing companies in the green areas of the city and also by preserving a safe distance from housing infrastructure.



#### How are we going to measure progress in achieving our goal?

1. Implementation of tasks and key projects:
  - a) develop the Creative Industries Centre in the Lublin Creative District (Lubelska Dzielnicza Kreatywna);
  - b) implement the Startup in Lublin programme;
  - c) create the Urban Innovation Lab;
  - d) redevelop the land of the former Daewoo Motor Polska factory;

- e) develop A. Grygowej and Turystyczna Streets, and also Abramowicka and Zemborzycza Streets.
2. Analyze key indicators and criteria:
    - a) percentage of students participating in additional lessons from entrepreneurship and programming;
    - b) size of investment land with new services and utilities in Lublin;
    - c) office space in modern buildings in Lublin;
    - d) indicator of newly created micro-entrepreneurships, including startups and creative businesses.
  3. Additional indicators and monitored data:
    - a) value of grant funds intended for the support of entrepreneurship by the self-government of Lublin;
    - b) availability and quality of the educational offer in the fields of entrepreneurship, programming and digital competencies;
    - c) adjustment of business infrastructure to meet the needs of business in Lublin and in the Lublin Metropolitan Area.
  4. Expert assessments on:
    - a) completeness of the entrepreneurship support system and the quality of offered support;
    - b) availability and quality of the educational offer in the fields of entrepreneurship, programming and digital competencies;
    - c) adjustment of business infrastructure to meet the needs of business in Lublin and in the Lublin Metropolitan Area.





# The green and urbanistically sustainable Lublin

“Green city” is an extremely capacious category covering the issues of shaping a sustainable city in terms of urban planning, mobility, greenery, energy security and resource management. Greenery is an extremely important element of the urban ecosystem, fulfilling multiple natural, health and social functions. It acts as a barrier against noise, smog and overheating. It is a space where biodiversity is protected, an area where many species of birds and plants can be found; as a fragment of the ecological corridor it becomes a sanctuary and primary habitat for animals migrating to the city. From a health and social perspective, green areas are places of contact with nature, a space for active recreation and intergenerational integration. In the opinion of Lubliners, greenery is one of the most important components of a city that contributes to the well-being and comfort of life, greatly influences the general aesthetics of the space, adds to the city’s charm and specific microclimate, and demonstrates its metropolitan character.



One of the domains negatively influencing the environment is widely understood urbanisation. Due to population concentration and the scale of exploitation of city resources, green areas constitute a key area of interventions undertaken to implement the concept of sustainable development, developed in response to the observed negative consequences of human activity on the environment. The concept of a sustainable city is multidimensional and touches upon many areas of its functioning. In terms of space, sustainable development is reflected in particular in spatial order, rational use of land, high-quality of development and technical infrastructure, care for environmental quality and urban greenery and respect for cultural heritage.

In spite of its metropolitan functions, Lublin stands out among other metropolises due to its compactness and the resident-friendly rhythm of life – the so-called slow life. The inhabitants notice the attractiveness of the urban greenery, the development of the technical infrastructure and the increasingly well-developed and redeveloped urban spaces. This fact is also confirmed by Lublin's high standing in rankings conducted by independent experts. This does not mean, however, that Lublin does not face a number of challenges connected with solving conflicts in the relation between the society, space and the environment. Not looking at the city critically would get us nowhere. New challenges, often resulting from global transformations affecting all cities, as well as individual problems of the city are a motivation for further action to improve the quality of life of its inhabitants. All processes in the world are now happening much faster. Recent events (whether caused by the COVID-19 pandemic, climate change or the resource crisis) demand an even greater concentration on sustainable city design than before.

A major challenge with a multidimensional impact on certain aspects of Lublin's functioning is environmental protection. Unsatisfactory air quality, increasingly high temperatures, and drinking water shortages are the consequences of urban development that have been on the rise for many years – urban pressure, development of high-carbon transport, higher than usual energy demand, as well as growing and irrational consumption. It is, therefore, important to shape these areas in consideration of their environmental impact. A coherent and extensive green space system, urban layouts designed to allow the free flow of air, low-carbon buildings, a highly efficient and zero-carbon transport system and respect for available resources are key to the functioning of highly developed, healthy and resilient communities.





## B.1. Coherent system of urban greenery

Urban greenery is a system of organised vegetation integrated into urban space in the form of parks, greens, squares and greenways, which for many years have performed vital functions in cities: recreation, health and wellness promotion, insulation and aesthetics. In recent years the position of urban greenery has increased considerably, which is related to the growing awareness of city dwellers of the impact of greenery on mitigating climate change. Green areas, especially those arranged for recreational purposes, are an indispensable element of the life of citizens and help create satisfactory living conditions in the city. Urban greenery can be called green infrastructure, as it plays an equally important role in the functioning of the city and in improving the quality of life of its inhabitants as the technical infrastructure.

The system of urban greenery includes not only walking and recreational parks, but also other, smaller areas of greenery, organised or not, which in Lublin occupy a total area of 1,305 ha, i.e. 8.9% of its total area. Lublin can definitely be counted among the greenest cities in the country also due to the potential of the forest areas within its administrative borders, which cover 11.1% of the city area. The perception of Lublin's greenery is

hindered by its fragmented character, which is why the city aims to create a coherent system of urban greenery through redevelopment activities, strengthening of the protection of environmentally valuable areas and the establishment of new forms of green areas. The potential of the city makes it possible – Lublin abounds in ravines and river valleys and dry valleys, supplemented with other forms of greenery penetrating housing estates and transport routes. This process will not only make it possible to increase the proportion of green areas in the city, but above all it will strengthen their functionality.

The main challenge in the context of the urban natural environment is the construction investments carried out in Lublin, which are often associated with the liquidation of the existing greenery and its replacement with greenery that fails to fulfil natural functions and is characterised by low quality of natural compensation. Therefore, it is particularly important to strengthen the protection of greenery in the investment process – a more restrictive analysis of the justification for the removal of high greenery in particular, and imposing the necessity of high-quality replacement planting. Greenery accompanying residential investments is extremely



valuable not only in aesthetic terms. It also acts as a buffer against noise in those areas of the city particularly exposed to adverse acoustic impacts and supports the ventilation of the city, including air purification.

By and large, Lubliners believe greenery is key for the good city life. It is essential for health. It functions as a space for meetings and activities that integrate residents, as an element that greatly shapes the overall aesthetics of the city, adding to its charm and specific microclimate. Green areas between buildings are a prerequisite for a sense of comfort and well-being. One of the most frequently expressed fears for the future is a decrease in the amount of greenery in the city.

Residents are negative about the development of more green areas, expecting definitely more greenery, both in the form of large, representative parks and recreational areas in the neighbourhood, close to their place of residence. Maintaining green areas is considered a global issue, and proper management of natural areas contributes to maintaining biodiversity.

The residents' perspective is complemented and made more concrete by the vision of the future of green Lublin formulated by experts, according to which the surface occupied by green areas should increase in the next decade – to a large extent thanks to the grass-roots initiatives of the inhabitants of Lublin.

## Coherent system of urban greenery

### To achieve this objective, we intend to:

**B.1.1.** Create a coherent system of green areas (green connection) with a simultaneous increase in their share in the total area of the city through regeneration and redevelopment of naturally valuable areas and creation of new ones, including those acting as connectors.

**B.1.2.** Strengthen the protection of environmentally valuable areas, including river valleys, ravines and dry valleys and establish new forms of nature conservation.

**B.1.3.** Create a system of protection of semi-natural vegetation (urban charms, mini-reserves).

**B.1.4.** Strengthen protection of greenery in investment processes, with particular emphasis on protection of high greenery.

**B.1.5.** Provide better access to environmental information collected on the basis of reliable and continuous environmental monitoring.

### Key tasks and projects

**B.1.k.1.** Develop and successively implement the concept of coherent connections between green areas, including greenery.

**B.1.k.2.** Develop municipal standards protecting greenery in investment processes.

**B.1.k.3.** Develop municipal standards of designing greenery accompanying urban traffic routes.

**B.1.k.4.** Regenerate the Bystrzyca river valley, together with its tributaries (Czerniejówka and Czechówka), including the construction of recreational infrastructure.

**B.1.k.5.** Support the National Water Management Company Wody Polskie in the implementation of

projects and activities aimed at improving water quality in Zemborzycki Lake and rivers in the area of Lublin.

**B.1.k.6.** Implement the project of the Bystrzyca River Park.

**B.1.k.7.** Create a park on the Błonia area below the Castle.

**B.1.k.8.** Revitalize the Bronowice Park.

**B.1.k.9.** Continue the *Green Budget* project in order to increase the share of green areas.

**B.1.k.10.** Exchange experience within the framework of international projects including financing of studies, analyses, reports, pilot projects and technical documentation and documents of strategic-implementation character.

### Recommendations and synergies

- Urban greenery is important in mitigating the effects of climate change, reducing the phenomenon of urban heat islands or improving soil water retention, therefore this objective is strongly related to objective *B.3. Sustainable urban development* of Lublin in the context of implementation of blue-green infrastructure investments, which complements traditional forms of urban greenery in areas characterised by high building intensity.
- The aim of creating coherent green areas (green connection) is to create a network of safe and visually attractive routes for barrier-free movement between green areas. This encourages people to walk, cycle or use personal transport devices such as scooters. The green network should be a coherent system of nature and recreation, connected with open areas, which should be linked with suburban areas to form ventilation wedges ensuring exchange and purification of air in the city and ecological corridors protecting biodiversity. In order to achieve this, it is necessary to carry out an inventory of the already existing green areas



in all districts of Lublin, and to designate areas that may fulfil such functions in the future. The creation of a coherent network of green areas in Lublin should be accompanied by efforts to connect green areas within the Lublin Metropolitan Area.

- In urban areas, a high death rate of young plantings is observed, especially in young trees. In this context, more attention should be paid to the selection of species adapted to the prevailing conditions, improvement of soil quality and careful care of planted trees.
- The large number of construction projects in the city creates the risk of shrinking greenery and lowering the landscape value of the urban space, so the city should take a stricter approach to enforcing the quality of replacement planting.
- Special planning protection should be provided for ravines, dry valleys and river valleys – as important areas for the city from the point of view of its ventilation, recreational values, and biodiversity. The main threat to these areas is development, which is increasingly interfering with them and disrupting their ecological functions and the legibility of their natural structures.
- A special role in caring for green areas should be played by the District Councils and the inhabitants themselves – as partners in dialogue with the city authorities, jointly responsible for the appearance of local neighbourhoods.
- Particular attention should be paid to protecting biodiversity, especially in the context of implementing measures in areas that have not been transformed. Protection of biodiversity should be linked to the proper channelling of traffic in order to reduce anthropopressure.





### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) development and implementation of the concept of coherent connections between green areas;
  - b) development of instruments protecting greenery in investment processes;
  - c) development of standards for designing greenery accompanying city transport routes;
  - d) revitalisation of the Bystrzyca river valley;
  - e) realisation of the project of the Riverside Park on the Bystrzyca river;
  - f) creation of a park on the Błonia area below the Castle;
  - g) revitalisation of Bronowice Park.
2. Analysis of key indicators and criteria:
  - a) share of green areas in the total city area;
  - b) share of legally protected areas in the total city area;
  - c) ratio of trees planted to trees removed.
3. Additional indicators and monitored data:
  - a) number of environmental datasets made available to residents;
  - b) number of natural monuments;
  - c) share of green areas not included in the Statistics Poland data in the total city area;
  - d) number of completed *Green Budget* projects.
4. Expert assessments on the quality and consistency of green areas.
5. Opinions of residents on:
  - a) quantity and quality of green areas, taking into account spatial differences.





## B.2. | Sustainable transport network

The transport system of the city consists of numerous elements, but today it is the management system that is crucial as it optimises flows while ensuring the safety of the traffic users. The development of management systems, organisations, technologies, products and services is the foundation for creating a good image for urban transport. In recent years, an Integrated Public Transport System has been implemented in Lublin based on the Intelligent Transport System (ITS). The system is constantly being expanded and optimised in order to be able to cover the whole city in the future.

Aspiring to become a zero-emission city, Lublin is obliged to develop accessibility of transport services, provide environmentally friendly transport that takes into account the principles of intergenerational equality, and build transport networks that correlate with the limited use of space. An important aspect from the point of view of sustainable transport networks is to take into account, while designing transport solutions, the needs of their users, including cyclists and pedestrians, as well as modern and increasingly popular forms of travelling by means of personal transport devices (*urządzenia transportu osobistego* – УТО) – both individual and shared ones. The idea of a compact city

assumes the proximity of the most important services at arm's length, making cities short-distance spaces. From this perspective, micromobility services seem to be the best thought-out solution. The city, following the needs of the inhabitants, has optimised the payment system for public transport by adding a more attractive bus stop tariff than before. Increasing the attractiveness of public transport has been an ongoing task for several years in order to meet the needs of a constantly developing city. The accessibility of this type of transport is particularly important – both in terms of the even distribution of the network within the city boundaries and the frequency of journeys. This is connected with the aforementioned urbanisation and rational development of the residential function.

One of the greatest urban-environmental challenges facing Lublin is the development of a sustainable mobility system. Users of urban spaces want to travel efficiently, safely, without encountering barriers and limitations resulting from infrastructural or management shortcomings – choosing the best means of transport for themselves, often in the form of their own personal car. This phenomenon leads to increasing transport congestion resulting in economic, social,

environmental problems and changes in the spatial and functional structure, which negatively influence non-motorised city users. Two aspects are crucial in developing sustainable urban mobility – quality of service and environmental neutrality. This process therefore requires a change in attitude – whereby transport using individual cars becomes less attractive in relation to travel by public, shared or non-motorised modes. Sustainable transport should reflect the different economic, social and environmental objectives in equal measure. The aim is not to eliminate any one means of transport, but to make them complement each other in order to improve the quality of travel.

The growing intensity of car traffic and its dominance plays a key role in the inhabitants' opinions about the future of Lublin. The inhabitants expect further development of the road and communication infrastructure, with a simultaneous systematic reduction of the number of cars and car traffic. This is to be achieved through continuous improvement of public transport (by increasing the number of stops and frequency of connections) and extension of good quality and consistent cycling infrastructure (so that its network covers the entire city). The objective is that residents voluntarily abandon car transport in favour of public transport and

the widespread use of alternative forms of mobility, such as bicycles and scooters. In this context, the safety and convenience of getting around on foot in the city plays an important role.

The residents' perspective is complemented and made more concrete by the vision on the future of urban mobility in Lublin formulated by experts working in the thematic group on urban planning and mobility. According to this vision, the use of different public transport systems in Lublin is easy, convenient and more efficient than individual car transport, which leads to many citizens giving up their cars. The share of electric vehicles in public and private transport is increasing. Car parks are built and integrated into the public transport system. More stops, connections and bus lanes are created. The quality of the fleet is maintained and financial incentives to use public transport are introduced on a permanent basis. Cycling routes form a dense and coherent network covering the entire city and integrated with recreational areas, making cycling comfortable and safe. There are more and more public transport connections between Lublin and the neighbouring municipalities, so even those living outside Lublin are not compelled to use their cars.



## Sustainable transport network

### To achieve this objective, we intend to:

- B.2.1.** Build the infrastructure necessary to develop and optimise a multimodal mobility system.
- B.2.2.** Improve road safety.
- B.2.3.** Integrate transport mode systems and intelligent parking zones.
- B.2.4.** Extend and develop the functionalities of the Intelligent Transport System.
- B.2.5.** Promote public transport and reduce vehicle traffic, especially combustion vehicles, especially in the city centre.
- B.2.6.** In cooperation with external operators, develop shared mobility systems.

### Key tasks and projects

- B.2.k.1.** Develop traffic analysis taking into account all available forms of transport in the city (by means of, e.g., geo-surveys).
- B.2.k.2.** Create new road investment standards promoting the concept of calm streets with a large green component.
- B.2.k.3.** Restrict individual car traffic in the central part of the city, together with the improvement of parking by changing the organisation of traffic and introducing facilities for other forms of transport.
- B.2.k.4.** Launch an application integrating all means of transport.
- B.2.k.5.** Develop standards for micromobility development.
- B.2.k.6.** Appoint locations and rules of operation of Clean Transport Zones.
- B.2.k.7.** Optimize public transport timetables.



**B.2.k.8.** Define a bus lane network concept and its implementation.

**B.2.k.9.** Develop the concept of and build internal transfer hubs.

**B.2.k.10.** Implement an intelligent parking space management system.

**B.2.k.11.** Further modernize and develop of road infrastructure, consistent with the Integrated Communication Centre and reconstruction of the collective transport system.

**B.2.k.12.** Build new public transport terminals.

**B.2.k.13.** Extend voivodeship roads improving access to the TEN-T network.

**B.2.k.14.** Exchange experiences within the framework of international projects including financing of studies, analyses, reports, pilot projects and technical documentation and documents of strategic-implementation character.

### Recommendations and synergies

- The development of sustainable mobility is closely connected with the development of electromobility included in the objective *B.4. Energy transformation of the city and clean air*, in terms of creating infrastructure for electromobility and increasing the share of zero-emission forms of public transport, which will be one of the main elements of the system of sustainable multimodal mobility in Lublin.
- The city relies to a large extent on flows, the key element of which is the transport system acting as a technical infrastructure improving the quality of life of its users. An efficient system that facilitates fast and safe movement around the city is often a key element in attracting investors and new residents.
- An indispensable aspect of developing an urban mobility system is caring for the safety of its users. In this area, it is important to focus on two complementary components – education and responsible behaviour, as well as the use of safety-enhancing equipment and engineering solutions. From this perspective, it is important to improve safety in the vicinity of schools in order to encourage the habit of travelling to and from school by alternatives means to private cars.
- The accessibility of urban services is a key factor in their quality. In recent years, many applications have emerged for using city infrastructure and services. However, it is worth trying to integrate them into one streamlined application instead of creating separate tools.
- In Lublin, there is plenty of possibilities to move around the city, but there remain major spatial differences in their accessibility. Many places lack convenient transport connections with the rest of the city. The aim should be to eliminate these differences by, for example, increasing the density of the public transport network and optimising timetables. Internal transfer hubs located evenly within the city boundaries may also facilitate movement around the city, enabling, for instance, transfers between different means of transport. Particularly visible is the lack of cycling infrastructure connecting the central districts of Lublin with the rest of its area. It is therefore important to create cycling connections to the city centre on the main routes, e.g. based on a system of collision-free bridges.
- The city centre, due to its functions, is characterised by a large population flow. This results in congestion and increased air pollution. Thanks to the good accessibility of this part of the city from other areas, as well as a developed and frequent network of public



transport connections and the availability of bicycle and scooter rental stations, the closure of this area to individual cars and the creation of a clean transport zone may be considered. This must be done taking into account the needs of various social groups – including business and residents.

- Lublin's sustainable transport system is one of the stages in the implementation of Action E.1.1, aiming to create a sustainable transport network in the entire Lublin Metropolitan Area. A major problem for the city is the influx of passenger cars from neighbouring municipalities. To this end, P&R, B&R and K&R interchanges are built along the most important transport corridors in order to relieve the city's transport system of passenger cars.
- The idea of 15-minute city involves creating multi-functional and more efficient urban units within its structure in order to increase the attractiveness of urban areas and make more rational use of resources. A city inhabitant should have access to all services most important for him or her within a distance of 15 minutes of walking or cycling, without the need to use a car. The gradual evolution of the city in this direction, including the evolution of infrastructure, will contribute to the prioritisation of micromobility and pedestrian travel.

#### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) develop a traffic analysis taking into account all available forms of travel in the city – a study of the division of transport tasks using, e.g., a geo-survey (at least once in every 4 years);
  - b) develop the concept and the construction of internal transfer nodes.

2. Analysis of key indicators and criteria:
  - a) length of public transport network (in total and per 10 km<sup>2</sup> of city area);
  - b) number of performed public transport vehicle-kilometres in the territory of Lublin (in total and per 10,000 inhabitants);
  - c) annual number of journeys by public transport (in total and per capita);
  - d) length of bicycle paths per 10 km<sup>2</sup> of the city area;
  - e) percentage of intersections covered by ITS;
  - f) area of designated clean transport zones;
  - g) number of road collisions and accidents per 1,000 inhabitants.
3. Additional indicators and monitored data:
  - a) length of bus lanes;
  - b) number of registered passenger cars per capita;
  - c) traffic volume on selected access roads in Lublin;
  - d) annual expenditure on the purchase of public transport vehicle-kilometres in the area of Lublin;
  - e) number of vehicles registered in the Central Vehicle Register;
  - f) data on the functioning of the Lublin City Bike;
  - g) data on the functioning of shared mobility systems.
4. Expert assessments on:
  - a) quality of public transport, cycling and walking communication;
  - b) modernisation and development of road infrastructure;
  - c) development of multimodal mobility in Lublin and Lublin Metropolitan Area.
5. Opinions of residents on:
  - a) sustainable mobility system and its elements, taking into account spatial differences; and the percentage of residents using public transport, cycling and walking (based on surveys).





## B.3. Sustainable urban development

Space is a shared but limited asset. Therefore it is important to manage it in a sustainable way taking into account the needs of all its users and respecting the natural environment and cultural heritage. The crisis of spatial planning, which has been observed and has been intensifying for years, is the reason for the growing spatial chaos. Excessive urbanisation pressure, sprawl and depopulation of city centres are the key challenges in urban planning. It is a problem which leads to high economic, ecological and social costs, for which we all pay. Besides obvious legislative changes to increase space protection, it is necessary to change the perception of the city, to redefine its structures and functions, putting the needs of the residents in the centre. The COVID-19 pandemic has accelerated changes that have been discussed for a long time. It is a chance for cities to change for the better, to re-programme their thinking about urban space designed for citizens and meeting their needs.

Lublin has a great potential stemming from its cultural heritage, both with regard to its historical resources and contemporary cultural heritage. However, especially as regards the tangible heritage, it is characterised by a poor technical condition or insufficient protection, and consequently – an under-utilised

potential. There is no doubt that the activities aimed at the protection of individual objects as well as entire urban systems should be strengthened by reinforcing area-based protection through appropriate provisions in planning documents. It is also necessary to increase the acquisition of external funds for restoration work.

Barrier-free space, accessible to all possible users and attractive both visually and functionally, is a guarantee of its usefulness. It is therefore necessary to develop uniform urban standards and universal design principles to ensure this. The city is not a homogenous tissue, it differs in functions, management or environmental aspects. These differences make places unique. However, it is important to compensate for these differences in technical infrastructure and availability of various services, including public services. These deficiencies are often the main reason for the gradual degradation and marginalisation of space. Lack of attractive areas in the city results in population outflow to peripheral areas, increasing the phenomenon of urban sprawl and suburbanisation. Improving the quality of urban land use, its revitalisation or investments are key measures to stop the outflow of inhabitants and depopulation of the city centre.

In the eyes of the inhabitants, sustainable urban development is equated with controlled expansion. Expansion is, on the one hand, a sign of continuous development and, on the other, a source of growing challenges connected with maintaining sufficient green areas and providing inhabitants with access to public infrastructure and services. Extension control is dictated by logic, where the city plans its road and pedestrian networks, public buildings and green areas in advance. The city functions based on a clear functional division. New housing estates are built according to a top-down concept created by the municipality, which guarantees the quality of solutions and the presence of necessary infrastructure. Life in housing estates built according to this concept is comfortable and safe. An important area of Lublin is its representative Old Town, which is being extended to include adjacent streets – a place to spend free time and a source of pride.

The residents' perspective is made complete and more specific by a vision of the future of urban development formulated by experts working in the thematic group on urban planning and urban mobility. According to it, Lublin in 2030 will be characterised by exceptional care

for high-quality planning and implementation of the city's spatial development policy. Urban planning studies are more detailed. The potential of 3D studies is being exploited. The new generation of plans makes use of the consolidation procedure and includes detailed guidelines for public spaces, increased parameters of biologically active greenery, reduced intensity and height of development in the outer zones, and promotes "low-dense" development. Land development plans have been adopted for the entire city. Outlays for a cultural heritage management strategy and the municipal programme for the care of historical monuments have been increased. The number of urban planning and architectural competitions has increased. Mandatory competitions for design works on public buildings realised by the municipality are established. The city has a clear housing policy and implements it consistently. Implementation is preceded by planning. Planning to prevent the dispersal of development and preferences in favour of supplementing the existing urban tissue have become common practice. Lublin of the future is a city developing in a sustainable way, aesthetically pleasing, with well-ordered and environmentally friendly buildings.



## Sustainable urban development

### To achieve this objective, we intend to:

- B.3.1.** Improve the quality and accessibility of public spaces.
- B.3.2.** Eliminate spatial disparities in access to infrastructure and public services, taking into account the principles of universal design and multifunctional urban structures in the spirit of the 15-minute city.
- B.3.3.** Counteract the urban sprawl by, e.g., redeveloping degraded areas in the central parts of the city, preventing the development of gentrification processes.
- B.3.4.** Strive to improve the acoustic climate in the city.
- B.3.5.** Protect the cultural heritage, including cultural landscape and contemporary cultural assets.
- B.3.6.** Protect the natural ventilation corridors of the city and shape urban structures that take into account the aspect of air regeneration.
- B.3.7.** Consider in urban planning the need to increase the city's resilience to climate change.

### Key tasks and projects

- B.3.k.1.** Strive for complete coverage of the city with local spatial development plans.
- B.3.k.2.** Adopt urban planning standards.
- B.3.k.3.** Develop the so-called landscape resolution.
- B.3.k.4.** Develop a plan for protection of contemporary culture assets.
- B.3.k.5.** Adopt a catalogue of protective solutions together with an analysis of the current state of acoustic climate in Lublin.
- B.3.k.6.** Analyze the urban layout of the city in terms of the risk of influence on the phenomenon of urban heat island and protection of the key ventilation corridors of the city.

**B.3.k.7.** Prepare analyses concerning the implementation of and design standards for the blue-green infrastructure.

**B.3.k.8.** Exchange experience within the framework of international projects, including financing of research, analyses, reports, pilot projects and technical documentation and documents of strategic-implementation character.

### Recommendations and synergies

- Access to good-quality technical infrastructure and services should be the norm. In an urban form such as a city, situations where there is no access to basic utilities, public transport, good quality road infrastructure, greenery, etc., must be prevented. Efforts should be made to eliminate such disparities between different areas of the city as quickly as possible. District councils play an important role in this process. Particular care should be taken to improve the quality and comfort of life of the inhabitants in districts where the dominant or supplementary function is or was performed by industry and bothersome services. It is necessary to apply natural and technical solutions in the surroundings of residential areas, which will reduce the negative effects of conducted activities.
- Shaping the city in a sustainable way is supported by the concept of 15-minute city, whose popularity grew as a result of the COVID-19 pandemic. The compact city is also an answer to the environmental crisis – it contributes to a more efficient and sustainable management of resources. Lublin has a great chance to meet these expectations because of the compact nature of its development.
- The city should consolidate its role in urban development. The urban planning standards commonly



applied in the largest Polish cities may be a tool supporting this process. Urban planning standards should support the development of local spatial development plans in shaping sustainable spatial development of the city. As far as the practices of creating local spatial development plans are concerned, their fragmentary nature should be avoided in favour of creating comprehensive plans which take into account the conditions of the surroundings and cover areas larger than individual plots of land.

- In order to protect cultural assets – both the historical heritage and contemporary cultural assets as well as the city landscape, steps should be taken towards passing a so-called landscape resolution, which would be a consensus between the protection of what is most valuable and social interests.
- Redevelopment incurs the risk of gentrification, which can already be partially observed in Krakowskie Przedmieście. The city authorities should programme this process in such a way as to strive for the greatest possible demographic diversity within one area.
- Construction of blue-green infrastructure is a key part of building a city's resilience. It solves problems of flooding, drought, supports air regeneration, lowers the city's temperature, purifies the air. The city must pursue a spatial policy aimed at protecting land (including private land), which is important for the natural system – particularly in relation to the protection of the city's ventilation corridors alleviating the phenomenon of the urban heat island.

#### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) adopt urban planning standards;
  - b) pass a so-called landscape resolution;

- c) develop a plan for protection of contemporary culture assets;
  - d) adopt a catalogue of protective solutions together with an analysis of the current state of the acoustic climate in Lublin;
  - e) analyze the city's urban layout in terms of its potential influence on the phenomenon of the urban heat island and protection of the city's key ventilation corridors;
  - f) prepare design standards for blue-green infrastructure.
2. Analysis of key indicators and criteria:
  - a) coverage of the city area with local spatial development plans;
  - b) noise index and percentage of inhabitants living in areas with high noise levels (at least once in every 4 years);
  - c) heat island measures (e.g. the difference between the temperature in the city centre and in its outskirts during the summer months).
3. Additional indicators and monitored data:
  - a) number of documents protecting urban structures.
4. Expert assessments on:
  - a) quality of urban planning standards;
  - b) quality and availability of multifunctional public spaces;
  - c) prevention of urban sprawl;
  - d) consideration of environmental objectives in shaping the city's spatial structure.
5. Opinions of residents on:
  - a) quality and availability of multifunctional public spaces – in general and close to the place of residence;
  - b) availability of public infrastructure and services close to the place of residence.





## B.4. Energy transformation of the city and clean air

The demand for energy is constantly increasing. At the same time, the production of energy from traditional sources threatens the environment and human health and quality of life. It is therefore necessary to take measures to promote renewable energy production and consumption among citizens. It is also crucial to increase the city's resilience to unexpected situations that may disrupt transmission integrity, in which diversification of energy sources plays an important role.

The modern transport market is gradually being dominated and shaped by electromobility. This process is in line with the need to diversify energy sources and develop a sustainable zero-emission transport system that is user-friendly and environmentally neutral. In order to make this scenario possible, it is necessary to ensure the functioning of the necessary technical infrastructure. The most important is to build a coherent charging system, especially in a bidirectional Vehicle-to-Grid system, which contributes to stabilising the electricity system at times of high demand for electricity. Special attention should be paid to the development of electric micro-mobility in the "Mobility as a Service" model (MaaS). The problem in many cities is, especially, the logistics of operating such vehicles,

especially their charging. Following in the footsteps of Paris, Lublin could implement a system of charging points for micro-vehicles, including pay-per-minute vehicles. The popularity of this type of vehicles will grow, especially with the emergence of low-emission zones, clean transport zones and zones limiting car traffic which, apart from reducing air and noise pollution, are designed to calm traffic and give space to pedestrian users.

The tradition of electromobility in Lublin is very long. Already on 21 July 1953, Lublin launched the first trolleybus line no. 15. Much has changed since then, but the aspirations for the development of zero-emission transport have remained. Reducing pollution from road transport is of particular importance for achieving the climate neutrality target. Zero emission public transport should become the main mode of transport in Lublin. For this to happen, timetables need to be optimised in order to improve the accessibility of this mode of transport. Still not all parts of the city are well connected – therefore, an even distribution of public transport stops should be aimed at and the functionality – including multimodal components – of existing transfer nodes in the city space with the highest intensity of public transport



passenger transfers should be improved. Undoubtedly, the development of transport based on electric buses is very dynamic, but it is necessary to remember about the necessity to diversify the sources of their propulsion. The development of hydrogen technologies will be helpful in this respect. Hydrogen should be treated as the zero-emission fuel of the future.

The development of renewable and zero-emission energy sources applies not only to the transport sector, but primarily to buildings and technical infrastructure. Low-stack emissions should be reduced by implementing clean technologies in buildings and modernising

energy-inefficient buildings and infrastructure. For a long time, the city has been carrying out thermal modernisation activities and co-financing the replacement of heating systems, including elimination of coal-fired power plants. These activities will certainly be continued, but it is particularly important to raise the awareness of residents and entrepreneurs of the initiatives they should carry out on their own to contribute to their own and others' quality of life. An important partner in this task are Lublin's universities, which together with the city authorities can carry out research into technologies for generating, optimising and storing energy.



## Energy transformation of the city and clean air

**B.4.1.** Reduce emissions of pollutants into the atmosphere, including emissions from local coal-fired boiler houses and individual boilers.

**B.4.2.** Develop the technical infrastructure and create conditions necessary to develop urban electromobility.

**B.4.3.** Extend the city's transport offer with zero-emission means of public transport.

**B.4.4.** Create conditions and support clean energy generation and storage.

**B.4.5.** Improve the energy efficiency of Lublin's technical infrastructure and public buildings.

### Key tasks and projects

**B.4.k.1.** Continue and strengthen of the municipal Low-Stack Emission Reduction Programme to eliminate individual coal-fired boilers.

**B.4.k.2.** Distribute air-quality monitoring sensors evenly across the city, taking into account needs and conditions.

**B.4.k.3.** Develop and implement a concept for a network of electric micromobility charging stations.

**B.4.k.4.** Modernize the city lighting using LED technology and intelligent control systems.

**B.4.k.5.** Cooperate with the scientific environment to develop the concept of hydrogen technology development, including the construction of hydrogen filling stations.

**B.4.k.6.** Build installations producing and accumulating energy from renewable sources to power public transport.

**B.4.k.7.** Modernize and expand the district heating system in Lublin, including replacement of the existing group heat distribution centres with individual heat distribution centres in order to reduce heat losses.

**B.4.k.8.** Support creation of local energy communities.

**B.4.k.9.** Ensure thorough thermomodernisation of existing public buildings, including replacement of inefficient heat sources, increasing the share of renewable energy sources in buildings, energy storage, and replacement of lighting with energy efficient ones.

**B.4.k.10.** Exchange experience in the framework of international projects, including financing of studies, analyses, reports, pilot projects and technical documentation and documents of strategic-implementation character.

### Recommendations and synergies

- Air quality in Lublin is influenced by numerous factors, including low-stack emissions from individual boilers or means of transport, inadequate thermal insulation of buildings, the urban development and related ventilation possibilities of the city, the amount of green areas and the ecological awareness of the inhabitants themselves. Improving air quality in Lublin therefore requires multidimensional measures and an integrated approach.
- In relation to climate neutrality objectives, measures should be taken to increase the share of energy from renewable sources using existing resources and potentials.
- When designing infrastructure for the development of electromobility, it is important to bear in mind that vehicles representing electric micromobility – bicycles, scooters, etc. – are much more popular than



conventional cars. Charging infrastructure for these types of vehicles in Western Europe has contributed to even distribution of scooters in cities. Such infrastructures could be built at the most important interchange points in the city and also allow the charging of so-called pay-per-minute vehicles. This will reduce environmental costs resulting from the logistics of transporting unloaded vehicles by operators.

- The city should continue to develop zero-emission public transport. Other types of drive should be considered in its development, including hydrogen technology. Due to the high costs of this technology, widely accessible refuelling stations should be considered.
- Planning documents should take into account design in favour of energy objectives, i.e. reduction of energy demand and possibilities to use renewable energy sources – flat roofs, orientation of the building with respect to sunlight, natural ventilation of buildings, vertical gardens, bright façade colours, etc.
- An opportunity to accelerate energy transition in cities is provided by local energy communities, established to cover local energy needs. This will serve to increase the share of distributed energy in the Polish energy market, especially renewable energy. For example, housing cooperatives and housing communities, which have a large and unused energy potential in the form of roof space.

### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) implement the Low-Stack Emission Reduction Programme;

- b) create a network of evenly distributed sensors monitoring air quality in the city area;
  - c) build a network of electric micro-mobility charging stations;
  - d) build a hydrogen refuelling station;
  - e) build installations producing and accumulating energy from renewable sources to power public transport.
2. Analysis of key indicators and criteria:
- a) share of energy from renewable sources in relation to total consumption;
  - b) emission factors for gaseous pollutants (per capita) and for particulate matter (per 1 km<sup>2</sup>);
  - c) annual number of vehicle-kilometres done by zero-emission buses of urban transport (in total and per 10,000 inhabitants);
  - d) number of days with bad and very bad categories of the air quality assessment index;
  - e) share of urban lighting with LED technology and intelligent control systems in the total lighting.
3. Additional indicators and monitored data:
- a) number of air quality monitoring stations in the city area;
  - b) number of households covered by the Low-Stack Emission Reduction Programme;
  - c) share of zero emission vehicles in the total number of vehicles registered in the city;
  - d) share of zero-emission vehicles in the city's vehicle fleet;
  - e) number of publicly accessible charging points for vehicles;
  - f) number of municipal public buildings undergoing energy refurbishment.
4. Expert assessments on:
- a) actions taken by the city for clean air;
  - b) actions taken by the city to increase energy efficiency and to generate and store clean energy.
5. Opinions of residents on:
- a) air quality (questionnaire survey).





## B.5. Closed-loop climate change mitigation

Although cities cover only 3% of the Earth's surface, they consume more than 70% of all natural resources. Therefore, cities should play a key role in shaping a sustainable circular economy. The principle of a circular economy is to carefully conserve all valuable resources in such a way as to strengthen the resilience of the whole urban system to possible disruptions and to enable its rapid regeneration.

Water management in Lublin is susceptible to both droughts resulting from prolonged periods of high temperature and localised floods resulting from short-lived but intensive rainfall. These problems are aggravated by reduced infiltration of rainwater and snowmelt caused by excessive sealing of soil, inefficient sewage networks and lack of water retention solutions. It is therefore necessary to implement measures aimed at improving the efficiency of the drainage and water collection system. This can be achieved through the development of the so-called blue-green infrastructure which is used on a large scale in both public and private investments. Solutions based on nature not only reduce the negative effects of extreme hydrological phenomena but also improve the city's microclimate and aesthetics.

Growing urban agglomerations, through their consumption patterns, create a number of negative

environmental impacts both inside and outside cities. The most frequently wasted raw materials (apart from food) include energy, water and construction waste. Measures should therefore be introduced to change consumption behaviour and to encourage greater efforts to recycle and save. Recycling does not end with separating waste into fractions. Recycling does not end with separating waste into fractions; it is also about making conscious purchases in order to reduce the amount of waste and reduce the amount of unnecessary items being thrown away in favour of recycling, returning or exchanging them.

The stream of waste needs to be monitored much more closely to give a clear picture of the possibilities for reuse. This will help identify the actual level of recycling as well as its form. At present the system is not completely transparent which raises many doubts about the effectiveness of the reuse of many materials. This requires cooperation with the city's key stakeholders: the waste and media industry, commercial and governmental spheres as well as social organisations.

The city will intensify the scale effect by implementing a green procurement policy aimed at obtaining a service with a significantly lower environmental impact than traditional procurement.

### Closed-loop climate change mitigation

#### To achieve this objective, we intend to:

**B.5.1.** Increase the city's resilience to extreme hydrological events by increasing the efficiency of water drainage and capture throughout the city, e.g. by expanding the blue-green infrastructure, creating soil conservation and management policies.

**B.5.2.** Increase the share of natural vegetation surfaces favouring the stabilisation of heat balance and water retention.

**B.5.3.** Build awareness of the importance of zero-waste policy reducing waste generation and consumption of raw materials in the city. Implementation of a circular economy in private investment should be encouraged.

**B.5.4.** Monitor waste treatment activities in order to optimise the waste management system.

**B.5.5.** Implement green procurement policies as standard in public institutions and promote green purchasing in the private sector.

**B.5.6.** Ensure the safety of citizens in the event of extreme events related to climate change.

#### Key tasks and projects

**B.5.k.1.** Prepare implementation analyses and design standards for blue-green infrastructure.

**B.5.k.2.** Develop water retention standards through protection of soils and proper water storage in overground and underground reservoirs.

**B.5.k.3.** Reconstruct and extend rainwater drainage, including construction of retention reservoirs, in areas particularly vulnerable to local flooding, e.g. in the region of Głębocka St., Kunickiego St., Nadbystrzycka

St., Morwowa St., Solidarności Ave., Płk. R. Kuklińskiego Roundabout.

**B.5.k.4.** Construct new and connect the already built retention reservoirs in the area of Ciek spod Konopnicy (in the north-western part of the city, between Raszyńska and Wojciechowska Streets), new reservoirs in Sławin (in the area of Warszawska Ave. and Skowronkowa St.) and in the area of Muzyczna St.

**B.5.k.5.** Continue the municipal low-scale water retention programme called *Catch Rainwater*.

**B.5.k.6.** Build the Turka water supply station and connecting it to the water supply system of the city of Lublin – the project aims to improve the efficiency of the water supply system in the city of Lublin by building a water supply station supplied from the new Turka water intake.

**B.5.k.7.** Increase the safety of water supply to the City of Lublin and neighbouring municipalities in emergencies through the construction of transit connections.

**B.5.k.8.** Prepare and implement educational campaigns in the zero waste area, e.g.: zero waste school, activities in the city districts and institutions.

**B.5.k.9.** Develop a catalogue of good “non-waste” practices.

**B.5.k.10.** Promote composting, e.g. through creation of composters in local green areas and making composters available to the inhabitants.

**B.5.k.11.** Develop urban agriculture in the form of so-called community gardens.

**B.5.k.12.** Extend the system of stationary selective municipal waste collection points (PSZOK).

**B.5.k.13.** Buy containers for collection of waste and electrical and electronic equipment, and containers for pharmacies collecting expired drugs.

**B.5.k.14.** Implement the Safety Management System of the City of Lublin as a comprehensive response

to the problems connected with the consequences of climate change.

**B.5.k.15.** Support groups especially vulnerable to the consequences of extreme climatic phenomena by e.g. building a system of neighbourly help.

### Recommendations and synergies

- Extreme meteorological phenomena in the form of sudden and intense precipitation or long-lasting droughts are increasingly affecting Lublin. Therefore, preventive measures should be taken into account in city development. Lublin has a well-developed network of rainwater drainage systems, which, however, have problems with collecting water during heavy rainfall, which is seen in temporary flooding. It is particularly important to implement actions in the field of blue-green infrastructure, which should be a standard for urban investments. This will not only prevent flooding, but will also allow water to be collected and stored for use in times of drought.
- The unsealing of pavements and introduction of new planting will help both in water retention and in mitigating the phenomenon of the urban heat island in densely built-up central areas of the city.
- Lublin has the potential to move towards a circular economy. However, for this to happen, the co-operation and education of all the city's stakeholders is needed. The city authorities should create conditions for the development of local repair shops, run educational campaigns and workshops teaching circular behaviour. However, it is up to the citizens whether they want to implement pro-ecological behaviour for the benefit of the environment. A good practice would be to implement a system of information about the reuse of recycled materials so that the

residents are aware and confident about the reuse of recycled materials.

- The most frequent phenomena affecting the public health sector in Lublin are heat waves and frosts, extreme weather conditions such as heavy rainfall and snowfall, storms, air pollution and increased insect population. These phenomena contribute to the creation or exacerbation of a number of health and life-threatening body dysfunctions. Particularly vulnerable in this respect are children under the age of 5, people over the age of 65 and the chronically ill. People with disabilities, reduced mobility and the homeless are also highly vulnerable to extreme weather events.
- As part of building a neighbourhood support system, social infrastructure facilities and friendly green public spaces are to be created to foster the integration of the elderly and lonely. Networking is especially important in times of increasing vulnerability, when city services are unable to reach all those in need. The city wants to increase the protection of its residents through qualified neighbourhoods and thus encourage volunteers to care for older people in the local community.

### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) build a water supply station in Turka, connected to Lublin's water supply system;
  - b) implement the *Safety Management System of the city of Lublin*;
  - c) develop the concept and implementation of the *Neighbourhood Support System*.
2. Analysis of key indicators and criteria:
  - a) volume of water retained per year;

- b) volume of sewage discharged and treated;
  - c) length of reconstructed or extended sanitary and storm water drainage system;
  - d) share of selectively collected waste in total waste;
  - e) recycling rates of selected waste fractions;
  - f) share of completed tenders covered by the green public procurement system in the total number of tenders.
3. Additional indicators and monitored data:
  - a) number and value of municipal investments in blue-green infrastructure;
  - b) number of households covered by *Catch the Rainwater* programme;
  - c) area of community gardens;
  - d) number of educational actions on the circular economy with the number of participants;
  - e) weight of mixed municipal waste per capita;
  - f) total water consumption per capita;
  - g) number of days with extreme air temperatures – hot days and very cold days.
4. Expert assessments on:
  - a) security of water supply for Lublin and the Lublin Metropolitan Area;
  - b) actions aimed at increasing the city's resilience to climate change and at mitigating the city's impact on climate change;
  - c) system ensuring the safety of the inhabitants in the situation of extreme climatic phenomena.
5. Opinions of residents on:
  - a) environmental awareness and pro-environmental attitudes.







# Lublin – open, multigenerational and socially involved



Local government plays a special role in a democratic state ruled by law. It is the authority closest to the citizens, with a mandate in the formal sense and responsibility for public affairs and, most importantly, it meets the needs of the residents. These actions, in the whole range of solutions adopted, should protect the rights of the individual, be based on the principle of justice, guarantee safety, respect the natural environment, strengthen equal treatment, care for the common good, and guarantee social cohesion.



The policy of the City of Lublin, within the framework of all competences vested in the local government, serves the purpose of solving problems and managing public matters. The directions of activities comply with the principle of subsidiarity, social participation and co-responsibility of inhabitants. All projects are performed on the basis of cooperation between the entities influencing the creation of the social policy of the city. To ensure sustainable development and improve the quality of life, these issues are addressed in documents defining priorities and solutions. In terms of social policy, the City of Lublin implements a comprehensive system of strategic management. Its elements include sector policies defining the directions of development of a particular area of the city's activity as well as practical activities. These include strategies, programmes and plans for solving social problems, health care, mental support, integration of disabled residents, family support, counter-acting violence, prevention of addictions, activation of seniors, local activity, cooperation with non-governmental organisations, improvement of the residents' safety and activation of the labour market.

During the work on the *Lublin 2030 Strategy*, which defines the vision of the city for the next decade, not only the problem areas, but also the priority directions of actions and strategic guidelines were defined in a participatory way. The objectives set out in this area are not disjoint. They are interrelated due to their co-occurrence, overlapping and the interventions undertaken. This interrelationship makes it possible to dedicate individual projects to different tasks and to network many related environments and local government or non-governmental sector entities in order to achieve the objective. In addition to defining the problems, proposals for methods and



ways of responding to emerging challenges were also formulated.

The idea of a socially involved city as a determinant of development programming has its grounding in Lublin's current policy. For many years, the city has been implementing a social policy understood as integrative, interdisciplinary, based on social inclusion and participation and on cooperation between the local government and social partners. It is a well-planned, consistent action, reaching out to all interested and needy groups and individuals. A system of interconnected actions based on recognised expectations has been successfully created in Lublin. Meeting needs in this area, with the experience gained and understanding new challenges, allows the freedom to move to a higher level of thinking about development in this area. Many issues or problems, which are reflected in the activities of the local government, evolve and create new needs and expectations and thus, new challenges emerge. An open, multigenerational and socially engaged city has a wide range of influences, which require looking at some issues in a different way than before. The spectrum of problems is very wide, which is reflected in the specific objectives of the Strategy. We also want the inhabitants of our city to be active participants and co-creators of social life in every area. An open, multigenerational and socially engaged city is at the same time a collection of active citizens of social organisations contributing their ideas and initiatives to the life of the local community based on articulated and recognised real needs. We recognise the potential of participation. It is only thanks to the involvement of the residents that initiatives and activities in every area of social life can be implemented effectively.



## C.1. | Open and inclusive city

Lublin has been and still is the biggest and most rapidly developing city in Eastern Poland. Its rich history is comprised of many elements. One of them is the openness of its inhabitants and the diversity of the city. For centuries, representatives of other nations, religions and cultures have blended smoothly into the social fabric of Lublin. The key to understanding both the historical and present-day spirit of the city is its historical openness and multicultural heritage. Openness is manifested by a unique orientation towards others and acceptance to include others. It is an attitude based on favour and approval. This spirit makes the local community of Lublin accessible and friendly towards others. Inclusion, on the other hand, is expressed through an attitude of inclusion. It takes place when one accepts the other person and strives for his or her real inclusion in social life regardless of possible differences. The expected effect of such inclusion is the creation of one group with diverse, individualised features without any division into better and worse. In inclusion understood in this way, acceptance is a prerequisite for the existence of an authentic community, it creates bonds and in effect translates into action. An open, inclusive and accessible city focuses on the quality of life of its inhabitants,

reacts consciously and sensitively to situations and processes that may affect the well-being of social groups, especially those threatened by exclusion or marginalisation.

Openness and inclusion is part of the city's policy to guarantee equal opportunities and respect for all people. An open city allows all inhabitants to participate fully in the life of the community. All groups of inhabitants, including vulnerable groups, have equal access to basic public services, such as education, culture, social services and health care.

Residents participating in the study described the city as open and accessible, a city willing to make changes and welcoming to those who want to make changes. It is a city where different cultures and world-views coexist and where everyone can feel comfortable and safe, regardless of their origin, age or nationality. It is a city where people are eager to make contact with each other, to show kindness.

An open, inclusive and accessible city will be guided in all its activities by the principles of human and civil rights protection, aiming at full inclusion in the social life of the city of every resident as well as all those who want to live there.



## Open and inclusive city

### To achieve this objective, we intend to:

- C.1.1.** Provide modern inclusive education and implement policies to manage diversity and equality as a factor of social inclusion.
- C.1.2.** To undertake local government policy measures to prevent exclusion and to include seniors, people with disabilities, minorities and all those at risk of exclusion in social life.
- C.1.3.** Ensure a system of cooperation of the city with organisations and the inhabitants in order to promote the idea of tolerance, counteracting discrimination and exclusion.
- C.1.4.** Take local government policy measures to ensure safety and prevent violence in social life.
- C.1.5.** Adapt the city's infrastructure for people with different needs.

### Key tasks and projects

- C.1.k.1.** Revise and continue the city's sectoral strategies and support programmes for seniors, people with disabilities, the unemployed, the homeless, victims of violence, the foster care system, the most common diseases, addiction prevention and improvement of safety in the city.
- C.1.k.2.** Create *Lublin's Intercultural Integration Policy*, horizontal diversity and equality management policy, anti-discrimination policy and municipal programme of inclusive education.
- C.1.k.3.** Redevelop and extend the facilities of the Prof. Zofia Sękowska Special School and Educational Centre

for Disabled Children and Youth in Lublin, creation of a centre of comprehensive educational, revalidation and integration support for children and young people with disabilities.

**C.1.k.4.** Expand and build educational, therapeutic and support institutions taking into consideration the needs of different groups of persons requiring support.

**C.1.k.5.** Conduct educational campaigns on diversity and building awareness of the existence of "invisible" social groups through social campaigns, educational lessons, actions and events.

**C.1.k.6.** Develop a system of social services provided in the community and the necessary range of institutional services aimed at particular groups requiring support.

**C.1.k.7.** Foster attitudes of social involvement and volunteerism through social campaigns, educational lessons, actions and events.

**C.1.k.8.** Promote and develop the city's helpline by ensuring service also in English and Ukrainian.

**C.1.k.9.** Carry out activities aimed at eliminating barriers and implementing reasonable improvements in public spaces and places of residence, as well as carrying out investment activities in accordance with the concept of universal design.

### Recommendations and synergies

- Lublin is a leader in employing people with disabilities in local government institutions. It is necessary to maintain this direction and further professional activation of people with disabilities.
- Tools for researching the needs of the city residents should be developed, making sure their needs are constantly monitored. In this respect, the needs of individual minority groups should be better identified,

both in terms of everyday functioning, quality of life and expectations for the future. The knowledge and conclusions gathered will allow for a better involvement of minority groups in the creation of a long-term city policy.

- Actions in the fields of culture, education and academia contribute to a continuous increase in social sensitivity due to the continuous development of the cultural and educational competences of the city residents, ensuring an increased sense of security and care for the potentially excluded and marginalised, as well as minimising negative phenomena based on stereotypes.
- The economic development of Lublin may be an opportunity to reduce economic stratification among the inhabitants. Improvement in the labour market situation and economic conditions should be used to strengthen social cohesion and reduce the sense of exclusion and marginalisation among residents.
- The development of the system of social services should be implemented with the use of the potential of social economic entities. Social economy should be treated as a tool used in various areas of social policy, professional activation and revitalisation. Stimulating the development of existing and supporting the creation of new social economy initiatives should be reflected in the detailed provisions of multi-annual municipal programmes specifying cooperation with non-governmental organisations and other social economy entities.
- Cultural and sports institutions accessible to all provide opportunities for development, deepening of interests, creative expression, physical activity and rehabilitation. Free access to such institutions

will contribute to better mutual understanding and integration of people at risk of exclusion.

### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) create *Lublin's Intercultural Integration Policy*, a horizontal policy for diversity and equality; management and anti-discrimination policy and a municipal programme for inclusive education;
  - b) redevelop and extend facilities of the Special School and Educational Centre for Disabled Children and Youth in Lublin;
  - c) develop a municipal helpline by providing services in English and Ukrainian.
2. Analysis of key indicators and criteria:
  - a) share of investments carried out in accordance with the principles of universal design in total investments;
  - b) number of crimes against freedom, freedom of conscience and religion, sexual freedom and morality ascertained by the Police per 1,000 inhabitants;
  - c) number of homeless persons per 100,000 inhabitants.
3. Additional indicators and monitored data:
  - a) number of projects implemented in favour of minorities, persons at risk of discrimination, exclusion and marginalisation;
  - b) expenditure on projects and activities in favour of minorities, persons threatened by discrimination, exclusion and marginalisation;



- c) the number of foreigners registered and the number of foreigners working in Lublin per 1000 inhabitants;
  - d) number of persons with disabilities employed in the Lublin City Office and in the city's organisational units and their percentage in the total number of employees.
4. Expert assessments with respect to:
- a) quality of inclusive education;
  - b) safety of minorities, persons threatened by discrimination, exclusion and marginalisation;
  - c) the city's activities for people at risk of discrimination, exclusion and marginalisation.
5. Opinions of residents on:
- a) conditions of living and functioning in the city (formulated by persons threatened by discrimination, exclusion and marginalisation) – on the basis of research conducted in cooperation with the academic circles at least once in every 4 years.





## C.2. | Multigenerational city

A multigenerational city is one guided by the principle of subsidiarity, which activates and initiates mutual cooperation of all age groups, which strengthens the social capital of its inhabitants, which deepens their local identity, which bonds and integrates them with their place of residence. In this sense, multigenerational relations within the local community are seen as a situation in which different generations agree to live together and work towards common goals. Therefore, given that generational continuity has been constantly eroded over the years, relations between generations take on particular importance. It seems necessary, therefore, to moderate intergenerational contact in such a way as to “get to know each other anew”, to create a climate for dialogue, to understand the needs of people belonging to different generations, to arouse motivation for joint action, and in effect to achieve the objective of a subjective relationship between all parties.

Lublin is a city with a complex, multilayered structure, a rich history and a formidable spirit. The process preceding the writing of the Strategy, based on in-depth dialogue, has shown how important it is to protect the cohesion of the local environment, to

understand each other and to cooperate in order to satisfy the living and social needs of the present inhabitants and to contribute to satisfying the needs of future generations.

Such an assumption made it possible to formulate a list of recommendations, which will lead to deeper multigenerational integration and satisfaction of the needs of individual social groups. Each activity enabling contact, exchange of experiences and services between people of different age groups, will make it possible to manage the unique resources of generations. This in turn should contribute to debunking stereotypes, deepening dialogue, sharing knowledge and experiences.

A city that is open to the young, according to expert predictions, is a city providing opportunities for development, supporting self-realisation of the young generation, offering decent education, investing in leisure time infrastructure, empowering the young as citizens, listening to them as inhabitants and communicating with them. An open and adult-friendly city provides access to crèches, kindergartens and schools. It supports the reconciliation of work and family life. It utilises spatial resources and modernises infrastructure, making it resident-friendly. It engages in



dialogue with citizens, building a civic society. A senior-friendly city places senior citizen policy among its key tasks. It takes into account their needs in accordance with accessibility standards in priority areas of

city development, including public space, buildings, transport, housing, social services and health care. The multigenerational city maintains dialogue with senior citizens.



## Multigenerational city

### To achieve this objective, we intend to:

- C.2.1.** Empower young residents, support them in acquiring knowledge and new skills, involve them in the life of the city and involve them in making decision on issues that affect them.
- C.2.2.** Develop complementary and effective support system for adults, comprehensively support families, strengthen them in fulfilling the educational function and reconciling parental and professional roles, develop the system of family foster care, support in crisis situations.
- C.2.3.** Continue activities for the benefit of seniors, providing them with support and care, activating and using the potential of this social group in order to create a city friendly to them.
- C.2.4.** Develop a model of multigenerational cooperation based on understanding the needs of all parties and mutual respect. In particular, promote and deepen the participation of young people, adults and seniors in decision making at all levels and manage the city through dialogue with citizens.
- C.2.5.** Care for the health (both physical and mental) of residents of all ages.
- C.2.6.** Develop the infrastructure and services needed by young people, families and senior citizens to make Lublin an “accessible city”.
- C.2.7.** Create new locations, implement non-development instruments and increase the availability of living spaces.

### Key tasks and projects

- C.2.k.1.** Expand the formula for involving young people in decision-making processes between the youth and the city, including improvement of communication and profiling of messages addressed to this age group.
- C.2.k.2.** Promote the activity of young people in various fields, e.g., through grant financing and comprehensive support for their initiatives and projects of social and economic character.
- C.2.k.3.** Implement the programme of activities and events defined in the application for *European Youth Capital 2023*.
- C.2.k.4.** Increase the availability of crèches and kindergartens and development of childcare forms.
- C.2.k.5.** Maintain the activity of psychological-educational counselling centres and increasing access to services provided by them.
- C.2.k.6.** Increase the availability of specialist counselling, including psychological counselling and crisis intervention in the context of problems caused by the COVID-19 pandemic.
- C.2.k.7.** Efficiently implement local and governmental programmes for families.
- C.2.k.8.** Develop infrastructure and services needed by families.
- C.2.k.9.** Continue and develop the system of comprehensive support for families, including family care in foster care.
- C.2.k.10.** Develop and better use of the potential of existing venues for meeting and spending time actively dedicated to seniors.
- C.2.k.11.** Extend the offer of services and goods for seniors, including services provided in the environment of seniors’ functioning.

- C.2.k.12.** Support and strengthen the social activity of seniors.
- C.2.k.13.** Design local government activities with the participation of seniors.
- C.2.k.14.** Develop and implement educational programmes improving competences of senior citizens, in particular digital competences and online safety.
- C.2.k.15.** Improve communication channels with seniors and senior organisations.
- C.2.k.16.** Programme activities supporting positive attitudes towards seniors, including organisation of senior volunteers and for the benefit of seniors.
- C.2.k.17.** Implement and promote innovative solutions, initiatives and practices which are part of the multigenerational cooperation mission.
- C.2.k.18.** Create a multigenerational mentoring network.
- C.2.k.19.** Organise multigenerational meetings.
- C.2.k.20.** Implement intergenerational friendly school projects.
- C.2.k.21.** Implement the *Health Programme for Lublin for 2021–2025*.
- C.2.k.22.** Support meeting the housing needs of families, including the implementation of government, partner and own programmes that increase the availability of housing spaces.

### Recommendations and synergies

- Lublin’s youth policy is addressed to a wide social category of young people. It takes into account the needs and addresses its offer to pupils, students and graduates of Lublin schools and colleges. It is based on partnership, strengthens participation, supports individual and organisational activity and is expressed in joint action for the benefit of young people and the whole local community.
- The title of *European Youth Capital 2023* should contribute to empowering young people (pupils, students and graduates), increasing their participation in decision-making in the city and strengthening their European identity. It is a good way to promote young, broadly defined culture and the activity of young people in various fields.
- Increasing accessibility of childcare for children up to 3 years of age is connected with a cyclic analysis of actual and expected demand for places in public nurseries in particular districts (goal A.1). Improved availability of nurseries in the districts may be ensured by constructing small, modular nurseries for several dozen children. Such a solution is in line with the idea of 15-minute city.
- The three pillars (accessibility, involvement and assistance) of senior citizen policy implemented by the city of Lublin should be complemented by an equally important component, i.e. lifelong learning. The scientific and didactic potential of universities in Lublin creates opportunities to prepare a wide range of lectures, workshops and classes based on the specialisation of particular units and faculties.
- One of the horizontal objectives of the *Lublin 2030 Strategy* is to increase the attractiveness of Lublin as a place to live, and thus to stabilise the population potential of the city. In order to achieve this goal, it is necessary to cooperate within the framework of governmental programmes as well as to implement one’s own programmes aimed at increasing the accessibility of residential areas.
- Efficient operation of health care services is guaranteed by an appropriate number and condition



of infrastructure, such as pharmacies, clinics and hospitals as well as the availability of medical staff (doctors and nurses). Despite the narrow scope of powers of the local government in this respect, efforts should be made to continuously improve the availability of social services.

#### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) create multigenerational mentoring networks;

- b) organise multigenerational meetings;
  - c) implement the *Lublin Health Programme for 2021–2025*.
2. Analysis of key indicators and criteria:
  - a) places in nurseries and kids clubs per 1,000 children aged up to 3 years;
  - b) children aged 3–5 per 1,000 places in pre-school education establishments;
  - c) the number of flats built within social housing, number of flats in the housing pool of the Lublin municipality (including the number of protected and respite flats) – in relation to the number of inhabitants.
3. Additional indicators and monitored data:
  - a) number of events and projects for the benefit of young people, families, seniors and multigenerational integration;
  - b) the city's expenditure on activities aimed at young people, families, seniors;
  - c) the number of unemployed under the age of 25 and the percentage of unemployed in the group of people aged 18–24.
4. Expert assessments on:
  - a) activities of the city addressed to youth;
  - b) city activities addressed to families;
  - c) city measures addressed to seniors;
  - d) city measures aimed at strengthening multigenerational dialogue;
  - e) increasing social activity of youth, families and seniors and involving them in the process of co-managing the city.
5. Opinions of residents on:
  - a) friendliness of the city for young people, families and seniors.





## C.3. | Active neighbourhood

The expected changes in the city require comprehensive involvement of Lubliners. Social development should contribute to the continuous strengthening of local democracy, and therefore residents must have access to tools enabling them to express their opinions on issues and processes affecting their daily lives. It is also important to continuously improve existing and spontaneously emerging new forms of civic participation in the city and neighbourhood life. Involvement of the neighbourhoods is crucial for the inhabitants' quality of architectural and infrastructural environment, because it is they who use these places on a daily basis. Neighbourhoods are the places where basic cooperative practices, leadership and responsive tools are developed and where the effects are most noticeable. In the process of urban renewal, it is important to recognise the nostalgia binding inhabitants to their neighbourhoods and to appreciate the strength of local identities. Especially the experiences from the pandemic show how important it is to have functioning local support networks and community solidarity.

Grassroots, intra-district activities of the residents combined with a dense network of friendly neighbourly relations is one of the foundations of a thriving city.

A good place to live is connected to strong interpersonal relations in the immediate vicinity, followed by cooperation and common activity as well as a sense of security. Relationships between residents increase the willingness to help each other, the commitment to design the neighbourhood and the care for cleanliness, infrastructure and active participation in change. Relationships increase spontaneous self-organisation aimed at solving local problems and the willingness to make changes to improve common life. Strong ties within the neighbourhood and local activism contribute to the growth of responsibility for each other and for the shared space.

Organising joint activities is all about bonding and relying on each other, and this requires places where spontaneous relations can take place. Also spaces where it is easy to congregate are necessary. Without a common local agora, where inhabitants can meet, it is difficult to discuss and decide together.

During the survey, residents from all districts commented on the lack of sufficient places and community facilities for spontaneous local social interaction and on the need to revitalise the existing ones. The replies also concerned the lack of rooms or larger spaces in local public buildings, where a larger group can meet



to debate and undertake different types of activities together. Additionally, the respondents mentioned places which they considered as conducive to local activity. Firstly, these are all places for spontaneous, casual meetings, e.g. civic activity centres, educational institutions, parks, squares, walking paths. Secondly, cultural institutions play an integrating role, especially libraries, housing estate markets, clubs and cultural centres.

The surveyed inhabitants of the city appreciate the importance of strong interpersonal bonds in their neighbourhood. On the one hand, they expect support from the self-government in initiating integration processes (in particular within new housing estates, where the social fabric is the least developed); on the other hand, they emphasise the need for autonomy and self-determination within the existing communities.

## Active neighbourhood

### To achieve this objective, we intend to:

- C.3.1.** Build systems that support the creation and maintenance of neighborhood ties, based on open, informal, and non-institutionalised spaces called Residential Activity Spots, modelled on Places for Local Activity and supported by enclosed public spaces, so-called *Places for You*.
- C.3.2.** Create and strengthen a sense of empowerment, capacity for action, and responsibility for common space among residents (also through the development of good neighborhood institutions).
- C.3.3.** Include neighbourhood communities in the process of planning and implementing changes in their immediate neighbourhood through the development of local participation systems.
- C.3.4.** Maintain the current high level of security in the city while strengthening efforts to further improve it.
- C.3.5.** Involve educational institutions in activities for local communities, developing social and civic competencies of children and youth.

### Key tasks and projects

- C.3.k.1.** Participatory creation of Neighbourhood Plans implementing the vision of a 15-minute city.
- C.3.k.2.** Continue developing public libraries in the districts and cultivation of their cultural, community and bond-building functions; continue to modernize public libraries and creation of a network of multimedia libraries (mediateka).
- C.3.k.3.** Expand and support the network of animators, performers and creators operating in the districts;

improvement of their working conditions and their operational capacities, strengthening of cooperation with the inhabitants.

- C.3.k.4.** Improve communication tools and channels between Lublin City Office, representatives of District Councils and local communities, including adjustment of communication channels to the needs of various groups of recipients so that the information on the implemented activities is efficiently communicated to the inhabitants via the Internet and local tools.
- C.3.k.5.** Involve residents in the planning process, e.g. through the developed procedures of community discussions.
- C.3.k.6.** Facilitate access to information concerning the city's spatial policy by, e.g., creating a tab on the city's spatial policy on the Lublin City Office website ([www.lublin.eu](http://www.lublin.eu)), with the following content: pedestrian and cycling standards, urban planning standards, information on planned investments.
- C.3.k.7.** Improve the functioning, comprehensive support and development of local civic activity centres and social entities such as community centres, clubs, cultural centres or other institutions animating the social life of districts.
- C.3.k.8.** Regularly monitor the inhabitants' needs in the districts.
- C.3.k.9.** Create a system of support for neighbourhood initiatives, including financial support.
- C.3.k.10.** Create infrastructure helping to build and maintain social bonds in newly developing housing estates of the city, in particular by opening Residential Activity Spots.
- C.3.k.11.** Create tools that facilitate active participation in district life and action for the benefit of the local community.



- C.3.k.12.** Organise public neighbourhood events integrating neighbourhood communities and building pride in one's neighbourhood.
- C.3.k.13.** Develop a pro-environmental educational offer addressed to residents and neighbourhoods.
- C.3.k.14.** Carry on and strengthen programmes aimed at improving safety and reducing the number of crimes, including further implementation of the *Safe Lublin* programme.

### Recommendations and synergies

- The ties between the inhabitants of the old districts and their surroundings, especially the active members of the community, hold great potential for bottom-up activism, which should be skilfully utilized to benefit local communities and the whole city.
- Special attention should be paid to strengthening the ties with where newly settled places, especially in new housing estates.
- Creating the widest possible opportunities for residents to express their opinions on the processes affecting their daily lives contributes to a stronger



sense of rootedness in their place of residence.

Lublin's local government should continue and improve the current forms of participation and create new channels of communication and participation in the processes changing the city, in accordance with the idea of co-management.

- The quality and aesthetics of housing estates depends largely on their inhabitants, who live there every day. Actions intended to strengthen local bonds and attachment to the place of residence will contribute positively to an increased care for greenery and cleanliness in the neighbourhood.
- Safety is an extremely important aspect in stimulating the city's development in many of its strategic areas, such as tourism and economic development. Furthermore, Lublin's development in other areas, especially in terms of reducing the wealth disparity among its inhabitants, significantly contributes to a decrease in crime.

#### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) create development plans for the districts;
  - b) create a funding system for local initiatives.
2. Analysis of key indicators and criteria:
  - a) number of multimedia libraries, district cultural institutions and libraries, *Local Activity Places* – in relation to the number of inhabitants;
  - b) recorded crimes per 1,000 inhabitants and crime detection rate.
3. Additional indicators and monitored data:
  - a) number of neighbourhood events carried out within districts (family picnics, district festivals).

4. Expert assessments on:

- a) the level of local social activity and its support by the city;
- b) inclusion of the local community in spatial planning and care for the immediate surroundings.

5. Opinions of residents on:

- a) living conditions (including common spaces and meeting places) and investment priorities in the immediate environment – at least at the district level (at least once in every 3 years).







# Lublin – inventive, active and hospitable



Vibrant cities have always been considered places where despite relatively high population density personal freedom and independence may find their fullest realisation. With their variety, employment and education opportunities, cultural heritage, and great leisure activities, they are the most suitable and highly regarded space for living, developing, achieving personal ambitions and goals, running a business and discovering the world. Accumulating the most active and creative human capital, cities are drivers of the economy and technological progress as well as incubators of new world-changing ideas. Despite similarities between cities, each of them is an organism of sorts, with its unique identity, characteristics and energy which help to keep its residents and attract new ones.





One of the key elements determining a city's position and attractiveness is the quality of life, defined as good health, a sense of comfort, and a chance to actively participate in and enjoy life's events. Thus understood well-being is influenced by diverse factors, both material and immaterial. Apart from good health, the most frequently cited factor in terms of the subjective sense of happiness and contentment is the quality and frequency of social relations at work and in education but primarily outside of them. It is thanks to interactions with other people that we feel happy and fulfilled; and it is cities with their much-desired anonymity that offer an ideal space for building and nurturing social relations. They provide closeness, density and above all access to an ever-growing range of activities offered by their rich urban culture, sport and leisure. The choice is made even wider by the natural openness and hospitality of cities, commonly perceived as attractive tourist destinations and education centres. Creative energy coupled with openness to others, hospitality and inclusivity, which make it easier for newcomers to adapt, are nowadays the most desirable features contributing to the urban *genius loci*.

In the areas of culture, sport and tourism, Lublin boasts resources and potentials which, when skilfully used and developed, will in this decade strengthen the position of the city and its positive reception by residents. Culture is seen as an important element of the city's identity and image, while the development of Lublin's cultural sector and the richness of its cultural offer, so highly regarded by residents and visitors, is indicative of the city's success. A key role will be played here by unlocking the potential of the artistic circles and the creative sector in a skilful way with a view to consolidating the position of the city as one of the most important cultural centres in this part of Europe. Lublin's sport - well-established teams, flagship facilities and important events - is extremely important

for residents and constitutes an important element of the city's identity, an element with great promotional potential. The biggest challenge in this decade is a sustainable development of the different areas of sport, including infrastructure and events, a development taking into account the local government's financial and technical capabilities. The city's task is to create favourable conditions for developing popular and competitive sport, supporting physical education and promoting physical activity as a method for building health potential. Lublin has tremendous potential as a tourist destination with tourism becoming an important driver of the city's development. It stimulates the economy, creates jobs and effectively promotes Lublin in Poland and abroad. Socially, tourism raises the awareness of the local heritage and culture, and contributes to a tolerant, inclusive and respectful society. Increased tourism results in the positive atmosphere, vibrancy and international feel brought by tourists. The growth of various branches of tourism and the meetings industry creates both opportunities and risks. To minimize the latter, sustainability should be striven for in developing tourism, and quality prioritised over quantity; we should always keep in mind the comfort of residents, who are the most important group of stakeholders in the process of creating and reviewing urban solutions.

Carrying out the vision of developing the three interrelated areas is linked with some horizontal objectives. Firstly, all the actors, including both the local government and creators as well as the users of services and solutions, must appreciate that without quickly adapting to the ongoing digital transformation and technological progress they will not achieve their set goals. Secondly, the key role in the process of changes will be played by demography, especially the ongoing ageing of society, which necessitates adapting the offer and solutions to diverse needs and groups of users.



## D.1. | City of culture industries

By influencing intellectual capital, promoting equal chances and boosting economic growth, culture makes a city more attractive to residents, investors and tourists, and shapes its metropolitan functions. Lublin has long considered culture as an important element of its identity and image, as well as a building material and bond of a modern and creative civic society. Culture is based on a common history and heritage, and pervades other areas of life as a catalyst and a link. The biggest challenge facing culture in the coming years is preserving its diversity, potential and creative activity while working out solutions that will help to enhance the resistance the whole cultural system to various problems and crises. This means that Lublin's culture should adapt more quickly and effectively to new trends, challenges and technologies; it should also develop in an active way through networking and interacting with global culture. To achieve success, it must also create its own unique solutions.

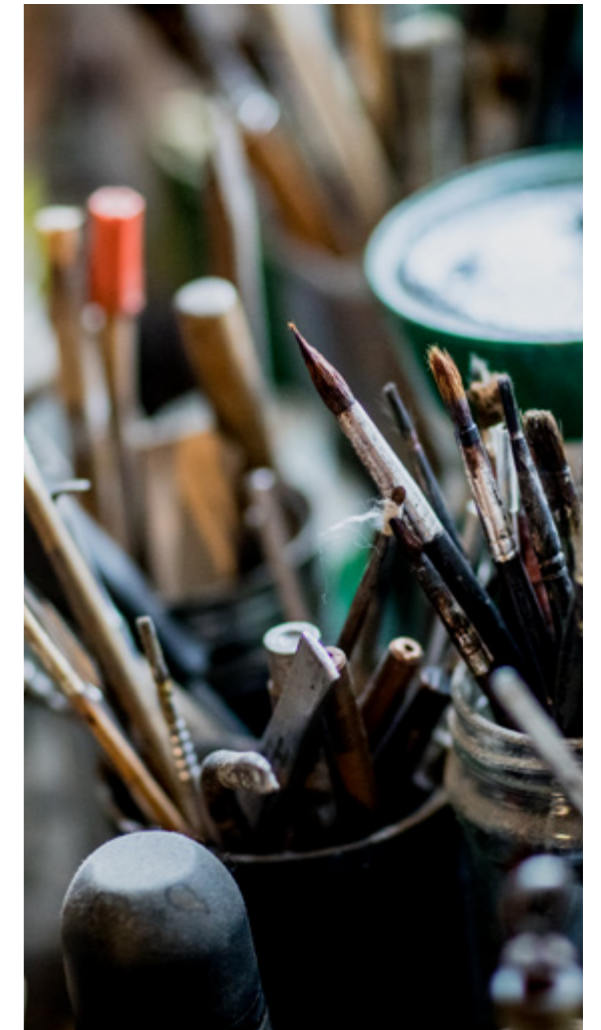
From the residents' point of view, two issues come to the fore regarding the future of Lublin's culture. The first concerns its impact on the outside, especially its beneficial effect on the growth of tourism and the city's

image and recognisability. Residents believe that the development of the cultural sector and the richness of its offer are indicators of Lublin's success and that culture will clearly set it out from other Polish cities. This view follows from Lublin festivals and events, which are considered well-known and esteemed nationwide. Thus, the city should host more quality events of worldwide significance. To raise Lublin's competitiveness, more should be done to improve the information and promotion system of the cultural offer.

The other issue relates directly to localness, understood as the need for access to culture and the possibility of spending free time close to one's place of living. Residents expect a much wider and improved range of leisure activities, such as access to an attractive cultural and sport offer in every district, and the possibility of spending free time outdoors, taking into account the needs of various age groups, especially seniors, families with children, and people with disabilities. Residents would prefer it if some events were moved from the city centre closer to where they live. They call for reviving community centres and broadening their range of activities. They see them as places reinvigorating local

communities and spaces, where people can pursue their interests; they would like such institutions to be established where they are still lacking, and they consider public city libraries to have an important role to play in this respect.

The residents' perspective is complemented and made more concrete by a vision of culture and the future of creative industries in Lublin put forward by experts from a thematic group on culture and creative industries. This vision of the city's future to 2030 assumes that culture will take on a strategic role in its development policy, impacting the residents' quality of life and contributing to its uniqueness. Lublin has drawn up its vision of culture and is implementing systemic solutions based on it. As a result, the city is considered one of Poland's three most important cultural centres, ensuring some of the best conditions for running creative industries. The city provides systemic support for the whole sector based on the principles of networking, cooperation, autonomy, openness and diversity. The financing of culture is transparent and has long-term and diversified character. Lublin's culture is a system shaped by a wide group of stakeholders, who are very diverse, capable of self-reflection, open to everyone and avoiding any exclusion. This ensures access to culture for everyone, regardless of ethnic origin, age, religion, orientation and other factors. The Lublin City Office, cultural institutions, non-governmental organisations and representatives of creative industries and business are acting together with a view to maximising benefits and working out values relevant for the largest group possible of recipients. It is due to culture that Lublin is becoming noticeable from the geopolitical perspective. The congresses and international events hosted here position the city as a leading place of international



dialogue between the East and the West as well as between Europe and the countries of the Eastern Partnership. Lublin is effectively making use of the potential of culture for educational and promotional needs, which makes culture one of the main drivers of its competitiveness.



## City of culture industries

### To achieve this objective, we intend to:

**D.1.1.** Utilise the potential of culture, creative circles and creative industries as a factor contributing to Lublin's development and competitiveness, forming its identity, uniqueness, metropolitan functions and social bonds.

**D.1.2.** Enhance the city's recognisability as one of the most significant cultural centres in this part of Europe and a place friendly to creative industries.

**D.1.3.** Define Lublin's uniqueness and clearly communicate the character of its cultural offer.

**D.1.4.** Create and implement an integrated system for building up an audience, a system treated as a strategic, dynamic and interactive process of improving access to art and culture.

**D.1.5.** Increase access to culture and other forms of leisure close to where people live, tapping the potential of social organisations and the network of community centres as well as public libraries.

**D.1.6.** Improve the existing ones and create new mechanisms and tools ensuring the development and stability of Lublin's cultural ecosystem and creative industries; these should be based on a long-term, diversified and transparent system of financing culture, which will include the needs of artists, cultural institutions, staff and NGOs and facilitate the commercialisation of artistic activity as well as activity in the creative sector (architecture, interior design, graphic design, industrial design, games and new media).

### Key tasks and projects

**D.1.k.1.** Follow and strengthen those directions of cultural activity which are indicators of the city's

metropolitanism while maintaining a balance between supralocal and local cultural events in districts.

**D.1.k.2.** Increase access to the cultural offer and improving the possibility of spending free time in districts by creating new and developing the existing community centres, places of local activity and public libraries.

**D.1.k.3.** Provide a varied cultural offer relevant for mixed-age groups of recipients and involving people with mobility issues and disabilities as well as migrants.

**D.1.k.4.** Develop and utilising new technologies and tools for building up an audience and making cultural products available remotely.

**D.1.k.5.** Use available tools that will improve accessibility standards for all cultural activities including translations into foreign languages and Polish sign language, audio-description and plain language.

**D.1.k.6.** Build urban cooperation networks and strengthening relations with Lublin's twin cities and similar cities by co-creating and participating in international and national projects as well as those between cities.

**D.1.k.7.** Implement a strategy for cooperation between sectors for the benefit of Lublin's creative industries (communication, vision for action, real financial means and their sources) drawing on the Analysis of the State of Creative Industries in Lublin 2018 and the *Strategy for the Development of the Creative Industries Sector in the City of Lublin and Lublin Functional Area for the Years 2020–2030* which both provide for an integrated system of non-financial support (promotion, training, creating hubs), financial incentives (including rent discounts) and measures encouraging cooperation between entities from the cultural sector and creative industries (e.g. cooperation platform, database).

**D.1.k.8.** Develop and implement a strategy for culture and its promotion using the brand "Lublin. City of inspirations" as the watchword of the cultural offer.

**D.1.k.9.** Create mechanisms and tools for researching the demand for the cultural offer, monitoring the participation in Lublin's culture and tracking the activities of other cities and centres as part of the Lublin Culture Observatory (Lubelskie Obserwatorium Kultury).

**D.1.k.10.** Actively cooperate with universities, colleges, schools, workshops, studios and other entities of the creative industries sector in order to popularize creativity and improve the educational offer, including that of artistic courses.

**D.1.k.11.** Establish an Arts Centre for Children and Youth (Centrum Sztuki Dzieci i Młodzieży) in Lublin based on the Railway Community Centre (Dom Kultury Kolejarza); its purpose will be to inspire the artistic work of children and young people, promote new and valuable artistic phenomena, popularize and support new methods for educating the younger generation and organize artistic and cultural events.

**D.1.k.12.** Develop and improve a cultural education programme as part of the *European Youth Capital 2023* project.

### Recommendations and synergies

- Comprehensive development of the city should be based on technological development, knowledge-based economy and development of the creative sector, including culture and new media. It is important in this respect to efficiently combine cultural and economic development and to ensure efficient commercialisation of the cultural sector.
- The cultural sector should be considered a crucial resource in shaping the city's image, one that impacts other branches of the economy, especially tourism. An important role is played here by the cultural offer and products of culture, regarded as

an attractive characteristic of the city and significantly affecting its recognisability.

- The cultural sector should develop resistance to crisis through sustainable investments in online presence and in building up an audience through modern technologies. To this end, it is necessary to reflect on how cultural institutions can be informed by the technological potential and how to link it with the need to establish live contact with the audience.
- The pandemic period led to an important discovery of the growing significance of common and neighbourhood spaces (e.g. parks and squares), which are conducive to the deglomeration of culture and increasing its role at the level of micro-communities. This phenomenon presents a huge challenge to culture but also a chance for a more local approach.
- The potential and involvement of people of culture and scholars should be used extensively to redesign reality and search for answers to questions like: How to break the dependence on geopolitical and climate changes? How to cope in a world which has suddenly become less safe but perhaps more open than ever before?
- The present models of financing culture need to be reworked. The starting point is the assumption that culture is the basis for the success of other development areas: economy, tourism, ecology and society.
- Culture plays a very important role in the education of children and young people. The good of Lublin's future generations requires creating an educational system characterised by closer and active contact with culture.
- The extremely rich but scattered offer of Lublin's cultural institutions must be consolidated and more efficiently promoted. Consolidation will strengthen the cultural institutions' potential and will make it easier to reach a very scattered audience with a varied offer

of activities and events. It is worth using the narrative potential of “The New Circus”, a concept developed for years by The Magicians Carnival (Carnaval Sztukmistrzów) festival and the group of artists, institutions and organisations gathered around it. Another idea integrating Lublin’s cultural community is creating the Lublin Centre of Modern Art (Lubelskie Centrum Sztuki Współczesnej).

- The coming years will see the enormous importance of preparedness to make changes and meet challenges posed by globalisation as well as fast adaptation to dynamically changing conditions. At the same time, it will still be very important to have the ability to develop unique and specific solutions that will allow for exploiting one’s own niche.

#### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) create a strategy for cooperation between sectors for the benefit of Lublin’s creative industry;
  - b) create a strategy for culture development;
  - c) establish an Art Centre for Children and Youth in Lublin;
  - d) establish the Lublin Culture Observatory.
2. Analysis of key indicators and criteria:
  - a) the number of cultural events and activities (broken down into types) per 10,000 residents;
  - b) the number of participants in cultural, artistic and entertainment events in relation to the number of residents;
  - c) the share of creative industries in the overall number of businesses.



3. Additional indicators and monitored data:
  - a) outlays on culture per resident and the share of culture expenditure in the structure of the city’s budget expenditure;
  - b) number of new partnership projects in the international sphere;
  - c) number of cultural events/activities whose completion involved the use of tools improving the accessibility standard for people with limitations;
  - d) number of Lublin’s nationwide marketing campaigns for cultural products;
  - e) number of Lublin’s international marketing campaigns for cultural products.
4. Expert assessments on:
  - a) the use of the potential of culture, artistic circles and creative sector as Lublin’s development factors;
  - b) the development and use of new technologies and tools in culture;
  - c) the cooperation of the city with universities, colleges, schools, workshops, studios and other entities of the creative industries sector;
  - d) the promotion and recognisability of Lublin as a city of culture in Poland and abroad.
5. Opinions of residents on:
  - a) the cultural offer available in Lublin and their districts of residence.



## D.2. | Attractive sports offer and wide range of leisure activities

Sport is one of the most important drivers of a city's development, shaping its social and economic environment as do culture, education and tourism. It also constitutes a major component of leisure and hence a reference point for assessing the quality of life in a city. Physical and mental health, as resulting from doing sports, are one of the most basic conditions of a successful life and personal development of residents. Doing sports regularly is a recognised way of coping with stress and preventing pathologies. Sport is also an indispensable educational tool whose value lies in the natural, playful and dynamic character of physical activity. The foundations for the regular practice of sports until old age are laid in childhood and early youth, when sport has considerable influence on physical, mental, social and intellectual development, shaping as it does appropriate behaviour and strength of character. In older people, physical activity improves their general fitness and makes them feel more in control. Socially, sport favours tolerance, team spirit and sense of justice. It is also one of few areas which enables an efficient and effective integration of ethnic minorities and people with mental or physical abilities as well as cooperation between the younger and older generations.

The most significant challenge for Lublin is a sustainable development of different areas of sport taking financial and technical capabilities into account. The city should create favourable conditions for developing popular and competitive sport, supporting physical education and promoting physical activity as a method for building health potential. Long-established sports and teams, flagship facilities and significant sporting events constitute an important element of the city's identity, an element with great promotional potential which contributes to Lublin's *genius loci*. The city's ambition is for its clubs representing the most popular sports to take part in top level games.

The growth of sports is a very important issue for residents as it reinforces the positive image of the city and thus translates into economic growth and contributes to strengthening local identity and pride. People in Lublin appreciate the successes of local teams and are approving of investments in sports infrastructure. There is clear support for the construction of a speedway track and the development of speedway racing in Lublin. The city is generally rated positively by residents, including seniors and people with disabilities, as a place where sport activity is developed. They would like more

prestigious sporting events to take place in Lublin. The city's sports infrastructure receives an overall positive rating even though there is a problem of its limited accessibility in some districts. This is particularly the case with outdoor facilities, such as park gyms, sports fields and skate parks. The use of the existing facilities should take into account the needs of mixed-age groups of residents and their daily schedules. Particular attention should be paid to supporting the sport activity of people with disabilities, i.e. adapting infrastructure to their needs, supporting volunteers/assistants during sporting events and improving information for people with limitations about accessibility and available options. Another very important issue, often brought up in interviews, is developing the area of Zemborzycki Lake and facilitating access to this very attractive place with a huge potential for sport and leisure.

The experts working on the *Lublin 2030 Strategy* put forward a number of specific visions and recommendations regarding sports in Lublin. The overall vision for the future provides for the development, modernisation and promotion of sports infrastructure such as cycling paths, running trails, fields, gyms and pools. It also envisages developing sports infrastructure which will make it possible to hold prestigious events, such as a speedway track, an athletics hall, and a multipurpose entertainment and sports facility. Further development of competitive, university and teenage sport requires regulations on the financing of particular sports and clubs and closer cooperation between Lublin universities in training and supporting talents, and improving the quality and accessibility of sports education for children and young people through developing infrastructure, human resources and training programmes.



## Attractive sports offer and wide range of leisure activities

### To achieve this objective, we intend to:

**D.2.1.** Develop in a sustainable manner the infrastructure for training and practicing sports at amateur and competitive levels by modernising and expanding school and district sports infrastructure and multifunctional facilities that meet the requirements of international sports federations and organizers of large-scale cultural and entertainment events.

**D.2.2.** Support and improve the level of sports training of children and youth in all disciplines through systemic support for the development and improvement of qualifications of teachers and trainers conducting extracurricular sports activities, as well as raising the level of attractiveness of sports and organisational school competition.

**D.2.3.** Increase the funding of sport and physical activity of inhabitants at the amateur level through sustainable and long-term planning of expenditure on sport infrastructure and tasks, and introduction of transparent criteria for financing and accounting for expenditure on sport from public funds.

**D.2.4.** Actively use the potential of academic sports and internationalisation of the academic community by strengthening cooperation with universities in Lublin in the area of access to educational and sports offer, promotion of physical activity and increasing the number of academic sports events (national and international) which will translate into promotion of the city and consolidation of its image.

**D.2.5.** Realise framework activities aimed at creating a multifaceted social role of professional sport by involving inhabitants and groups of fans



of sports teams of the city of Lublin in voluntary activities and deepening the city's cooperation with non-governmental organisations and Polish sports associations within the scope of training and organisation of national and international events.

**D.2.6.** Implement attractive programmes to activate residents with varied interests and abilities to undertake physical activity in the so-called "sports for life", promoting care for physical condition, healthy eating, healthy habits, supported by the promotion of civilisational disease prevention through physical activity.

### Key tasks and projects

**D.2.k.1.** Develop a sports base for physical activity of residents at the amateur level, including: cycle paths, soft cross-country trails, gyms, sports fields, year-round ice rink, swimming pools.

**D.2.k.2.** Modernize and expand generally available recreational and sports infrastructure to extend the offer and improve the quality of services provided to inhabitants, with special emphasis on facilities of greatest interest to the inhabitants of Lublin.

**D.2.k.3.** Develop programmes and use of tools stimulating an increase in the number of children and youth participating in sports and professional development and improvement of qualifications of teachers, coaches and instructors conducting sports activities for children and youth.

**D.2.k.4.** Implement actions aimed at securing the highest possible place in the Youth Sports System by clubs training children and young people in Lublin.

**D.2.k.5.** Strengthen and develop the cooperation of universities with the city on the level of the programme of the Academic Sports Training Centre as the main



source and direct base of competitors representing Lublin in Olympic disciplines and as a tool to attract and keep in Lublin young people who are the most talented in sports.

**D.2.k.6.** Develop and implement a sectoral strategy for the development of sport and a system of sport promotion based on the municipal coat of arms as a historical symbol integrating all amateur and professional sport disciplines, a carrier of tradition and pride of the city.

**D.2.k.7.** International product promotion of sport resources and infrastructure in order to attract national and international sport events.

### Recommendations and synergies

- Sport carries enormous educational values. Physical education should be continuously developed in all schools and in forms that are attractive to different age groups.
- Recreation areas and sports facilities are places to meet, spend leisure time and socialise in the districts. Their development and quality should be nurtured and their activities stimulated.
- Zemborzycki Lake is a highly valued place for rest, walks, sports and social life of generations of Lubliners. It should be developed comprehensively, from accessibility and cleanliness to sports and catering infrastructure and recreational areas.
- The city's sports offer (sports clubs, top-level sports disciplines, sports infrastructure) needs to be actively promoted among the inhabitants. Proactive social attitudes should be popularised, including active participation in the organisation of sports events as part of sports volunteering.
- It is worth cooperating with the local health care sector to increase the effectiveness of pro-health activities and to include medical facilities in programmes

promoting and offering physical activity as a way to prevent civilisation diseases such as obesity, cardiovascular disease, type II diabetes.

- Entities organising sports events and amateur competitions for inhabitants should be supported and monitored in order to continuously improve the organisational level of these events.
- Lublin should become a significant centre in Europe for the organisation of mass events for inhabitants, including marathons and half-marathons. It is worth ensuring that, due to the organisational and financial level, marathons organised in Lublin are attended not only by "world champions", but above all, by a large number of runners from outside Lublin.
- It is worth promoting sports sponsorship, in particular, spreading the idea of the so-called dispersed sponsorship among the residents and local entrepreneurs.
- It would be advisable to undertake promotional activities aimed at the inhabitants' identification with Lublin as a city favouring physical activity and concerned with pro-health attitudes, improving knowledge of the sport offer of the city, familiarity with professional sportsmen representing Lublin, and seeing them as ambassadors of the city, building its prestige.

### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) implement the Academic Sports Training Centre programme;
  - b) create a strategy for development of sport in Lublin.







2. Analysis of key indicators and measures:
  - a) number of sports facilities per 10,000 inhabitants;
  - b) number of sports clubs per 10,000 inhabitants;
  - c) number of national sports events organised in the city at the level of at least Polish championships;
  - d) number of international sports events organised in Lublin;
  - e) number of persons practising in sports clubs per 1,000 inhabitants.
3. Additional indicators and monitored data:
  - a) number of medals won by Lublin sportsmen at competitions of at least the rank of Polish championships;
  - b) number of national and international marketing campaigns of Lublin promoting municipal sports products.
4. Expert assessments on:
  - a) sport infrastructure base in Lublin;
  - b) the level of sports training of children and young people in all sports disciplines;
  - c) cooperation of the city with universities in the implementation and promotion of the educational and sports offer, promotion of physical activity;
  - d) national and international promotion of sports resources and infrastructure.
5. Opinions of residents on:
  - a) sport offer available in Lublin.





## D.3. | City recognised as a tourist destination

Global urbanisation processes have led to an unprecedented increase in the number of people living in agglomerations, in which more and more inhabitants feel strongly connected to the urban lifestyle and perceive urban space as a natural field of activity. Consequently, more and more people are looking to visit other cities as places of exploration and recreation and sources of inspiration. This is facilitated by the increasing affluence of the middle class and the decreasing cost of travel over recent years, fuelled largely by the expansion of low-cost airlines and the availability of cheap accommodation. Today, city tourism is one of the fastest growing segments of travel, becoming an important incentive for local economies, with revenues often exceeding those generated by domestic tourism. The share of urban tourism in the global tourism market is increasing, and this growth is driven by spatial, social, economic and technological factors. The development of urban tourism is supported by digitalisation and advances in information and communication technologies, which strengthen the marketing and promotion of cities, and facilitate self-planning and rebooking of trips and accommodation online. As a consequence of these processes, cities are no longer seen as mere

entry, embarkation or transit points on a journey, but as attractions and destinations in themselves.

The role of tourism as one of the industries fostering the development of the city is noticeable in Lublin – it creates jobs, stimulates foreign exchange through income and taxes, and promotes investment in infrastructure and the provision of high-quality services, both public and commercial. From the perspective of the city's development, business tourism, connected with the role played in recent years by business travel, training and incentive trips, is also playing an increasingly important role. Its key resources are the constantly developing meeting industry infrastructure and hotel base. Medical tourism, closely linked to the dynamic development of the medical industry and wellness services in Lublin and its surroundings, is beginning to play an increasingly important role in the city's economic landscape. Both sectors are characterised by sustainability and discrete but regular expansion. Sport tourism also plays an important role – thanks to the modern infrastructure which attracts major professional sporting events – and shopping tourism, which benefits from the relative nearness of the eastern border and the large number of Ukrainian shoppers who benefit from offers

here not available in their domestic market. Tourism raises awareness of local heritage and culture and contributes to a tolerant, inclusive and respectful society. The result of increased tourism is the positive atmosphere, vibrancy and international climate that tourism brings to the city and the need to protect and revitalize historical parts of the city and traditional architecture.

Lublin is increasingly being affected by the axial concentration of tourist traffic, especially in the city centre. The city, through an active policy of allocating activities to the districts, the Bystrzyca Valley and Zemborzycki Lake, should open new areas of tourist activity, taking into account the principle of sustainable development. Recognising tourism as an important driving force for the development of Lublin will, however, require consistent implementation of a long-term policy, careful planning and integrated management, taking into account the complex realities of tourism and its possible inconvenience to residents. To meet the needs, requirements and expectations of the community of Lublin residents and visitors, the city will have to constantly adapt and transform itself, actively responding to emerging issues. Both opportunities and challenges related to city tourism need to be addressed and managed in a process of cooperation with related stakeholders and inhabitants.

Lubliners are unanimous in their opinion that Lublin is an attractive tourist city, ideal for a weekend, with many attractions, a rich history and a unique atmosphere. They also consider tourism to be a desirable path for the city's development, although they point out that Lublin should try to avoid the mistakes made by other Polish cities, which led to an excessive number of cars, overcrowding and tourists trampling the city. Lubliners call for developing tourism with quality, not quantity, in mind, and for wise, strategic development of this sector in such a way that it benefits the city and, above all, its residents.

The residents' perspective is complemented and made more concrete by the vision of the future of tourism formulated by experts working in a relevant thematic group. Crucially, one of the pillars of the city's development rests on tourism industry and its recognition as leverage for Lublin's economy thanks to the intensification of cooperation between the local government and the business environment. This is to be achieved through the development of a tourist offer based on new technologies, drawing on available natural resources, development of tourist infrastructure in Lublin and its surroundings, and increased promotion of the tourist attractions of the city, supported by an effective information system.

## City recognised as a tourist destination

### To achieve this objective, we intend to:

- D.3.1.** Build up the tourist potential of Lublin based on the offer of the entire Lublin Metropolitan Area and strengthen the importance of tourism as one of the key branches of the economy – an economic growth factor and a desirable direction of Lublin's development, with other functions of the city respected and used.
- D.3.2.** Strive to maintain balance in the development of tourist traffic, favouring quality over quantity and taking into account the living comfort the residents.
- D.3.3.** Strengthen areas of tourism with the greatest dynamics of development, growth potential and the degree of connections with priority sectors for the development of Lublin – in particular, health tourism, medical incoming tourism, business and sentimental tourism, and the meetings industry.
- D.3.4.** Develop tourist products around thematic axes tapping into the historical and cultural heritage of the city and current narratives, taking into account trends and expectations of Lublin's inhabitants and tourists.
- D.3.5.** Step up the promotion of the tourist potential of Lublin and the Lublin Metropolitan Area, and ensure better access to information on tourist offer and leisure opportunities in the city and its surroundings.
- D.3.6.** Inspire and promote among tourist operators the culture of product quality and high standards of service in order to improve the quality of experiences of visitors to Lublin and strengthen the network of connections and the quality of cooperation between the city and tourist industry entities, in particular with the use of activities of the Local Tourist Organisation of the Lublin Metropolitan Area and Lublin Regional Tourist Organisation.

### Key tasks and projects

- D.3.k.1.** Increase transport accessibility, which builds Lublin's position as a tourist destination, with particular emphasis on stimulating the development of a network of air and railway connections.
- D.3.k.2.** Develop trade fair, exhibition and conference infrastructure enabling development of meetings industry.
- D.3.k.3.** Create a complex, thematic tourist offer, realising expectations of various groups and taking into account people with special needs.
- D.3.k.4.** Base the tourist information system on a website integrating tourist offer data and on a network of stationary tourist service points.
- D.3.k.5.** Develop a methodology for data collection and implementation of a system of constant and comprehensive monitoring of the tourist offer and traffic, as well as their impact on the local economy, the image of the city and the visibility of Lublin.
- D.3.k.6.** Develop and implement a sector tourism development and promotion strategy based on the marketing concept "Lublin. City of Inspirations" as a designation of a tourist offer.
- D.3.k.7.** Actively promote quality standards in the tourist industry within the framework of the *Place of Inspiration* and *Inspiration Guides programmes*.
- D.3.k.8.** Develop a tourist offer with active participation of all entities of the tourist industry, as well as undertaking actions aiming to develop common solutions and integrate the industry.
- D.3.k.9.** Develop attractive programmes and actions supported by promotion, aimed at keeping tourists in the city.

- D.3.k.10.** Include some districts and extend the tourist activity area along the axis Lubartowska St.–Podzamcze–Zamojska St.–Metropolitan Station as an alternative crossing the axis Castle–Old Town–the main pedestrian precinct–Centre for the Meeting of Cultures.
- D.3.k.11.** Include the area and resources of Zemborzycki Lake in the basic tourist offer by creating a tourist offer supported through promotion.

### Recommendations and synergies

- The tourist offer requires promotional activities referring to the historical and cultural heritage based on the marketing concept "Lublin: A City of Inspirations" in close relation to cultural resources.
- An important issue related to the inflow of foreign tourists are communication skills and an increase in language competences of employees of tourist service providers – a connection with the areas of education and academia.
- Trends indicate further dynamic development of city tourism in the years to come. This means that Lublin, like most large European cities, will face enormous challenges in managing the growth of tourism and the resulting economic and socio-spatial implications. Apart from the obvious economic benefits, the rapid development of the tourist offer and the influx of tourists to the city may have a negative impact on the quality of space and the perceived quality of life of the inhabitants. This applies particularly to the historical city centre and in time also to the adjacent inner-city residential areas.
- The drive for commercialisation and increased profits from tourism leads to the so called "festivalisation" and "touristification" of urban space, reflected in the

subordination of city centres to staged presentations of cultural heritage and events allowing tourists to experience the "urbanness" and artificial uniqueness of the city. The remedy to this challenge is the widely postulated pursuit of a balance between centralisation and localisation of the tourist offer, favouring the dispersion of tourists.

- There are numerous cultural institutions in Lublin managed by the regional authorities and central institutions (e.g. Lublin Village Open Air Museum, Centre for the Meeting of Cultures, State Museum at Majdanek, National Museum in Lublin). They constitute a very important and valuable element of the tourist offer of the city, which requires support in terms of development and communication as part of promotional activities. Synergy of activities in this area is very desirable and advisable, as well as cooperation in coordination of tourist promotion in Lublin between the city and the region.
- It is in the vital interest of the local authorities to support tourist industry entities from the private and non-governmental sector in the process of creating tourist products that make up the catalogue of metropolitan tourist offer. Cooperation of the city with other members of local and regional tourist organisations should be a tool of support.
- The attractiveness of the city for tourists is synergetically connected with a number of objectives and tasks improving the living comfort of the city inhabitants – e.g. comfortable public transport, a network of cycling routes ensuring accessibility of places attractive to tourists, sports infrastructure or revitalisation of the Bystrzyca Valley. The infrastructure and space of the city should be managed with various users in mind – both the local inhabitants and visitors to Lublin.





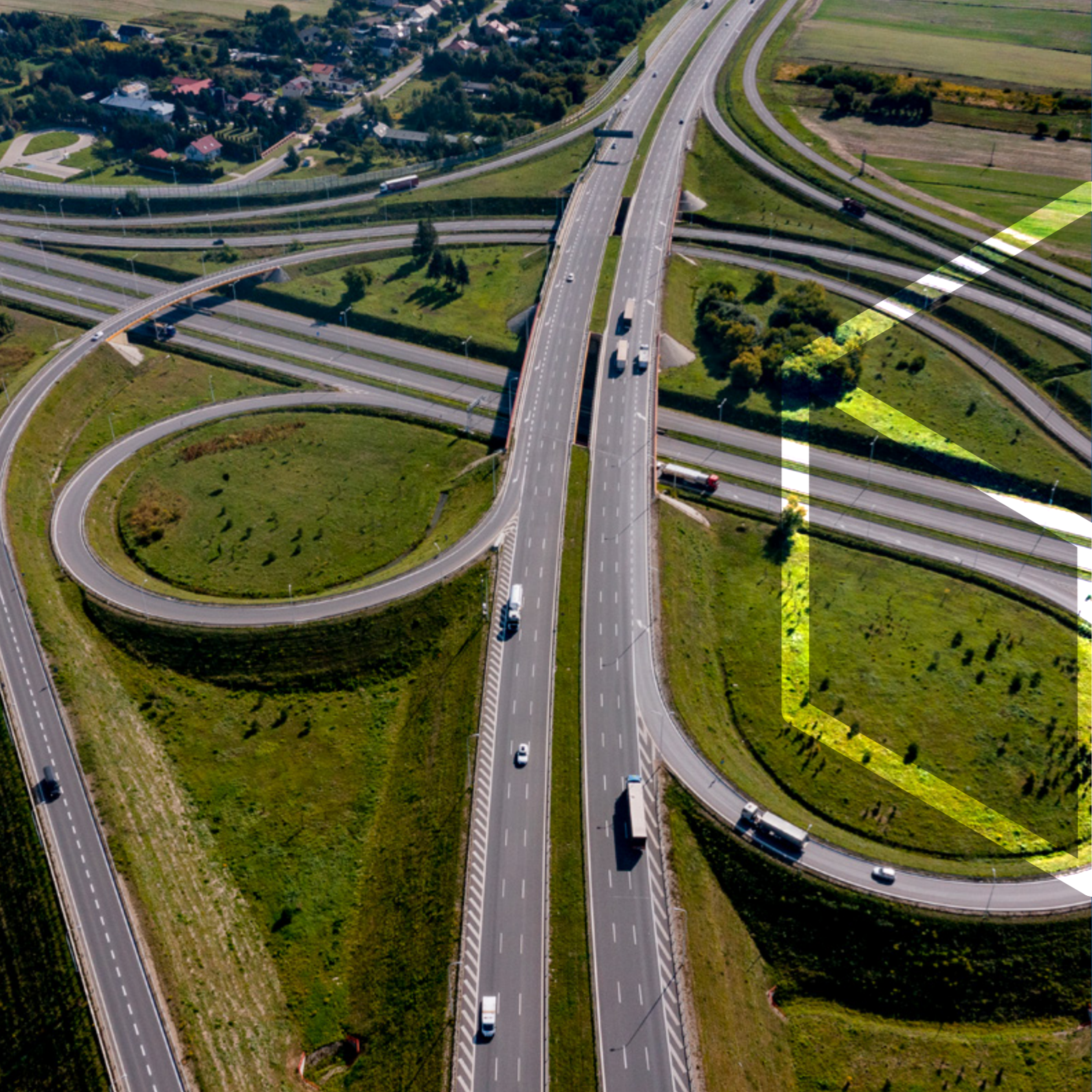
#### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) develop a catalogue of thematic tourist products forming the city's basic tourist offer;
  - b) implement a system for comprehensive monitoring of tourist offer and traffic;
  - c) create a tourism development strategy;
  - d) implement the *Inspiration Place* and *Inspiration Guides* programmes.
2. Analysis of key indicators and measures:
  - a) number of tourists (with accommodation) and visitors (without accommodation), in Lublin and the Lublin Metropolitan Area, in both absolute terms and per 1,000 inhabitants;
  - b) number of hospitality establishments and beds per 10,000 inhabitants;
  - c) daily tourist expenditure in Lublin.
3. Additional indicators and monitored data:
  - a) number of persons served at tourist information points;
  - b) number of tourists according to the purpose of their visit;
  - c) share of foreign tourists in the total number of tourists;
  - d) structure and use of accommodation;
  - e) number of air and rail connections (international and interregional);
  - f) number and value of national and foreign marketing campaigns promoting the tourist offer.
4. Expert assessments on:
  - a) cooperation of the city with entities of the tourism industry;
  - b) national and international promotion of tourist offer;
  - c) balance between development of tourism and the quality of life of the inhabitants of Lublin.
5. Opinions of tourists visiting the city on:
  - a) attractiveness of Lublin (at least once in every 3 years).



# Lublin – a metropolitan city

Lublin has entered the phase of metropolitan development, which has been significantly influenced in recent years by the growth of the cultural field, the academic sector, supralocal entrepreneurship (*business process outsourcing* - BPO and *high-tech* industries), infrastructural investments and a municipal policy favouring openness and diversity. Additionally, these processes were strengthened by the integration of the city with its functional area through the implementation of strategies with the surrounding municipalities (Integrated Territorial Investments). Changes in the above areas led to social changes, diversification of the social structure and increase in its functional complexity. They have also resulted in the emergence of new urban life actors aspiring to being subjects in the city space with their needs and expectations.







The metropolisation processes in Lublin, usually overlooked by the majority of its citizens, are noticed by experts and observers from outside. Metropolisation is a process that is already practically unstoppable, and Lublin must face up to its challenges and take advantage of a favourable moment in its history. On the other hand, giving priority to the creation of a metropolitan Lublin and an integrated Lublin agglomeration can tremendously accelerate the city's development in practically every sphere: economy, image, academia, tourism and culture. As a result, Lublin will advance not only to the top league of Polish cities, but also to the group of important European cities. By building the framework of a metropolis, Lublin is also filling a void in the eastern part of Poland, gradually balancing the current role of Warsaw in the development processes.

Achieving the status of a metropolis does not mean that Lublin will become a city of a million inhabitants with a low quality of life and degraded natural environment, a place where social and security problems

accumulate. Lublin's metropolitan character should be understood as the emergence of an open city, developing its numerous supraregional, national and international functions, affluent and integrated with its suburban surroundings by means of numerous ties. A city with a strong image and international recognition, attracting talent from home and abroad. Finally, a city of a size not exceeding half a million inhabitants, with a very high-quality of life – comparable to medium-sized European metropolises.

The processes of metropolisation of Lublin concern its various functions – economic, academic, cultural, educational, tourist and administrative. These processes improve the living conditions of the city's inhabitants – including an increase in Lublin's links with the region as a result of the creation of new jobs in the city, attractive to the increasing number of employees, and leading to decreased unemployment in the neighbouring municipalities. However, these processes are accompanied by challenges related to the need to coordinate spatial

planning, the creation of a coherent transport system with high-quality public transport, the organisation of water and sewage management or the coordination of the protection of valuable natural areas. Many of these challenges and tasks requiring a joint approach of local governments have been identified within the framework of cooperation of municipalities belonging to the Lublin Functional Area.<sup>25</sup>

Metropolisation also means that due to an increase in the complexity of the social fabric and the transformation of the social space, the effectiveness of the existing mechanisms of influencing urban reality on the part of authorities and institutions is decreasing. This means that support for the process of building a metropolitan Lublin must take into account specific, contextual tools. They are largely of soft, social and relational nature, as well as promotional. On the other hand, meeting the challenges of metropolisation will require a major

investment effort from the self-government of Lublin, the region and the government, the creation of a new local approach to spatial planning and urban planning or, finally, the development of agglomeration projects facilitating internal and external mobility (airport, internal ring road networks, new agglomeration road solutions). All these activities must be carried out in accordance with the principles of sustainable development and adhere to the interests of all partners, especially other local governments in the Lublin agglomeration.

<sup>25</sup> *Kierunki Działania LOF po roku 2020*, Lubelski Obszar Funkcjonalny, Lublin 2018.



## E.1. Lublin as the leader of the Lublin Metropolitan Area

Metropolitan areas play the role of the so-called regional growth generators – they drive the economic development and thus improve the quality of life of their inhabitants in many ways. A natural process of metropolitan development is the formation of a leader – a centre where networks of connections and cooperation of the whole metropolis are located. These centres become a place of accumulation of development potentials, capital, innovation and knowledge, as well as national and international contacts with other important urban centres and metropolises. Central cities exert an impact on neighbouring areas, strengthening economies of scale.

The Lublin Metropolitan Area (LOM) consists of 22 municipalities inhabited in 2020 by 616,883 people, almost 60% of whom live in Lublin – the largest and functionally most important urban centre of Eastern Poland. Lublin is the only city near the eastern border capable of performing metropolitan functions as a leader, shaping and influencing the other municipalities included in LOM. Despite its well-established position, Lublin's potential is not yet developed enough to effectively influence the social and economic processes in the region. It is necessary to take initiative in order to

build metropolitan coherence within the whole LOM and, in a further step, to strengthen the convergence with other metropolitan centres, which together will contribute to the formation of a strong metropolis by 2030.

An important element accelerating the process of convergence within the metropolis is a coherent and balanced transport system. The improvement of transport accessibility, especially of public transport, is the key to socio-economic development and in particular to increasing accessibility to infrastructure, science and business and culture of Lublin for inhabitants of the surrounding municipalities. Modernisation of the LOM transport links, both road and rail, also has measurable benefits in terms of improving national and international accessibility – by building up the attractiveness of transport, it influences the development of functional links integrating Lublin with other urban centres. The external connections and the development potential of Lublin are strengthened by the presence of Lublin Airport, whose activities aimed at increasing its role in the global network of connections require the decisive support of local authorities. The key in this case is the implementation of solutions aimed at changing the preferences in the choice of airport



by passengers travelling for business, tourism and private purposes, as well as by companies in the field of cargo handling.

In order to improve the effectiveness of the LOM, it is necessary to establish a development policy common to all municipalities while taking into account the diversity of potentials resulting from individual conditions. The identification of development priorities and potentials is an essential task for the implementation of joint investments based on internal resources and their flow. In this process one should not forget about creating functional and spatial connections with other regional growth centres in the voivodeship and rural areas.

Municipalities within the LOM, with Lublin at the forefront, should take action to develop a common

spatial policy. In the context of spatial planning of the metropolitan area, uncontrolled urban sprawl and intensified suburbanisation are a major threat. This phenomenon has many negative consequences (environmental, economic and social) both for Lublin and its neighbouring municipalities. One of the possibilities of protecting valuable natural areas and rural areas with high production potential for agricultural purposes is to separate a zone of highly urbanised areas surrounding Lublin, characterised by the strongest links with the city, which in the future may be included in its administrative borders. However, such a merger must be preceded by detailed analyses indicating the justification for such a measure and in full respect of all the parties to the process, in a culture of dialogue and agreement.



## Lublin as the leader of Lublin Metropolitan Area

### To achieve this objective, we intend to:

- E.1.1.** Develop inter-municipal cooperation to develop sustainable agglomeration transport, including integration of the municipal transport system with the planned Lublin Agglomeration Railway.
- E.1.2.** Lobby for new investments increasing national transport accessibility of Lublin.
- E.1.3.** Strengthen the functions of Lublin Airport by implementing solutions stimulating initiation of new international air connections and development of airport infrastructure (cargo, aviation business).
- E.1.4.** Develop cooperation in order to elaborate and implement common development policy of the LOM, on the basis of which partner undertakings within it will be implemented.
- E.1.5.** Strengthen cooperation with the LOM municipalities in planning its spatial policy which limits the phenomenon of suburbanisation and uncontrolled urban sprawl, as well as in protecting the natural environment and optimising the distribution of economic activity zones.
- E.1.6.** Develop the areas near the Integrated Communication Centre in a sustainable way with re-realisation of business, service and residential functions so that it becomes a showcase of metropolitan Lublin.
- E.1.7.** Develop the area of the former PKS bus station in Podzamcze and its surroundings, realising business, residential and public functions in the area, together with the creation of the *Lublin Creative District*.

### Key tasks and projects

- E.1.k.1.** Implement investments together with local governments of the Lublin Metropolitan Area.
- E.1.k.2.** Extend and modernise of railway lines in the LOM area to create agglomeration railway (in cooperation with the the Marshal Office of Lubelskie Voivodeship, PKP Polish Railways and other project partners) and integration of infrastructure.
- E.1.k.3.** Build P&R (Park & Ride), B&R (Bike & Ride), K&R (Kiss & Ride) interchanges on the outskirts of Lublin.
- E.1.k.4.** Expand and create a coherent system of bicycle paths within the LOM and integrate them into the international bicycle route system.
- E.1.k.5.** Construct a road from the Witosa junction to the Konopnica junction to serve traffic in the southern part of the city and provide access to Zemborzycki Lake.
- E.1.k.6.** Build infrastructure servicing the area by the Integrated Communication Centre (including extension of Lubelskiego Lipca '80 St. and investment in sustainable transport).
- E.1.k.7.** Create *Supralocal Development Strategy for the LOM*, defining common development policy of self-governments and rules of shaping and implementing spatial policy.
- E.1.k.8.** Create the *Lublin Aviation Upland* project, integrating aviation service ecosystem in Lublin and the region.
- E.1.k.9.** Extend the cargo terminal at Lublin Airport.
- E.1.k.10.** Develop and implement solutions stimulating initiation of new international air connections, including those with partner cities of Lublin.

### Recommendations and synergies

- A metropolitan area needs a strong leader to shape its development. Lublin is the core of the Lublin Metropolitan Area and is the largest urban centre in Eastern Poland. This is influenced by the metropolitan functions of the city, its economic base, the national and international contacts it establishes, and its scientific and academic background. However, a problem for the development of the metropolis is the lack of integration within the area and a sense of belonging to the LOM by its inhabitants. Lublin should undertake initiatives aimed at increasing integration and cooperation between all partners in order to realise joint and beneficial projects.
- The main step towards integration within the LOM is the elaboration of a common development policy using the potentials of its members – production, natural or human resources, which will be based on the Strategy of Interregional Development of the LOM. This strategy will precisely define priorities of cooperation and LOM Integrated Territorial Investments. On the basis of the analyses carried out so far, it is possible to indicate the emerging, prospective directions of intervention. These include: development and integration of transport systems (including improved transport accessibility and development of sustainable low-emission transport); environmental protection and adaptation to climate change (including water protection through improvement of water and sewage management and protection of river valleys, waste management, energy efficiency and air protection, biodiversity protection); development of an integrated social policy (social infrastructure, social inclusion, education, revitalisation of degraded areas with supralocal functions); development of educational, museum and leisure offer in the LOM and development of investment areas and entrepreneurship.
- The diversity of potentials is an asset for the LOM, allowing it to diversify its economic activity and build an attractive brand based on many products.
- The development of a coherent transport system in the Lublin Metropolitan Area should be a priority for all the municipalities belonging to it. Improving transport accessibility, including shortening travel times, generates many benefits for inhabitants, increasing socio-economic activity. The development of a sustainable and efficient public transport system – whether by road or rail – influences behavioural changes, encouraging people to give up their cars, the use of which is becoming increasingly burdensome for the environment and the overburdened transport system, and has a negative impact on the quality of life of metropolitan residents.
- Developing Lublin's metropolitan potential will also require a new approach to urban planning issues (e.g. the permissible height of buildings in Lublin), reflected in the provisions of local spatial development plans.
- A thriving metropolis is characterised by strong links to cities and regions within and outside the country. Recently, virtual links have become more and more important, but they cannot replace real contacts. That is why it is still necessary to take measures to improve Lublin's transport accessibility, both nationally and beyond. Apart from ongoing road investments, Lublin Airport presents an opportunity for Lublin. Reducing travel time between the largest cities and ensuring the convenience of connections

will be an impulse to increase Lublin Airport's significance not only on the map of Poland. The launch of air connections enabling travel in all directions is an opportunity to position Lublin Airport as the "airport of first choice", not only by the inhabitants of the Lublin region. In order to achieve that it is necessary (apart from extending the network of direct connections) to ensure that Lublin is connected with large European airline hubs, including Warsaw and at least one hub in Germany.

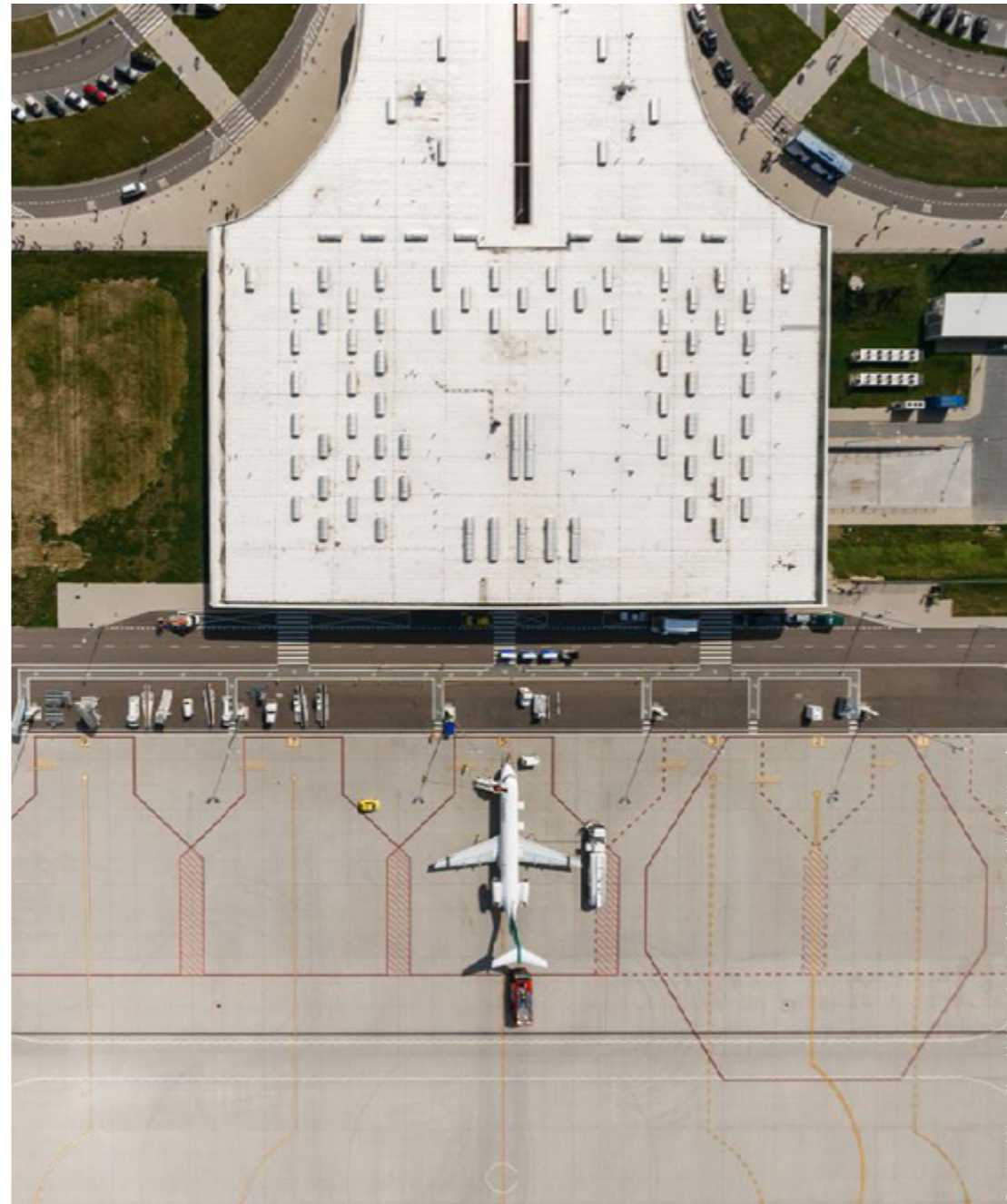
- The *Lublin Aviation Upland* project should not duplicate cluster projects designed exclusively for companies in this sector and focused on building cooperative links in global value chains. The project should integrate the activities of Lublin Airport with the metropolitan and regional environment, in particular with companies involved in air traffic and cargo handling, servicing and repair of aircraft, education of pilots and aviation engineers as well as international exchange.
- The Lublin Metropolitan Area is characterised by highly attractive nature, especially in areas with lower population density in rural areas. The increasing process of suburbanisation and dispersion of buildings is a threat to natural values. The spatial chaos is not only an environmental problem but also an economic and social one. It is therefore necessary to take action to develop a common spatial policy for the LOM in order to counteract this phenomenon.
- The need to extend the city boundaries by the end of 2030, as pointed out by experts and residents participating in the work of the Metropolis Regional Development Team, is a task which will require in-depth socio-economic analyses and may stir up many conflicts. Therefore, it is necessary to enter

a multilateral dialogue with the municipalities and their inhabitants in order to ensure that the possible expansion process takes place in an atmosphere of dialogue and mutual benefits.

- Digitalisation of public services is an element of the *Lublin 2030 Strategy*, but it can also be a strategic goal of the Lublin Metropolitan Area. Cooperation of municipalities in the process of digitisation of public services brings economic benefits for local governments, as well as better accessibility of services for the residents of the LOM.

#### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) build a road from the Witosa junction to the Konopnica junction serving traffic in the southern part of the city and providing access to Zemborzycki Lake;
  - b) create an agglomeration railway for the LOM;
  - c) develop a strategic document specifying a common development policy for the Lublin Metropolitan Area, together with the principles of shaping and conducting spatial policy of the LOM;
  - d) develop the *Lublin Aviation Upland* project, integrating the aviation service ecosystem in Lublin and the region;
  - e) open a cargo terminal in 2022.
2. Analysis of key indicators and metrics:
  - a) coverage of local spatial development plans in the LOM;
  - b) value of LOM intermunicipality investments in PLN and as percentage of total investment outlays of LOM municipalities;



Fot. Urząd Marszałkowski Województwa Lubelskiego w Lublinie (W. Komet)

- c) number of serviced passengers of Lublin Airport per 10,000 inhabitants of the LOM;
  - d) number of vehicle-kilometres carried done by public transport in LOM municipalities (in total and per 1,000 inhabitants of the municipality);
  - e) percentage of population of the LOM municipalities living within the range of public transport stops (at least once in every 4 years);
  - f) number of P&R interchanges in the Lublin area;
  - g) cargo tonnage handled by Lublin Airport.
3. Additional indicators and monitored data:
    - a) length of cycle routes in the LOM;
    - b) number of train connections in the LOM;
    - c) travel time to voivodeship towns (rail, car);
    - d) number and structure of air connections to and from Lublin Airport.
  4. Expert assessments on:
    - a) transport accessibility of the LOM;
    - b) transport accessibility of Lublin for inhabitants of the LOM;
    - c) cooperation of the LOM municipalities in the fields of economic, social, environmental development and spatial policy.



## E.2. | Development of Lublin's metropolitan functions

A city becomes a metropolis not only because it boasts a large population or even a considerable economic potential, but mainly because it performs metropolitan functions, which connect the metropolis not only with its immediate surroundings, but also with the region, as well as other metropolises in the country and beyond its borders. Lublin concentrates its metropolitan functions mainly in the area of science and higher education, entrepreneurship and economy, culture, education, trade and administration. These functions are both regional, national, and (increasingly significant in recent years) international. The dynamic development of higher-order functions is a very good prognosis and at the same time a premise for giving them higher priority in the *Lublin 2030 Strategy*. National and international functions are worth emphasising in particular, because regionally as well as in Eastern Poland Lublin is the clear leader and an agglomeration with the greatest demographic, social-economic, academic, cultural and administrative potential.

Among the national functions, the development in the last decade of the modern service sector, specialised industry, culture, and well-proven central administrative facilities in the field of the judiciary

(e-court, National School of the Judiciary and Public Prosecution) and IT (IT services for ministries and the Agency for Restructuring and Modernisation of Agriculture), as well as medical services, deserves particular emphasis. Lublin has intensively developed its international functions as the main centre in Poland for local government and university contacts with Ukraine, education of foreign students and international military structures (the Lithuanian-Polish-Ukrainian Brigade named after Grand Hetman Konstanty Ostrogski). This is good initial capital for the activities planned for the coming decade.

The construction and development of metropolitan functions involves a number of challenges. One of the most important ones is the entry of the city into a different (international) level of competition for resources, with much stronger competition of cities and regional systems than on a national scale. An additional problem is the failure of urban institutions to keep up with the rapid changes taking place in the sphere of the social tissue and the separation of social space from the territory of the city and the agglomeration. Although these processes are independent of the self-government, the city should prevent the above tendencies by



adjusting its institutions and coordinated cooperation networks to the growing structural complexity of the Lublin agglomeration. Another challenge is the low marketing activity of Lublin in the international sphere and the lack of connections from Lublin airport.

The themes related to Lublin's metropolitan status crop up relatively rarely in the interviews with the inhabitants and during the participatory meetings. The need for continuous promotion of the city and the creation of new cultural festivals was mentioned above all. Respondents also noted the need for expanding the network of air connections, especially eastwards. Experts formulated definitely more recommendations concerning the metropolitan functions and their visions of Lublin. First of all, Lublin has a chance to become a leader of international cooperation in Central Europe

and an important partner in European cooperation networks. In the vision of Lublin in 2030, the number of institutions that are leaders of international initiatives and projects has definitely increased. Foreigners living in the city and graduates of Lublin's universities living and working all over the world have become an important element in building its image abroad. Lublin's brand is positively evaluated not only at home but also abroad, and Lublin is identified as a strong centre of culture, tourism, economy and academia, being a gateway to the East. The city itself was awarded the title of *European Capital of Culture 2029*, which definitely increased Lublin's tourism potential. Lublin has become the seat of international institutions and the host of world events, while the Lublin agglomeration itself has become an attractive place to invest external capital.

## Development of Lublin's metropolitan functions

### To achieve this objective, we intend to:

- E.2.1.** Develop the existing and build new metropolitan functions of the city (based on the advantages of Lublin's location and its resources, including international cooperation networks).
- E.2.2.** Create and promote new recognisable events on an international scale (festivals, competitions, congresses and new hybrid products) and support such events realised by other institutions in Lublin (using the city brand "Lublin. City of Inspiration").
- E.2.3.** Attract headquarters of central and international institutions to Lublin.
- E.2.4.** Utilise the potential of diaspora of Lubliners living in foreign and domestic metropolises and create favourable conditions for talent to return to Lublin.
- E.2.5.** Build recognition of the city and the Lublin Metropolis domestically and abroad.
- E.2.6.** Support participation of representatives of Lublin local government, universities and representatives of other stakeholders in important international events.
- E.2.7.** Consistently build up Lublin's strategic diplomacy and create a city network of international cooperation.

### Key tasks and projects

**E.2.k.1.** Develop a programme promoting Lublin as the main metropolitan centre situated on the Via Carpatia route together with the development of its economic, cultural and academic functions.

**E.2.k.2.** Develop trade fair functions and extension of Lublin Trade Fair as a business base of the Lublin agglomeration and international co-operation.

**E.2.k.3.** Create (with the participation of numerous stakeholders) the *Lublin Export Hub* programme for Central and Eastern European markets, particularly the Ukrainian market.

**E.2.k.4.** Create a programme aimed at locating in Lublin the headquarters of national economic organisations and clusters, central institutions, international chambers of commerce, economic and social think tanks and business support institutions.

**E.2.k.5.** Create a programme to strengthen the bonds between Lubliners living in foreign and domestic cities and Lublin, using the potential of social media (*Ambassadors of Lublin*) and a programme for promotion on the international arena by engaging prominent Lubliners living in our city (*Lublin in the World – the World in Lublin*).

**E.2.k.6.** Develop and promote internationally the Cross-Border Cooperation Congress in Lublin as the leading social and economic event in the space of Central and Eastern Europe.

**E.2.k.7.** Implement the programme of priority directions of international cooperation of Lublin together with verification and development of the system of partner cities and institutions in the world.

**E.2.k.8.** Implement programmes and initiatives of trans-border cooperation in the field of education, science, economy, culture, non-governmental organisations, social affairs, health and others.

**E.2.k.9.** Create a municipal unit responsible for comprehensive marketing activities of Lublin in the country and abroad, integrating dispersed promotion structures in the Lublin self-government.

**E.2.k.10.** Implement the *European Youth Capital 2023* programme as a tool for promoting the city on a European scale and building new metropolitan functions of Lublin.

**E.2.k.11.** Place Lublin in international city rankings.

### Recommendations and synergies

- The programme to make Lublin one of the main metropolitan cities on the Via Carpatia route is extremely ambitious and requires adequate partnerships, both national and international, as well as permanent lobbying for, among others, the decision to locate in Lublin the international institutions of the Three Seas region. Full synergy of activities at the self-governmental, regional, governmental and international level is necessary, irrespective of the political option.
- One of the key metropolitan functions that should be developed in the next decade is to strengthen the city's potential as an international venue: business, academia, tourists and other visitors to the city. To achieve this goal, conditions should be created for the development of business infrastructure in the city, including hotels, exhibitions and fairs, sports and conference facilities. An important role in this respect should be played by Lublin Fairs, a partnership between the local government of Lublin and Targi Lublin, and municipal companies managing sports infrastructure. Moreover, joint activities are necessary between various organisational units of the Lublin City Office, including units responsible for the development of tourism and entrepreneurship.

- Metropolisation processes, including the development of Lublin's metropolitan functions, are strongly correlated with economic development and the inflow of foreign investment to the city. One of the factors that lead to an increase in the importance of a city in the international arena is the export of modern products and services produced in a given centre. At present, Lublin is in a very favourable position to become an export hub to Eastern markets (this is facilitated by the development of transport infrastructure and the increased competitiveness of local business), and in prospect – to other European markets. This will require institutionalisation of activities supporting the creation of such a hub and attracting a much larger number of foreign investors than at present, who treat Lublin as an export outlet.
- Attracting new institutions, both governmental and international, to the city is a notoriously difficult process in which decisions are strongly influenced by politics in addition to matters of substance. Therefore, synergy and cooperation between different political options is necessary. Lublin – thanks to its proximity to the capital, the development of a specialised labour market and the presence of universities – can be an attractive destination in the process of deglomeration and delocalisation of offices, which has been noticed in the ministerial analyses.<sup>26</sup> On the other hand, actions should be taken to support locally established or already existing think tank institutions, taking into account the city's assets and selected paths of economic, academic and social specialisation.
- The priorities of city diplomacy should be determined in such a way as to reflect the strategic interests of

<sup>26</sup> *Uwarunkowania delokalizacji centralnych urzędów w Polsce*, Ministerstwo Przedsiębiorczości i Technologii, Kraków 2019.



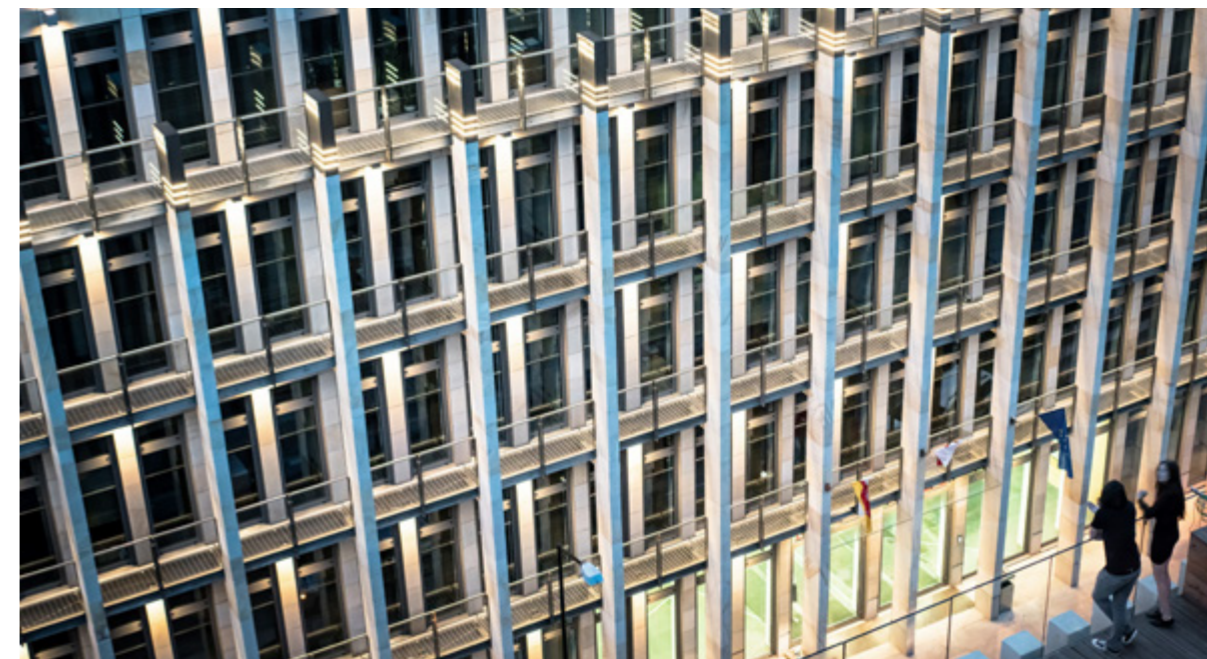
Lublin in the international sphere. The key partners are, on the one hand, the EU countries, including Germany, and on the other hand, Ukraine and the countries of Central and Eastern Europe. In such a formulated geo-political space, international activities should be developed and effects should be maximised. Furthermore, in the coming decade the USA, China and selected African countries are prospective countries for building closer relations with their urban centres.

- The development of Lublin's metropolitan functions also involves intensive marketing activity to accompany the city's programmes and projects, which requires a new approach to managing these processes. This is not facilitated by the dispersion of marketing units in the Lublin local government. The faces of the new metropolitan Lublin are not only information in social media, but also people implementing projects abroad: local government officials, scholars and lecturers, business and ordinary citizens. It is necessary to boost, despite the realities of the hybrid post-pandemic reality, the international contacts of Lubliners, as well as to use the city's ambassadors (for example, graduates of Lublin universities from all over the world, but ex-Lubliners, too) to build the city's image and to attract new diverse assets.
- Metropolisation processes are strongly connected with the presence of foreigners, foreign specialists and students or migrants in the city. Today, breakthrough innovations in the world are created almost exclusively in cross-cultural talent teams. Lublin, having a relatively unique resource of foreign students from over 100 countries in the world, should, to a greater extent than so far, implement programmes for the integration of foreigners into the city, especially into the local labour market.

- A crucial factor in the city's development and in building and strengthening its position in Europe is consistent international marketing and promotion, carried out in traditional and social media, through, for example, participation of prominent Lublin inhabitants, institutions and representatives of the city authorities in European and global projects, networks, organisations and European institutions. The above task should be implemented through long-term projects coordinated by the Lublin City Office.
- The *European Youth Capital 2023* programme may be one of the factors increasing the recognition of Lublin in Europe. It will require the cooperation of Lublin local government with a large group of stakeholders, which should consequently release new social energy among young inhabitants of Lublin. To be fully successful, this programme should also institutionalise activities to benefit young people in Lublin and create new strategies for action in this area.

#### How are we going to measure progress in achieving our goal?

1. The accomplishment of key tasks and projects:
  - a) create a programme promoting Lublin as the main metropolitan centre located on the Via Carpatia route;
  - b) create the *Lublin Export Hub* programme for the markets of Central and Eastern Europe;
  - c) create a programme aimed at locating the headquarters of national and international institutions in Lublin;
  - d) develop a programme to strengthen the ties between Lubliners living in foreign and domestic metropolises and Lublin;
  - e) implement a programme of priority directions for Lublin's international cooperation;



- f) create a municipal unit responsible for comprehensive marketing of Lublin at home and abroad, integrating dispersed promotional structures in the Lublin self-government;
  - g) develop the *Lublin Ambassadors* and *Lublin in the World – World in Lublin* programmes, which implement the assumptions of comprehensive international promotion of the city.
2. Analysis of key indicators and measures:
    - a) number of events and congresses of international importance together with the number of participants;
    - b) number of new governmental and international institutions based in Lublin, international companies and others;
    - c) number of foreigners working in Lublin per 1,000 inhabitants;
  - d) percentage of foreigners living in Lublin;
  - e) Lublin's position in the leading national and international rankings.
3. Additional indicators and monitored data:
    - a) number of new twin cities in the international priority spaces;
    - b) number of institutions located in Lublin in connection with the implementation of the *Tri-Marium* concept;
    - c) number of international marketing campaigns of Lublin.
  4. Expert assessments on:
    - a) development of metropolitan functions of Lublin;
    - b) promotion and recognition of Lublin and the Lublin Metropolis in the country and abroad;
    - c) implementation of Lublin's strategic diplomacy.



The image shows a close-up of a modern building's glass facade. The glass panels are arranged in a grid, with some panels reflecting the sky and others showing a view of a city with residential buildings. A prominent feature is a large, semi-transparent blue geometric overlay that consists of several overlapping shapes, including a large 'N' or 'M' shape, and various triangles and rectangles. The text is positioned in the upper right corner of the image, overlaid on the blue geometric shape.

# Horizontal objectives of the Lublin 2030 Strategy





Setting goals, tasks and expected results – albeit a crucial element of any development strategy – may not suffice to make Lublin the best possible place to live, meeting the expectations of the multigenerational community, a city developing in a sustainable way, resilient to crises and ready for technological challenges. Sometimes, excessive concentration on the implementation of narrow goals makes us lose sight of important, cross-sectional and immeasurable megatrends, especially if they remain beyond the influence of individual city cells or organisational units. The formulation of horizontal objectives is an attempt to address this problem – to complement the objectives and tasks indicated so far with priorities resulting from trends and challenges perceptible in many areas of city functioning. The following horizontal objectives should therefore serve as a guideline when implementing the various objectives and tasks identified in the five development areas of the *Lublin 2030 Strategy*:

1. Increase in Lublin's attractiveness as a place to live, and thus stabilisation of the city's population potential.
2. Balanced development of Lublin and the Lublin Metropolitan Area plus concern for natural environment resources and increased climate resistance.

3. Use of technology development and digitalisation to build a smart city.
4. Integrated city management in accordance with the principles of participation and co-management model.

### **1. Increasing the attractiveness of Lublin as a place to live, thus stabilising the city's population potential**

Polish cities and regions are subject to intensive demographic processes, which will significantly shape their development opportunities and objectives in the coming decades. Demographic forecasts clearly indicate a decrease of the population potential of Poland and ageing of the society. The decisive factor of those processes is the low fertility rate, the determinants of which to a large extent lie outside the sphere of influence of the public policies, and the measures implemented so far at the national level have not brought about a significant improvement. The differences visible at the regional and local level are in turn primarily the consequence of migration – mainly internal migration.

Over the past two decades the total number of residents of the municipalities making up the Lublin

Metropolitan Area has remained stable, and Lublin itself – after a phase of suburbanisation of a scale comparable to that of most voivodeship cities – has in recent years achieved a stabilised population of 340,000. Demographic forecasts, however, indicate that in 2030 the number of inhabitants will decrease to 322,600, and one in four inhabitants will be at least 65 years old. In this context, Lublin should – through multidimensional activities improving the quality of life and the attractiveness of settlement – encourage its present inhabitants to stay in the city and attract new ones, both from Poland and abroad. Contrary to the commonly formulated opinions, a number of surveys (e.g. a survey of several thousand inhabitants of Polish cities as part of the “Przystanek Miasto” (The City Stop) action of the *Gazeta Wyborcza* newspaper, cyclic surveys carried out by the City Office or analyses of graduates’ migration) show a relatively low (declared and actual) willingness to migrate from Lublin, also among young people, and thanks to the presence of the university, more than 10,000 freshman students from the region and Poland and 2,000 foreign students come to Lublin every year. The city is already achieving very good results in rankings of various aspects of quality of life in cities based on both subjective and objective measures. The implementation of the development goals set out in the *Lublin 2030 Strategy* should lead to the maintenance of the population potential of Lublin and the Lublin Metropolitan Area, e.g. through an increasingly better educational offer and perspectives for attractive employment, improved housing availability, high-quality of public infrastructure and services, friendly urban space with green and recreational areas, a rich offer of leisure activities or openness to new inhabitants from Poland and abroad.

## 2. Sustainable development of Lublin and the Lublin Metropolitan Area with concern for natural environment resources and increased climate resilience

Implementation of the vision of sustainable development assumes both balancing and integration of the three dimensions of development: economic, social and environmental, as well as meeting the needs of the present generation without compromising the ability to meet the needs of future generations. Nowadays we are more and more aware of the fact that the concentration of economic activity and population density put the natural eco-systems of urban areas under pressure, cause air pollution and the formation of urban heat islands, threaten water resources and result in large amounts of waste. Environmental and climate changes negatively affect the living conditions, health and safety of the inhabitants, translate into higher operating costs for companies, increase pressure on infrastructure, force municipalities to re-evaluate their current approach to spatial planning.

Lublin has many valuable natural resources and the transformation of the natural environment has not been as extensive as in many urbanised areas in Poland and abroad. The city is developing programmes and policies aimed at environmental protection, reduction in low-stack emissions or energy management. The Study of the Conditions and Directions of Spatial Management of the City of Lublin, adopted in 2019, raised the level of protection of environmentally valuable areas, and the principle of integrity, continuity, protection against development and strengthening of the natural functions of the Ecological System of Protected Areas was adopted as the overriding principle. On the one hand, environmental problems and their costs are still

growing, but on the other hand – the mobilisation of efforts for green transformation in the country and, first of all, in the European Union, provides an opportunity to take action with a much broader scope and greater impact than so far.

The *Lublin 2030 Strategy* is another important milestone in this respect and the horizontal postulate of a balanced development of Lublin and the Lublin Metropolitan Area with concern for natural environment resources and increasing climate resilience should be a point of reference in the implementation of all aims and tasks set out in the Strategy. Its implementation requires the primacy of long-term strategic thinking over the temptation of achieving short-term benefits, adopting a holistic perspective on city management, taking into account the interdependence of economic, social, environmental and spatial dimensions of city development, and not only the actions of individual organisational units in narrow fields and sectors.

## 3. Using technological development and digitalisation to build a smart city

The concept of a smart city assumes continuous, uninterrupted development through the use of modern technologies in every area of functioning. A standard division of the dimensions of a smart city’s impact focuses on: economy, mobility, environment, society, city management and overall quality of life. Therefore, it becomes necessary to re-evaluate the needs of the city by moving away from focusing only on technology and hard infrastructure and focusing on establishing effective dialogue and cooperation with citizens and developing a good strategic foundation.

Already starting with the previous *Lublin 2020 Strategy*, Lublin has been consistently raising the level of urban intelligence and implementing the smart city idea, in line with the Human Smart City 3.0 paradigm, under which the inhabitants co-create the city and have a real impact on decision-making. The projects implemented to date have included a traffic management system, modernisation of public transport towards zero-emission, launching a range of e-service solutions and systems supporting the transparency of public data such as a geo-portal, a 3D model of the city or an open data portal. A number of participatory projects were also implemented, aimed at involving residents in social life by providing them with appropriate tools and opportunities to intervene in the areas most important to them. It is also worth mentioning the solutions aimed at building energy efficiency and security implemented by municipal companies, such as Miejskie Przedsiębiorstwo Wodociągów i Kanalizacji (Municipal Water and Sewage Company in Lublin), which invested in water and sewage network management systems or the construction of a photovoltaic farm. All the implemented projects enable further development and implementation of new elements in order to create a complete intelligent infrastructure of the city.

The *Lublin 2030 Strategy* should continue the activities initiated in the previous strategic period, however taking into account the changes, global trends and new directions of development. The smart city concept from a global perspective nowadays does not refer only to metropolitan areas and the related infrastructure, but takes on the character of a social movement that creates urban ecosystems focused on citizens and their needs.

The change of development directions was also reformulated due to the situation caused by the COVID-19 pandemic, which forced the public administration to focus



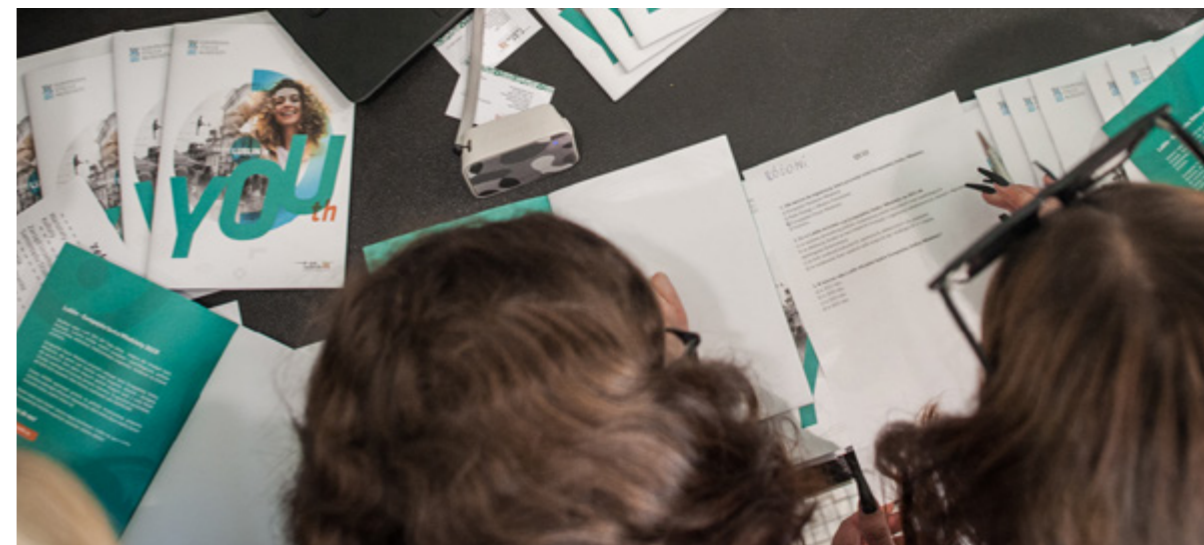
more on the issue of social security and digitisation of priority services, e.g. administrative, educational or urban mobility services. Thus, a horizontal objective should be a gradual digitisation of various spheres of economic, social, political and administrative activity and implementation of new technological solutions in accordance with the City as a Platform (CaaP) principle. The digitalisation of the economy and society is one of the most dynamic changes of our times and as a continuous process of convergence of the real and the virtual world it is becoming the main driver of innovation and change in most sectors of the economy, including cities. However, technology is only a tool for growth – the modern society is responsible for the final development.

The implementation of this goal requires an integrated approach and strategic intervention in many functional areas. The technological development of the city in accordance with the City as a Platform principle should focus on close cooperation of public entities, private entities, universities within one urban innovation ecosystem and create conditions for implementation and testing of new technologies improving the quality of life and bringing benefits to inhabitants. Additionally, it should create a platform for communication between inhabitants and self-government administration, thanks to which it will be possible to effectively participate in decision-making processes and to share responsibility for the city's development in accordance with the idea of smart governance, binding the city as a single system (organism) through a human and technological factor. The leading role in building the "urban platform" should be played by public administration which will create an environment of open activities for other entities and then enable the introduction of innovative services on its basis (for inhabitants, economic sector, third parties) catalysing the local ecosystem.

Intensive demographic processes (ageing of the population), the need to respond to climate change, changes in the labour market and the demand for digital competences, the development of the sharing economy, management models based on Big Data analytics are only a few of the challenges, but also opportunities that cities will face in the context of digitalisation and the implementation of new technologies. Therefore, it is of utmost importance to apply strategic intervention in this area in order to identify opportunities but also problems, because only then will it be possible to release the full potential of the digital economy, in which technology will include all inhabitants in social life rather than exclude them.

#### 4. Integrated city management in line with the participation principles and the co-management model

In today's reality the achievement of development goals through traditional governance in which self-government, independently of the surrounding actors, realises goals and tasks defined by law using hierarchical institutions can only lead to the stagnation of the city. Economic, social, environmental and technological developments have turned urban areas into a highly complex system, increasingly out of the control of public authorities. Managing the city's development today requires knowledge and resources that vastly exceed those of the self-government, but these deficits may be compensated for by the capital of relations with the inhabitants or public institutions, built through the implementation of the idea of participation and co-management of the city.



The provisions of the *National Urban Policy 2023* or the *New Leipzig Charter* recommend that local governments build a city open to dialogue, treating participation as a method of management and daily action for development. The idea of participation has permeated the provisions and re-implementation of *Lublin Strategy 2020*, and it has also been a guiding principle in the process of developing *Lublin 2030 Strategy*. All the more so that the implementation of the objectives of *Lublin 2030 Strategy* should be accompanied by the principle of integrated city management in line with the principles of participation and the co-management model. Integrated management involves the development of network, and not hierarchical, management structures. Integration of economic, social, environmental and infrastructural development planning overcomes the silo-like nature of fragmented bureaucratic structures. Participation assumes identification of needs, dialogue and cooperation of the local government with the inhabitants, who by engaging in various forms of

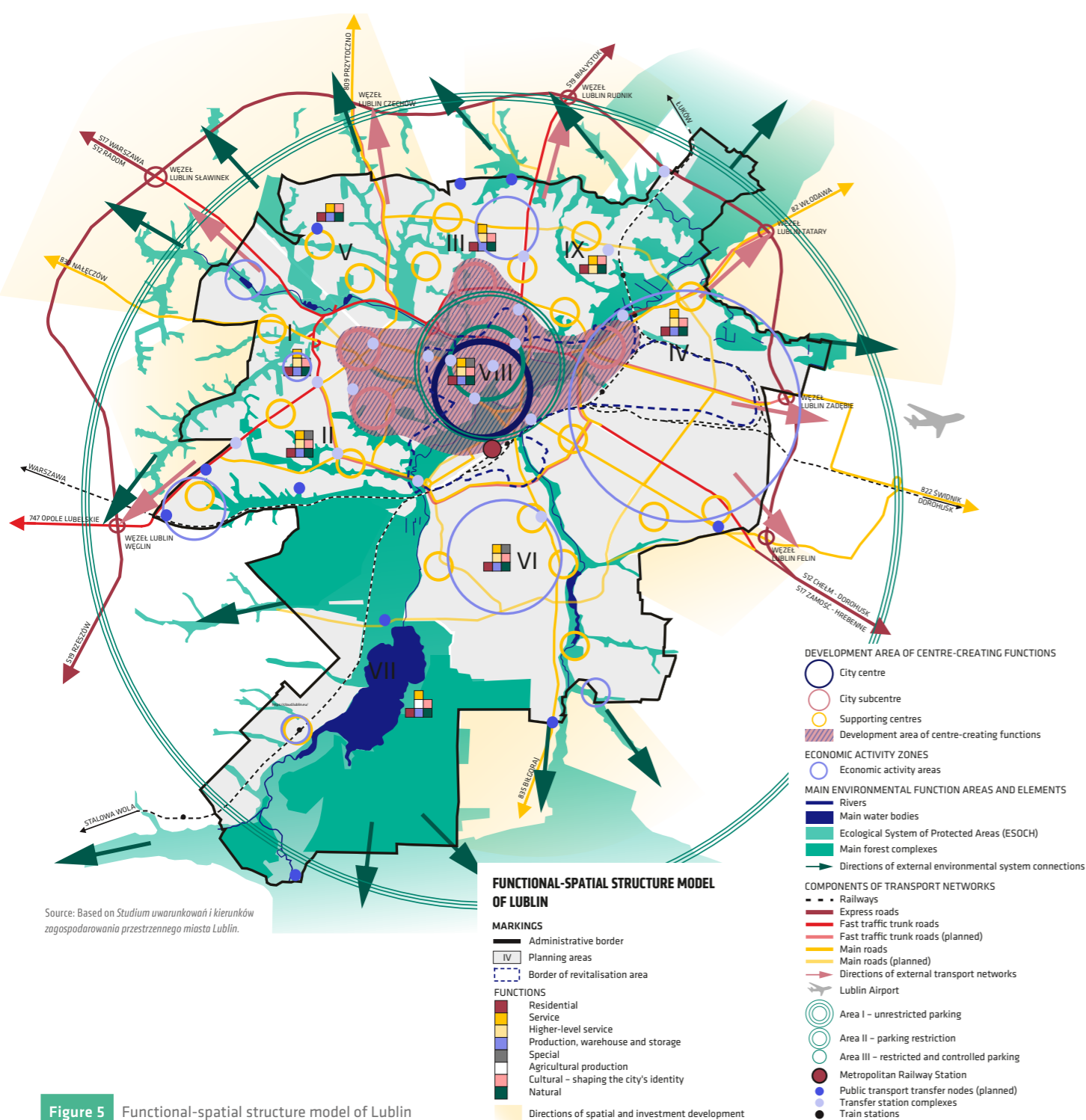
participation not only articulate their needs but take joint responsibility for the city. Also important is the transparency of the public authority and its readiness to support grassroots initiatives of citizens who "take matters into their own hands" in various kinds of organisations or informal groups. Co-management is characterised by the implementation of city policy by the city authorities in co-operation with entities outside its formal and institutional boundaries, including business, universities, NGOs and non-associated groups of inhabitants. This means involving the District Councils in their management, cooperation with the surrounding municipalities or the voivodeship government. Participation and co-management is a direction, which cannot be deviated from even under the influence of various failures and conflicts. This is co-responsibility for the city, readiness for dialogue and compromise, to which both the local government and non-governmental organisations, business, universities and residents themselves must continue to mature.



# Model of functional and spatial structure of Lublin







Source: Based on *Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Lublin*.

**Figure 5** Functional-spatial structure model of Lublin

## Assumptions of the functional-spatial structure model

The development strategy requires an integrated approach – combining the socio-economic, environmental and spatial dimensions, in order to, among others, achieve greater transparency of decision-making processes. The approach to the creation of development strategy in the spatial dimension makes it possible to look at the processes occurring in the city with greater accuracy and taking into consideration all development conditions and differences. This is to be facilitated by the functional-spatial structure model, which in an illustrative and spatial way defines strategic directions of municipality development, functional links, endo- and exogenic conditions, developmental needs and potentials possessed. It should also be noted that because of the synthetic character of the city development strategy, the model is a simplified vision of the Lublin area – showing schematically directions of the most important interventions.

The functional-spatial structure model of Lublin is underpinned by the *Study of the Conditions and Directions of Spatial Management of the City of Lublin*, adopted by the resolution of the Lublin City Council No. 283/VIII/2019 of 1 July 2019 (hereinafter: “Study” or “SIUKZP”), with regard to the formation of the

functional-spatial structure of the city and to the stating of findings and recommendations for the formation and conduct of spatial policy in the municipality. The model therefore includes a simplified vision developed in the Study, enriched with the contents identified in the course of preparation of the *Lublin 2030 Strategy*.

## Key functions and the layout of planned interventions in the Lublin area

### Area I – West

For Area I, it is established that organised settlement structures will be arranged, where within the dominant areas of basic residential development and residential/services development of equivalent functions the satisfaction of the basic needs of the residents will be ensured for complementary purposes:

- services, including: administration, education, health, culture, religious worship, sports, recreation, collective housing, trade, gastronomy and small crafts;
- public greenery (parks, squares, greenways);
- technical and communication infrastructure.

It is planned to locate service functions of a higher-level (culture and art, science, education, medicine,

administration, business environment, etc.) of a supralocal (metropolitan) significance together with accompanying services (trade, gastronomy, collective housing, sports, etc.).

Concentration of production, warehouse and storage and service functions (which are local centres of workplaces, services and production of material goods) is permitted. Within the areas of economic activity and services, it is allowed to implement functions in the field of technical and communication infrastructure, arranged greenery, as well as service and residential functions to the extent necessary for the needs of business activity. In the areas specified in the current local spatial development plans it is possible to build service and commercial facilities (including large-area commercial facilities). The main areas of economic activity are distinguished for the following regions: Wola Sławińska, Sławińska-Szerokie, Konstantynów.

Due to the protective functions and the shape of open spaces and areas constituting the city's environmental system, it is not possible to build up some areas in a way that would destroy the system's environmental functions, allowing for the location of facilities and equipment related to their functioning (sport and recreation, tourism), protection of the environmental functions, and technical and communication infrastructure facilities and equipment. The aforementioned conditions cover:

- green areas of riversides and meadows located in the valley of the Czechówka river and in the valley of the Ciek spod Kopnicy stream, including the nature and landscape complexes to be protected: "Dolina Środkowej Czechówki" and "Dolina Cieku spod Konopnicy";
- green areas of public use located in dry valleys leading into the valley of the Czechówka river and the Ciek spod Kopnicy stream, including areas designated

for protection – the Nature and Landscape Complex "Dolina Środkowej Czechówki" and the Nature and Landscape Complex "Dolina Cieku spod Konopnicy";

- areas of open space on the slopes of the Czechówka river valley;
- green areas connected with recreational and leisure needs of the community, including allotment greenery: in the area of Wojciechowska St., Nałęczowska St., Grabowa St., Kraśnicka Ave., Beatrycze St., Abelarda St., Lipniak St.;
- areas of the ethnographic park (skansen) – the Lublin Village Open Air Museum (Warszawska Ave.).

Protection of national heritage, monuments and goods of contemporary culture, and other sites of cultural importance (forming the identity of the city) is to include:

- historical buildings and areas listed in the Municipal Register of Historical Monuments, with particular emphasis on those listed in the Register of Historical Monuments of the Lubelskie Voivodeship, i.e.: the area of the open-air museum landscape and architectural complex of the Lublin Village Open Air Museum (A/813) in Warszawska Ave., and the manor and park complex "Sławin" (A/963) on Agronomiczna St.;
- archaeological sites;
- main city avenues: Warszawska Ave., Kraśnicka Ave. and Nałęczowska St.
- Existing and planned elements of the settlement structure, including technical and communication infrastructure:
- areas of technical infrastructure: water supply station "Sławinek" on Wodna St.;
- fast traffic trunk roads: Kraśnicka Ave., Solidarności Ave., Boh. Monte Cassino St. (including the planned extension to Solidarności Ave.);

- main roads: Kraśnicka Ave., Nałęczowska St., Głębocka St. (including the planned extension to Solidarności Ave.);
- collector roads: Warszawska Ave., Wojciechowska St. and Morwowa St.

### Area II – South-West

For Area II, it is established that organised settlement structures will be arranged, where within the dominant areas of basic residential development and residential/services development of equivalent functions the satisfaction of the basic needs of the residents will be ensured for complementary purposes:

- services, including: administration, education, health, culture, religious worship, sports, recreation, collective housing, commerce, gastronomy and small crafts;
- green areas of public character (parks, squares, greenways).

Higher-order service functions are envisaged (culture and art, science, education, medicine, administration, business environment, etc.) with a supralocal (metropolitan) importance together with accompanying services (commerce, gastronomy, communal living, sport, etc.).

Production functions, warehousing and services (which are local centres of work, services and production of material goods) can be concentrated. Within the areas of economic activity and services, technical and transport infrastructure, arranged greenery, service and residential functions to the extent necessary for the needs of conducting business activity are permitted. In the areas indicated in the valid local spatial development plans it is possible to locate service and commercial facilities (including large-area retail facilities). Main areas of economic activity are specified for the area of Węglinek.

For Area II, special areas connected with defence and public security are envisaged.

With regard to protective functions and shaping of open spaces and the city's natural system the possibility to build up parts of areas in a way that destroys the system's natural functions is excluded, allowing the location of facilities and equipment related to their function (sport and recreation, tourism), protection of natural functions, as well as facilities and equipment of technical and communication infrastructure. The arrangements include:

- green areas of public character located in the Bystrzyca Valley and in dry valleys;
- green areas of public character located in Wapienna St. (park), along J. Sowińskiego St. and in Nadbystrzycka St. (ecological connectors);
- woodland between the housing estate (Czuby-Widok housing estate) and railway areas;
- areas of greenery related to leisure and recreational needs of the community, including allotment greens in the area of Kazimierza Wielkiego St., Jana Pawła II St., Wapienna St., Nadbystrzycka St.
- Protection of national heritage, monuments and contemporary cultural goods, as well as other objects of cultural significance (forming the identity of the city) shall cover:
- historical buildings and areas listed in the Communal Register of Historical Monuments, with particular concern for the objects and areas listed in the Lubelskie Voivodeship Monuments Register, i.e.: the manor and park complex in Węgliń (A/849) in Kraśnicka Ave. and the religious cemetery (Roman Catholic) (A/942) in Beżycka St.;
- archaeological sites;
- main city avenues along Kraśnicka Ave. and Głębocka Ave.



- Existing and planned elements of the settlement structure, including technical and communication infrastructure;
- premises of the religious cemetery (Roman Catholic) in Beżycka St.;
- technical infrastructure areas: switching station “Śródmieście”, switching station “Czuby”;
- areas of technical infrastructure: pumping station “Ruta”, pumping station in Dziewanny St.;
- main roads of accelerated traffic: Kraśnicka Ave., Boh. Monte Cassino St., Armii Krajowej St., Jana Pawła II St.;
- main roads: Jana Pawła II St., Filaretów St., Głębocka St.;
- collector roads: T. Zana St., Wileńska St., Nadbystrzycka St., W. Orkana St., Boh. Monte Cassino St., Roztocze St., Granitowa St., Filaretów St., Głębocka St., Muzyczna St., a road to serve as extension of Lubelskiego Lipca '80 St. towards Kraśnicka Ave.;
- railway areas related to the route of the railway line no. 7 (Warszawa Wschodnia–Dorohusk) along with the stations: Stasin, Lublin Zachód;
- vehicle traffic service areas: public transport interchanges in the area of Granitowa St. and Kraśnicka Ave., where accompanying services of the operation of the interchanges are allowed.

### Area III – North

For Area III, it is established that organised settlement structures will be arranged, where within the dominant areas of basic residential development and residential/services development of equivalent functions the satisfaction of the basic needs of the residents will be ensured for complementary purposes:

- services, including: administration, education, health, culture, religious worship, sports,

- recreation, collective housing, commerce, gastronomy and small crafts;
- green areas of public character (parks, squares, greenways);
- technical and communication infrastructure.

Higher-order service functions are envisaged (culture and art, science, education, medicine, administration, business environment, etc.) with a supralocal (metropolitan) importance together with accompanying services (commerce, gastronomy, communal living, sport, etc.)

Production functions, warehousing and services (which are local centres of work, services and production of material goods) can be concentrated. Within the areas of economic activity and services, technical and transport infrastructure, arranged greenery, service and residential functions to the extent necessary for the needs of conducting business activity are permitted. In the areas indicated in the valid local spatial development plans it is possible to build service and commercial facilities (including large-area retail facilities). The main areas of economic activity are specified for Bursaki area. Protection of national heritage, monuments and contemporary cultural assets, as well as other objects of cultural significance (forming the identity of the city) shall cover:

- historical buildings and areas listed in the Communal Register of Historical Monuments;
- archaeological sites;
- an avenue in the system of main city avenues along Spółdzielczości Pracy Ave.

With regard to protective functions, the shaping of open spaces and the city's natural system, the possibility to build up parts of areas in a manner destroying system's natural functions is excluded, allowing for the location of

facilities and equipment related to their function (sport and recreation, tourism), protection of natural functions, as well as facilities and equipment of technical and communication infrastructure. The arrangements include:

- green areas of public character located in the valley of the Czechówka river and dry valleys between housing estates in Bursaki, Czechów and towards Rudnik and Jakubowicka Valley: Park Czechów, Park in Górki Czechowskie (in the area of Poligonowa St.), the Landscape-Nature Complex “Górki Czechowskie”, designated for protection, as well as in the area of J. Mackiewicza St. (Łemszczyzna Park);
- the woodland in Górki Czechowskie in the area of Północna St., the Landscape-Nature Complex “Górki Czechowskie”, designated for protection;
- areas of greenery related to leisure and recreational needs of the community including allotment areas in the region of Kupiecka St., I. Kosmowska St., Choiny / A. Zelwerowicza St., Bursaki St.

Existing and planned elements of the settlement structure, including technical and communication infrastructure:

- areas of technical infrastructure: the water supply station “Bursaki” in Związkowa St.;
- areas of technical infrastructure: switching station “Północ”, switching station “Czechów”;
- main roads of accelerated traffic: M. Smorawińskiego Ave., Gen. B. Duchy St., Poligonowa St., Bohaterów Września St., Solidarności Ave.;
- main roads: Solidarności Ave., A. Zelwerowicza St., E. Wojtasa St., Do Dysa St.;
- collector roads: Choiny St., Koncertowa St., I. Kosmowska St., Kompozytorów Polskich Ave., J. Elsnera St., T. Szeligowskiego St., M. Biernackiego St. and Związkowa St.;

- car service areas: public transport interchanges in the area of Choiny St. and Kupiecka St., where accompanying services of the operation of the interchanges are allowed;
- car service areas (road junction) of Solidarności Ave. and M. Smorawińskiego Ave.

### Area IV – East

For Area IV, it is established that organised settlement structures will be arranged, where within the dominant areas of basic residential development and residential/services development of equivalent functions the satisfaction of the basic needs of the residents will be ensured for complementary purposes:

- services, including: administration, education, health, culture, religious worship, sports, recreation, collective housing, commerce, gastronomy and small crafts;
- green areas of public character (parks, squares, greenways);
- technical and communication infrastructure.

However, in the areas of services and educational services, the construction of facilities connected with the residential function and the conduct of business activity (services, crafts or small-scale production) is allowed.

Higher-order service functions are envisaged (culture and art, science, education, medicine, administration, business environment, etc.) with a supralocal (metropolitan) importance together with accompanying services (commerce, gastronomy, communal living, sport, etc.).

In a considerable area it is possible to concentrate production, storage and warehousing functions and services (which are local centres of work, services and production

of material goods) together with technical and communication infrastructure and arranged greenery. Within the areas of economic activity, services technical and transport infrastructure, arranged greenery, service and residential functions to the extent necessary for the needs of conducting business activity is permissible. The areas indicated in the valid local spatial development plans it is possible to build service and commercial facilities (including large-area retail facilities). The main areas of economic activity are specified for the following areas: Hajdów-Zadębie, Tatary, Majdan Tatarski, Felin.

Protection of national heritage, monuments and contemporary cultural assets, as well as other objects of cultural significance (forming the identity of the city) shall cover:

- historical buildings and areas listed in the Municipal Register of Historical Monuments, with particular attention to the objects and areas listed in Lubelskie Voivodeship Monuments Register: the manor-park complex "Felin" (A/967) in Doświadczalna St. and the so-called "Czerwona Karczma" building (A/268) in Turystyczna St.;
- archaeological sites;
- avenues in the system of main city avenues along Droga Męczenników Majdanka St.

With regard to protective functions, shaping of open spaces and the city's natural system the possibility to build up parts of areas in a manner destroying system's natural functions is excluded, allowing for the location of facilities and equipment related to their function (sport and recreation, tourism), protection of natural functions, as well as facilities and equipment of technical and communication infrastructure. The arrangements include:

- the Bystrzyca river and the Zadębie watercourse;

- riverside and meadow greenery areas located in the valley of the Bystrzyca river and the Zadębie watercourse, including those designated for protection: "Skarpa Jakubowicka", the ecological conservation area "Derkaczowe Łąki", and the ecological conservation area "Zadębie";
- public green areas located in dry valleys flowing into the Bystrzyca river valley in Zadębie, Trześniów, Łysakowo and Jakubowice Murowana (including those designated for protection – the Nature and Landscape Complex "Dolina Trześniowska" Nature and Landscape Complex "Dolina Jakubowicka", Nature and Landscape Complex "Jakubowice Murowane", Nature and Landscape Complex "Łysaków") to the Czerniejówka river valley, the "Tatary Park" in the area of Gospodarcza St. (between Łęczyńska St./ Maszynowa St. and Gospodarcza St.);
- open space areas in Zadębie, Trześniów, Jakubowice Murowane, Łysaków, Pliszczyn, included in the Protected Landscape Area "Dolina Ciemiega", and the areas designated for protection – Nature and Landscape Complex "Dolina Trześniowska", Nature and Landscape Complex "Dolina Jakubowicka", as well as the Nature and Landscape Complex "Jakubowice Murowane", Nature and Landscape Complex "Łysaków";
- areas of greenery related to leisure and recreational needs of the community including allotment greenery in the area of Zadębie St.

Existing and planned elements of the settlement structure, including technical and communication infrastructure:

- areas of technical infrastructure: premises of the religious cemetery (Roman Catholic) in the area of Jarmarczna St.;

- areas of technical infrastructure: the sewage treatment plant "Hajdów" in Łagiewnicka St.;
- areas of technical infrastructure: liquid waste reception point in Azaliowa St.;
- "Megatem EC-Lublin" Combined Heat and Power Plant together with accompanying technical infrastructure areas in Frezerów St.;
- areas of technical infrastructure: switching station "Hajdów", switching station "Wschód", switching station "FS-1", switching station "FS-2", switching station "Odlewnia";
- regional installation for Municipal Waste Processing Facility in Metalurgiczna St.;
- areas of technical infrastructure: bus and trolleybus depot "MPK Lublin" in A. Grygowa St.;
- vehicle service areas: public transport interchange at the junction of Droga Męczenników Majdanka St. and the planned ring road (from the "Lublin-Felin" junction in the direction of Abramowicka St.), where the realisation of services accompanying the operation of the interchange is allowed;
- traffic service areas (road junctions): Mełgiewska St. and A. Grygowa St., W. Witosa Ave., Tysiąclecia Ave. and E. Graffa St.;
- express road (S12/S17) – Lublin ring road
- main roads with accelerated traffic: W. Witosa Ave., Tysiąclecia Ave., E. Graffa St., Mełgiewska St., Turystyczna St.;
- main roads: Droga Męczenników Majdanka St., H. Dekutowskiego St. (including the planned transfer to Abramowicka St.), A. Grygowa St., J. Kasprowicza St. (including the planned extension towards Do Dysa St.), planned ring road (from "Lublin-Felin" junction towards Abramowicka St.);
- collector roads: Doświadczalna St. (together with a planned extension towards Wyzwolenia St.),

- Vetterów St., Braci Krausse St., Chemiczna St., Hutnicza St., Gospodarcza St., Pliszyńska St.;
- railway areas associated with the route of the railway line No. 7 (Warszawa Wschodnia-Dorohusk) along with the "Lublin Północny" station and the "Lublin – Special Economic Zone" station, No. 30 ("Lublin Północny-Łuków") with the following stations "Lublin Zadębie", "Lublin Ponikwoda", "Rudnik" and No. 67 (Lublin-Świdnik) with the freight station "Lublin Tatary", where it is permitted to locate the following functions: economic activity (services, production, warehouses and storage) in a way that does not collide with the railway function provided that appropriate communication accessibility is ensured.

#### Area V – East

For Area V, it is established that organised settlement structures will be arranged, where within the dominant areas of basic residential development and residential/services development of equivalent functions the satisfaction of the basic needs of the residents will be ensured for complementary purposes:

- services, including: administration, education, health, culture, religious, sports, recreation, collective residential, trade, catering and small craft;
- public greenery (parklands, square, greenery);
- technical and communication infrastructure.

At the same time in the services area it is permitted to develop facilities connected with the residential function and conducting business activity (services, crafts or small-scale production).

Concentration of production functions, warehousing and services (which are local workplaces centres and



production material goods) is allowed. As a part of economic activity and services areas it is permissible to perform functions in the field of technical and communication infrastructure, arranged greenery and service and residential functions to the extent necessary for the needs of business activity.

Due to protective functions, spatial design and areas which are constituting the city's natural system, the possibility of developing some areas in a manner of significantly destroying 140 natural functions of the system is excluded, allowing for the location of facilities and equipment related to their functioning (sport, recreation and tourism), protection of natural functions, as well as objects and devices of technical and communication infrastructure. The arrangements include:

- the Czechówka river with a reservoir;
- public greenery areas located in the river valley of Czechówka and in the dry valleys (Sławin Park, Wola Słowińska Park, Dzbenin Park) in the vicinity of the municipal cemetery in Sławin;
- cultivated green areas (parks) in the area of municipal cemetery in Sławin;
- forest areas in the area of the municipal cemetery in Sławin;
- open space areas in Sławin (in the region of Dąbrówka forest);
- cultivated green areas associated with to leisure and recreational needs of society, including allotment greenery in the area of: Zbożowa St., Sławinkowska St., Dzbenin St.;
- Botanical Garden of Maria Curie-Skłodowska University in Sławinkowska St.

The protection of national heritage, monuments, modern cultural heritage, and other objects of cultural importance (forming the city's identity) will cover:

- historical buildings and areas listed in the Municipal Register of Historical Monuments, with particular regard to those entered in the Register of Historical Monuments of the Lubelskie Voivodeship, i.e., Kościuszko Manor House (at the UMCS Botanical Garden) in Sławinek (A/127) at Warszawska Ave., and villas with the surrounding tree stand (A/930, A/957) at Warszawska Ave.;
- archaeological sites;
- Warszawska Ave. in the system of main city avenues.

The existing and planned elements of the settlement structure, including technical and communication infrastructure:

- areas of technical infrastructure: the area of the municipal cemetery in Sławin near Bohaterów Września St. and the planned extension of A. Zelwerowicza St.;
- fast traffic trunk road: Solidarności Ave.;
- collector roads: Zbożowa St. (including the planned extension towards A. Zelwerowicza St.), Willowa St., Sławinkowska St. of the planned collector road (between Poligonowa St. and extension of A. Zelwerowicza St.).

### Area VI – South-East

For Area VI, it is established that organised settlement structures will be arranged, where within the dominant areas of basic residential development and residential/services development of equivalent functions the satisfaction of the basic needs of the residents will be ensured for complementary purposes:

- services, including: administration, education, administration, education, health, culture, religious worship,

- sports, recreation, collective housing, trade, catering and small crafts;
- public greenery (parks, squares, greenways);
- technical and communication infrastructure.

In the areas of services and educational services realisation of buildings connected with the residential function and with conducting business activity (services, crafts or small production) is admissible.

It is planned to locate higher-order functions (culture and art, science, education, medicine, administration, business environment, etc.) of supralocal (metropolitan) importance together with accompanying services (commerce, catering, collective residence, sports, etc.).

It is permitted to locate special areas and facilities associated with defense and public safety.

It is permitted to concentrate production functions, storage and warehousing and service functions (which are local centres of workplaces, services and production of material goods). As a part of the economic activity and service areas it is allowed to implement functions in the field of technical and communication infrastructure, arranged greenery, as well as service and residential functions to the extent necessary for the needs of business activity. There are main areas of economic activity: Bronowice, Kosminek, Majdan Tatarski, Majdanek, Dziesiąta Stara, Dziesiąta II, Wrotków, Abramowice, Abramowice Prywatne, Dominów.

Due to protective functions, spatial design and areas constituting the city's natural system, the possibility of developing some areas in a manner destroying the natural functions of the system is excluded, allowing for the location of facilities and equipment related to their functioning (sport and recreation, tourism), protection of natural functions, and technical and communication infrastructure facilities and equipment. The arrangements include:

- the Bystrzyca river and the Czerniejówka river, together with reservoirs (fish ponds) in Abramowice Prywatne, Głusk and Dominów;
- the riverside and meadow areas in the Bystrzyca and Czerniejówka river valleys, including "Majdan Wrotkowski" Landscape and Nature Complex, recommended for protection;
- public greenery located in the valley of the Bystrzyca and the Czerniejówka river – Bronowice Park, Riverside Park (Bronowice) together with Jordan's Garden on the Bystrzyca River, Park in Głusk, Wyzwolenia Park (Sokolniki St.), Riverside Park (Wrotków) in dry valleys flowing into the Bystrzyca and Czerniejówka valleys, Abramowice Park, Felin Park;
- open space areas in Abramowice Private, Abramowice Kościelne, Głusk, Dominów and Wólka Abramowicka;
- cultivated greenery connected with recreation and leisure needs of society, including allotment greenery in the area of: Osmolicka St., Wilcza St., Nadrzeczna St. /Robotnicza St. and the planned ring road in Wólka Abramowicka.

Protection of national heritage, monuments, and modern cultural heritage, as well as other objects of cultural importance (forming the city's identity) shall cover:

- monuments and areas listed in the Municipal Register of Historical Monuments, with particular focus on those entered into the Register of Historical Monuments in the Lubelskie Voivodeship, i.e.: the premises of the former Nazi camp at Majdanek along with the camp buildings, the Monument to Struggle and Martyrdom and the Mausoleum (A/1029) at Droga Męcz. Majdanka; Abramowice Manor and Park Complex (A/815) in Abramowicka St.; Bronowicki City Park (A/848) in Bronowicka/Fabryczna streets;

- St. James the Apostle Parish Church with movable historical objects (A/50) at Głuska St.; the so-called “murowaniec” building and its surroundings (A/277) at Głuska St./Nektarowa St.; the cemetery (Roman Catholic) (A/949) at Głuska St./Parafialna St.;
- archeological sites;
  - the Annihilation Monument at Majdanek along with the the protection zone, including the green areas of public (isolation greenery);
  - main avenues along Droga Męczenników Majdanka St. (including the foreground of the municipal cemetery at Majdanek, W. Kunicki St., Abramowicka St.).

Existing and planned elements of the settlement structure, including technical and communication infrastructure:

- technical infrastructure areas: the areas of the municipal cemetery at Majdanek (at Droga Męczenników Majdanka St.) along with the areas of motor vehicle service (at Cmentarna St., the planned E. Kwiatkowskiego St. and the planned extension of H. Dekutowskiego St. towards Abramowicka St.);
- premises of the cemetery (Roman Catholic) on Głuska St./Parafialna St.;
- technical infrastructure areas – waterworks station: “Dziesiąta” at Nadrzeczna St., “Zembożycka” at Zembożycka St.;
- electrical power and heating plant “EC Lublin Wrotków” and associated areas of technical infrastructure in Inżynierska St. and Powojowa St.;
- technical infrastructure areas: GSZ “Abramowice”, switching station “EC-II”, switching station “Wrotków”, switching station “Dziesiąta” and at Długa St.;
- technical infrastructure areas in the field of communications at Kosmonautów St.;

- fast traffic trunk road: Krańcowa St., Dywizjonu 303 St. (with planned extension to Wrotkowska St.), Wrotkowska St., Diamentowa St., Krochmalna St.;
- main roads: Fabryczna St., Droga Męczenników Majdanka St., W. Kunickiego St., Abramowicka St., Diamentowa St., the planned ring road (from the Lublin-Felin and Lublin-Węglin interchanges towards Abramowicka St.);
- collector roads: Łęczyńska St., Wolska St., Wojenna St. (including planned extension towards Stadionowa St.), E. Romera St., Nałkowskich St., Zembożycka St., Diamentowa St. (including planned extension towards the ring road), Janowska St., Smoluchowskiego St. (including planned extension towards Lubelskiego Lipca '80 St. and the ring road), S. Sierpińskiego St., T. Rejtana St., planned E. Kwiatkowskiego St., Wyzwolenia St., Głuska St. (including planned extension towards the ring road), Zorza St., Wygodna St., F. Strojnowskiego St.;
- public transport interchange in the area of Abramowicka St. (including Głusk Community), where it is permitted to realize services connected with the interchange;
- railroad areas associated with the following lines: No. 7 (Warszawa Wschodnia–Dorohusk) and No. 68 (Lublin–Przeworsk) along with “Lublin Towarowy” station, railroad siding towards “EC Wrotków Lublin” and PKN Orlen fuel depot in Zembożycka St. (including a suggested alternative route with the planned reconstruction of the road system extension of Dywizjonu 303 St. to Wrotkowska St. and Smoluchowskiego St. to Lubelskiego Lipca '80 St.).

### Area VII – South

For Area VII, it is established that organised settlement structures will be arranged, where within the dominant areas of basic residential development and residential/services development of equivalent functions the satisfaction of the basic needs of the residents will be ensured for complementary purposes:

- services, including: administration, education, health, culture, religious worship, sports, recreation, collective housing, commerce, catering and small crafts;
- public greenery (parklands, square, greenery);
- technical and communication infrastructure.

It is permitted in the areas of services and educational services to locate buildings associated with the residential function and conducting economic activity (services, crafts or small-scale production).

Settlement structures connected with agricultural production space are to be preserved, where activities in the field of agrotourism and production, storage and service functions (local centres of workplaces, services and production of material goods) are permitted. As a part of economic activity and service areas it is permitted to implement functions in the field of technical and communication infrastructure, arranged greenery, service and residential functions to the extent necessary for the needs of conducting business activity.

Due to protective functions and formation of open spaces and areas constituting the city's natural system, the possibility of developing some areas in a manner destroying the natural functions of the system is excluded, allowing for the location of facilities and equipment related to their functioning (sport and recreation, tourism), protection of natural functions, and

technical and communication infrastructure facilities and equipment. The arrangements include:

- the Bystrzyca river together with a reservoir – Zembożycki Lake;
- riverside and meadow areas in the Bystrzyca river valley, included in the Czerniejowski Protected Landscape Area and designated for protection – Nature and Landscape Complex “Majdan Wrotkowski”, Nature and Landscape Complex “Uroczysko Krężnickie”;
- public greenery areas located in: the Bystrzyca Valley – Nadrzeczne Park (Wrotków) and in dry valleys flowing into the Bystrzyca Valley;
- open space areas in Zembożyce Kościelnych, Zembożyce Górne, Majdan Wrotkowskie and in the vicinity of Stary Gaj Forest;
- forest areas: Stary Gaj Forest, Dąbrowa Forest and Krężnicki Forest, which are part of the Czerniejowski Protected Landscape Area, where there are existing forms of protection – the “Stasin” reserve and areas designated for protection – Nature and Landscape Complex “Uroczysko Krężnickie”;
- forest areas in the park in Zembożyce;
- greenery associated with leisure and recreational needs of society, including allotment greenery in the area: Krężnicka St. by the railroad areas (Zembożyce Górne, Zembożyce Kościelne) and Janowska St. and Stary Gaj Forest.

Protection of national heritage, monuments, and goods of contemporary culture as well as other objects of cultural importance (forming the city's identity) shall cover:

- historical buildings and areas listed in the Communal Register of Historical Monuments, with particular emphasis on those listed in the Register of Historical



Monuments of the Lubelskie Voivodeship, i.e.: the cemetery (Roman Catholic) (A/947) in the area of Pszczela St.;

- archaeological sites.

### Area VIII – Centre

For Area VIII, the following are established:

- arrangement of the functional area of the city centre as a metropolitan settlement structure (Old Town, Centre, Czwartek, Wieniawa, Piaski [part]), where there is a concentration of downtown developments, multi-family housing (in the area of Unicka St., Czwartek St., Obywatelska St., Przy Stawie St., Głębocka St. and H. Wiercieńskiego St.) and services with citywide and supralocal – metropolitan functions; the functional downtown area should be treated as a potential development area for downtown developments;
- arrangement of the downtown development areas as multifunctional areas of quarters of residential, residential and service buildings, including higher-order services (culture and art, science, education, medicine, administration, business environment, etc.) with its form referring to the historical spatial character and architectural and urban composition of the Centre and the Old Town;
- preservation of the old town complex as an area of historically arranged downtown buildings, where the dominant function is services connected with tourist traffic, in particular in the field of: hospitality, gastronomy, trade, crafts, culture and tourist attractions, where the residential function will serve as supplementary purpose; the Old Town should be excluded from public motorized traffic (car access restrictions);
- reinforcing re-urbanisation processes intended to revive the central areas of the city, e.g., by preventing the residential function from being replaced by service function – except for the ground floor level of buildings;
- arrangement of the organised settlement structures in the city (housing estates) where within the areas of residential development (primary purpose), residential and service development (equivalent purpose) the following functions will be performed, providing services for the basic and secondary needs for the inhabitants:
- services, including services: administration, education, health, culture, religious worship, sports, recreation, residences for communities, trade, gastronomy and small crafts; services related to greenery of a public character (parks, squares, greenways), as well as technical and communication infrastructure;
- location of service functions, including higher-order services (culture and arts, science, education, medicine, administration, business environment etc.) of supralocal (metropolitan) importance together with accompanying services (trade, gastronomy, residences for communities, sport etc.);
- concentration of production functions, storage and service functions (being local centres of workplaces, services and production of material goods); as part of economic activity and service areas it is permissible to realise functions in the field of technical and communication infrastructure, organised green areas, as well as service and residential functions to the extent necessary for the needs of business activity; the designated areas of main economic activity are for the area between Krochmalna St., Diamentowa St. and railway premises;
- location of elements of the settlement structure, including technical and communication infrastructure of citywide and supralocal (metropolitan) importance;

- location of special areas related to defence and public security.

Protection of national heritage, monuments and goods of contemporary culture heritage, as well as other objects of cultural importance (forming the identity of the city) covers:

- historical monument “Lublin – historical architectural and urban complex”;
- objects on the European Heritage List;
- historical buildings and areas listed in the Municipal Register of Historical Monuments, with particular emphasis on those entered in the Register of Historical Monuments of Lubelskie Voivodeship;
- archaeological sites;
- main city avenues: Krakowskie Przedmieście St., Lubartowska St., Spółdzielczości Pracy Ave., Królewska St., Kardynała Stefana Wyszyńskiego St., Zamojska St., Raławickie Ave., Weteranów St., Sowińskiego St., I. Radziszewskiego St., Lipowa St., Zygmuntofskie Ave., J. Piłsudskiego Ave., 1 Maja St., Dworcowa St., W. Kunickiego St. and Fabryczna St., Stadionowa St., Muzyczna St. and Głębocka St.; efforts should be made to reconstruct and complete the alley of lime trees along Lipowa St. – at least in the section from C. H. “Plaza Lublin” to G. Narutowicza St. and further – to Droga Męczenników Majdanka St. and W. Kunickiego St.

Due to protective functions and shaping of open spaces and areas constituting the city’s natural system, it is excluded that part of the areas may be developed in a manner destroying the system’s natural functions, allowing for the location of facilities and equipment related to their functioning (sport and recreation, tourism), protection of the function of nature, as well

as facilities and equipment of technical and communication infrastructure. The arrangements include:

- the valleys of the Bystrzyca and Czechówka rivers;
- areas of greenery connected with leisure and recreation needs of society, including allotment greenery and greenery of public character in river valleys and dry valleys flowing into them, in particular: Ludowy Park, Akademicki Park, Rusałka Park, Kalinowszczyzna Park, Słomiany Rynek, Błonia pod Zamkiem (Podzamcze Park);
- areas of greenery of public character (organised greenery): Saski Garden, park and garden arrangements in Litewski Square, Podzamcze, in the area of the Culture Centre in Peowiaków St.

Existing and planned elements of the settlement structure, including technical and communication infrastructure:

- areas of technical infrastructure: the area of the Integrated Communication Centre location in the area of Train Station Square within the area of the bus station and railway areas (railway station), where it is permissible to extend the public transport service functions with service functions;
- areas for tourist services at Działkowa St.;
- areas of services in greenery (including sports and recreation services) at Mełgiewska St. and Tysiąclecia Ave.;
- areas of sport and recreation services: “Aqua Lublin” (swimming centre with an Olympic-size swimming pool); municipal (football) stadium “Arena Lublin” at Stadionowa St. with associated services; sports stadium on Zygmuntofskie Ave. (athletics, motor racing) and S. Leszczyńskiego St. (football) with accompanying services; sports premises in the area of Rusałka St. and Lubelskiego Lipca ‘80 St.;

- educational services areas in the area of Muzyczna St., Podwale St., Spokojna St., K. Jaczewskiego St.; J. Długosza Ave., Raławickich Ave., J. Popiełuszki St., J. Poniatowskiego St., Lipowa St., Orphan St., Szkolna St., ks. M. Słowikowskiego St., Prezydenta G. Narutowicza St., Krochmalna St. and Farbiarska St.;
- service areas (health, social care services) at Spadochroniarzy St., Kalinowszczyzna St., B. Głowackiego St.;
  - service areas in the green area of Lubelskiego Lipca'80 St.;
  - green areas with single service facilities in the region of Tysiąclecia Ave., Solidarności Ave. and Puławska St.;
  - premises of the municipal cemetery at Biała St. with areas for servicing motor vehicles;
  - premises of the cemetery (Roman Catholic, Orthodox, Evangelical) at Lipowa St.;
  - premises of a religious cemetery (Roman Catholic) at Unicka St. / Walecznych St.;
  - premises of the religious cemetery (Orthodox) at Walecznych St.;
  - premises of the cemetery (Roman Catholic) in F. Kleeberga St.;
  - premises of the Jewish cemetery at Walecznych St., Kalinowszczyzna St. and S. Leszczyńskiego St. and the Uniate cemetery at Unicka St.;
  - areas of downtown development: the MPWiK head office with the "Centralna" water supply station at J. Piłsudskiego Ave.;
  - technical infrastructure areas: water tower at Raławickich Ave.;
  - areas of technical infrastructure: switching station "Śródmieście", switching station "Działkowa", switching station "Solidarności" and switching station "PKP";
- main roads of accelerated traffic: Diamentowa St., Krochmalna St.;
  - main roads: Lubelskiego Lipca ,80 St., W. Kunickiego St., Bychawski Square, J. Piłsudskiego Ave., Zygmuntowskich Ave., Lipowa St., Raławickie Ave., J. Sowińskiego St., J. Poniatowskiego St., Solidarności Ave., Tysiąclecia Ave., Unii Lubelskiej Ave., Podzamcze St., Unicka St., Spółdzielczości Pracy Ave., Fabryczna St.;
  - collector roads: Krakowskie Przedmieście St., Prezydenta G. Narutowicza St., H. Kołłątaja St., 3 Maja St., Dolna 3 Maja St., Lubartowska St., Świętoduska St., Królewska St., Prymasa S. Wyszyńskiego St., Zamojska St., Wolska St., Lwowska St., Ruska St., Walecznych St., Obywatelska St., M. Biernacki St., K. Jaczewski St., B. Prusa St., Lubomelska St., Czechowska St., S. Leszczyńskiego St., J. Długosza Ave., Stadionowa St. (including the planned extension towards Dywizjonu 303 St.), and the planned extension of M. Smoluchowskiego St. towards T. Zana St.;
  - railway areas connected with the route of the railway line No. 7 (Warszawa Wschodnia–Dorohusk) along with "Lublin Główny" railway station;
  - car service areas at Solidarności Ave. and J. Poniatowskiego St.;
  - a complex of transfer stops for local and long-distance transport in Podzamcze in the area of R. Dmowskiego roundabout (Tysiąclecia Ave., Unii Lubelskiej Ave).

#### Area IX – North-East

For Area IX, it is established that organised settlement structures will be arranged, where within the dominant areas of basic residential development and residential/

- services development of equivalent functions the satisfaction of the basic needs of the residents will be ensured for complementary purposes:
- services, including: administration, education, health, culture, religious worship, sport, recreation, collective housing, trade, gastronomy and small crafts;
  - public greenery (parks, squares, greenways);
  - technical and communication infrastructure.

However, in the areas of services and educational institutions and greenery services it is permissible to erect buildings associated with the residential function and with conducting economic activity (services, crafts or small production).

It is permitted to locate service functions, including higher-level services (culture and art, science, education, medicine, administration, business environment, botanical/zoological garden, etc.) of significance of supralocal (metropolitan) importance together with accompanying services (trade, gastronomy, collective living, sport, etc.) and concentration of service functions (which are local centres of workplaces, services and production of material goods). Within the areas of economic activity and services, it is permissible to realise functions in the field of technical and communication infrastructure, organised greenery, as well as services and residential functions to the extent necessary to conduct business activity. In the areas indicated in the local spatial development plans in force it is possible to realise service and commercial facilities (including large-area commercial facilities).

Protection of national heritage, monuments and contemporary cultural heritage, as well as other objects of cultural importance (forming the identity of the city) shall cover:

- historical buildings and areas listed in the Municipal Register of Historical Monuments, with particular emphasis on those entered in the Register of Historical Monuments of the Lubelskie Voivodeship, i.e.: the manor complex (A/722) in Malwowa St. / Dożynkowa St.;
- the religious (Jewish) cemetery (A/983) at Walecznych St.;
- archaeological sites;
- Spółdzielczości Pracy Ave. in the system of main city avenues.

Due to protective functions and shaping of open spaces and areas constituting the city's natural system, it is excluded that part of the areas may be developed in a manner destroying system's natural functions, allowing for the location of facilities and equipment connected with their functioning (sport and recreation, tourism), protection of natural functions, as well as technical and communication infrastructure facilities and equipment. The arrangements include:

- the riverside and meadow greenery areas in the valley of the Bystrzyca river;
- public green areas in the valley of the Bystrzyca river and dry valleys flowing into it, including Zawilcowa Park, Rudnik Park, Ponikwoda Park;
- areas of open spaces in Jakubowice Murowana and Marianówki (Torowa St. / T. Lipeckiego St.);
- areas of greenery connected with leisure and recreational needs of society, including allotment greenery in the area of Zawilcowa St.

Existing and planned elements of the settlement structure, including technical and communication infrastructure:



- areas of technical infrastructure: areas of religious cemetery (Roman Catholic, Jewish) at Walecznych St., (Old Catholic Mariavite) at Mariańska St.;
- animal cemetery at Torowa St. (location permitted after exploitation of the wells in Ciecierzyn – 10k and Ciecierzyn – 11k);
- areas of technical infrastructure: MPWiK Central Laboratory in Lublin at Zawilcowa St.;
- main roads of accelerated traffic: Spółdzielczości Pracy Ave., W. Andersa Ave., Mełgiewska St.;
- main roads: planned extension of Do Dysa St. in the direction of Turystyczna St.;
- collector roads: Walecznych St., T. Strzembosza St., Cynamonowa St., Dożynkowa St., Orzechowa St., M. Koryznowej St., S. Węglarza St., Nasturcjowa St.;
- motor traffic service areas at the junction of Trzeźniowska St. and Torowa St., where the construction of a complex of interchange stops together with accompanying services is admissible;
- grounds for car transport services at Torowa St.







## Arrangements and recommendations on the formation and conduct of spatial policy in the municipality

In order to conduct appropriate land development and use, the following assumptions have been adopted for shaping individual types of land use, including those designated for investment (residential, services, economic activity, cemeteries) and land which should be excluded from the possibility of development – open spaces of greenery related to leisure and recreation needs of the society, including allotment greenery, public greenery, riverside and meadow greenery.

Considering the formation of the functional and spatial structure of the city based on the development of the city-forming functions and structural settlement units (residential), the creation of organised systems of residential buildings is envisaged with a programme of basic services (including leisure services) as well as technical and communication infrastructure, located in close proximity to organised greenery, forests or open spaces.

Due to the “natural” need to ensure proper formation and functioning, it is necessary to take into account:

- social infrastructure of educational and care services;
- public green, recreation and sport areas (including community greenery);

- optimal relation of the intensity of the built-up area to the green area.

Land development and use should result from the analysis of site-specific conditions (cultural, natural, landscape, compositional and aesthetic, economic). The following land use and development directions should be considered as general basic guidelines for local plans.

### Transportation in the city

The development of the city’s transportation systems should take place in compliance with the principles of sustainable development, i.e. striving to achieve a balance between the implementation of economic, social, transportation and environmental protection objectives. This requires consideration of the interests of various users in the development policy and the application of measures that will make it possible to ensure the efficiency and effectiveness of the functioning of transportation systems that meet all expectations of users (city residents, those working in the city, etc.) in conditions of limited financial, spatial, technical, and environmental opportunities. Social benefits should be maximised in relation to the costs incurred by managing the demand of transport system users in such a way that the demand for travel is met in the most economical way. The basic



measures that should anticipate decisions on new investments in the transport (communication) system are:

- making better use of existing resources (e.g. through traffic management, management of infrastructure use, privileging collective transport);
- reducing motorisation and providing alternative travel options (e.g. by increasing the attractiveness of public transport, developing cycling, facilitating pedestrian movement, introducing carpooling, carsharing);
- spatial planning and stimulation of urban development (e.g. by densifying development on corridors well served by public transport, increasing the functional attractiveness of downtown areas, mixing functions, preventing urban explosion and suburbanisation);
- use of fiscal mechanisms (e.g. parking fees, area access fees, payments for using selected elements of infrastructure, vehicle taxes, ticket pricing in public transport).

In the development of the city's transport systems in compliance with the principles of sustainable development, priority is given to the development of public transport, cycling and pedestrian traffic. The privileging of public transport, development of the basic road system, including the ring road system, development of cycling and changes in traffic organisation related to traffic restrictions in the central area of the city are considered to be the most important measures for the development of Lublin's transportation systems.

### Environmental protection

Areas located within the Ecological System of Protected Areas (ESoch) should be treated as excluded from development (or with significantly restricted possibilities of

development). These areas are designed to perform natural functions and such functions should be strengthened here. The Ecological System of Protected Areas is a simplified model of functioning of the environment and nature at the city scale which is to ensure planning protection of the areas that determine to the highest degree the living conditions in Lublin. The basis for the proper functioning of the city's ecological system is its spatial permeability and its undisturbed connection with open areas outside the city. This allows for free inter-zonal ecological exchange and guarantees the protection of habitat and species diversity, water, river, meadow and other ecosystems. River valleys and dry valleys are one of the key elements of the ESoch – without their proper natural functioning the other elements of the ESoch will be degraded, and consequently the quality of space and the health conditions of habitation will decline. The building-up of spaces fulfilling a natural role in the city, among other things, disturbs the water cycle, contributing to the overloading of the urban sewage system and an increase in the risk of the so-called "urban floods", increases sensitivity to weather extremes and strengthens the effect of the so-called heat islands. Urban ecosystems maintained as undeveloped green areas have the lowest average temperatures in the urban structure and reduce the temperature around them, which in addition to the obvious climatic (health) benefits translates into reduced energy consumption (e.g. for air conditioning). Reducing development in ESoch and supporting ESoch open areas means reducing flood and inundation losses. Narrowing, building up and discontinuity of the ESoch does not only contribute to the deterioration of health conditions for residents, but also to shaping a negative image of the city and reducing its competitiveness. Decreasing competitiveness means a decreasing number of inhabitants

and thus decreasing revenues to the city budget, i.e. making it poorer and less able to repair the existing state of affairs.

All values of the natural environment should be protected, in the hierarchy of their importance in the natural system of the area, trying to use them appropriately – within ecologically acceptable limits – for the development of the city. The location of objects or the application of solutions causing the environmental quality standards to be exceeded within the city limits shall be excluded.

The basic aim of protecting the environment and its resources as well as nature is not only to secure and preserve their current state but also to strengthen them with simultaneous development of the city, which should result in improved quality, including health conditions of the residents' life and increase its attractiveness for outsiders. The spatial policy in the scope of protection of the environment and its resources and nature protection includes:

- maintenance and gradual strengthening of biodiversity;
- preservation of areas valuable in terms of nature and landscape;
- preservation and strengthening of the continuity of all elements of the city's natural system (ESoch);
- protection of groundwater;
- protection of surface waters and improvement of their quality, including through re-naturalisation of river beds;
- preventing the drying up/disappearance of water sources, water reservoirs, wetlands and preventing the lowering of groundwater levels;
- improvement of air quality and acoustic climate;
- shaping of favourable topoclimatic and aerosanitary conditions;

- protection of areas where deposits occur through their rational management;
- protection of existing forests, coppices and increasing their biological potential (also by increasing their area);
- reclamation of degraded areas;
- biological regeneration of degraded sections of the Bystrzyca, Czerniejówka and Czechówka river valleys, e.g. through their renaturalisation;
- preservation of the existing green areas and their protection against conversion to other purposes (including e.g. car parks);
- implementation of new green areas in places requiring enhancement of the ESoch and as greenery in areas with other designations, including in particular residential areas.

The principle of integrity, continuity, protection against development and strengthening of the natural functions of the city's Ecological System of Protected Areas should be treated as paramount, as a properly formed and efficient ecological structure of the city conditions and shapes the state of the atmosphere's hygiene, thus directly influencing the improvement of the city's aerosanitary conditions and, consequently, the health of its inhabitants.

With regard to the external regulations set out in the Provincial Land Use Plan, consideration should be given to:

- prohibitions:
  - locating buildings in a manner detrimental to the natural functions of the system;
  - landform transformation, including the creation of soil banks and filling in of river valleys, dry valleys and ravines;
  - depositing municipal refuse, industrial and power-industry waste, locating slurry and waste dumps;

- exploitation of mineral resources except for areas for which a concession has already been granted;
- obligations:
  - removal of destructive objects;
  - widening (or making) culverts in road and railway embankments crossing ecological corridors;
- permissions:
  - preservation of existing buildings, in particular historical buildings;
  - construction of buildings related to flood protection and water economy, including water facilities;
  - execution of buildings connected with recreation and tourism, in compliance with the principles set out below and services including cultural services, education and other functions as indicated in the Study;
  - execution of micro and small installations (within the meaning of the Act of 20 February 2015 on Renewable Energy Sources), in particular: photovoltaic panels, solar thermal collectors, small hydroelectric power station, micro wind turbines and hybrid systems, while maintaining the priority of environmental and landscape protection
  - implementation of necessary elements of technical infrastructure and transportation (roads) in a manner which allows to maintain the continuity of the system and which is least invasive to the environment and landscape, e.g. running roads on overpass;
- recommendations:
  - shaping of strip natural structures (meadows, coppices);
  - restitution of grasslands at the expense of arable farming;
  - increase the area of existing forest complexes by including land unsuitable for agricultural

production, wasteland and land reclaimed and intended for recultivation.

### Protection of waters

The purpose of protecting water intakes is to ensure adequate water quality for supplying the population with water intended for human consumption and for supplying production plants that use high-quality water, as well as to protect water resources. In compliance with the current law, a protection zone, comprising only the direct protection area, is established by the competent authority of the State Water Holding Polish Waters by way of a decision, whereas the direct protection area and the indirect protection area are established by the voivode by way of a legal act. Since 2018 direct protection zones of groundwater intakes have been systematically established. In their area, it is prohibited to use land for purposes not related to the exploitation of the water intake.

In the area of the city indirect protection zones have been established for 3 water intakes of the MPWiK in Lublin: Prawiedniki (Ordinance No. 44 by the Lubelskie Voivode of 1 October 2020), Wrotków (Ordinance No. 23 by the Lubelskie Voivode of 1 October 2021) and Wilczopole (Ordinance No. 53 by the Lubelskie Voivode of 11 December 2020).

At present, works are being carried out to establish a protection area for the Main Underground Water Reservoir (Główny Zbiornik Wód Podziemnych – GZWP) No. 406 Niecka Lubelska (Lublin). Prohibitions and restrictions intended to protect groundwater resources from degradation are laid down in the Appendix to the Documentation Defining Hydrogeological Conditions for Establishment of a Protection Area for the Niecka Lubelska (Lublin) Main Underground Water Reservoir

(GZWP No. 406) in Connection with Establishment of Protection Areas for the Main Underground Water Reservoir No. 406 Niecka Lubelska (Lublin) Set forth by the Polish Geological Institute – National Research Institute in 2016.

According to the provisions of the Study, the following spatial policy principles are defined:

1. The principle of complementarity and zoning in space of different types of human activities.
2. The principle of integrity and continuity of ecological and spatial structures.
3. The principle of preservation and protection of cultural environment elements, including landscape and cultural scenery, constituting the historical past and contemporary identity of the city.

In relation to the above principles, the purpose of the protection of the environment and its resources (including nature protection) is not only to secure and preserve their current state, but first of all to reinforce the natural structure while providing the city with development opportunities. This development may not, however, be understood as uncontrolled expansion of buildings into open areas, but as raising the standards and quality of habitation of the residents and increasing the competitiveness of the city.

### Cultural heritage protection

With regard to protecting cultural heritage and historical monuments as well as contemporary culture assets this document establishes:

- protection, conservation, revaluation and restoration of historical substance and structure, including rehabilitation of old housing stock – especially the urban layout of the Old Town and the City Centre;

- revaluation of the most valuable plans for the city's landscape and composition;
- protection of historical buildings and areas, including sacred sites of national and European importance and providing proof of mingling cultures of the east and west, i.e.: Holy Trinity Chapel, the Cathedral, monastery complexes, religious cemeteries (Catholic, Orthodox, Protestant, Jewish).

For the purposes of protecting the panoramic view of the Old Town, a view protection zone (VPZ) is established and a possibility of establishing a Lublin Culture Park is indicated.

In accordance with the external provisions, the elements of the functional and spatial structure are designated along with adapted direction of land development and use, which are presented in the following tables.



### Terrain structure (settlement, communication)

Source: Based on *Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Lublin*

| Element of functional and spatial structure                                         | Direction of land development and use                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sanitary Protection Zones of the Cemetery                                           | Legal protection from the possibility of the cemetery's harmful influence on the surroundings – chapter 4.5. SUIKZP ( <i>Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Lublin</i> ) (henceforth: Directions). |
| Rail yards (railways)                                                               | Restrictions regarding placement of the buildings, trees and plants nearby railways – chapter 4.1.5. SUIKZP (Directions).                                                                                                              |
| Areas restricting the height of buildings and natural structures nearby the airport | Restrictions regarding the height of buildings and natural structures nearby the airport and due to the bird foraging site, resulting from legal provisions – chapter 4.1.4. SUIKZP (Directions).                                      |

### Technical infrastructure, defence and public safety

Source: Based on *Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Lublin*

| Element of functional and spatial structure                               | Direction of land development and use                                                                                                                                            |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Water intake                                                              | Restrictions resulting from protection of groundwater intakes, referred to in chapter 2.1.3. SUIKZP (Directions).                                                                |
| High voltage overhead power lines with nuisance zones                     | Restrictions resulting from operating conditions of high-voltage overhead power lines, referred to in chapter 4.2.5. SUIKZP (Directions).                                        |
| Sources of Renewable Energy (SRE)                                         | Restrictions regarding location of SRE structures in terms of preventing negative influence on the environment – chapter 4.6. SUIKZP (Directions).                               |
| High-pressure gas pipelines                                               | Restrictions resulting from the functioning conditions of the high-pressure gas pipelines along with the controlled zone, referred to in the chapter 4.2.3. SUIKZP (Directions). |
| Areas of particular flood risk                                            | Restrictions regarding flood prevention resulting from legal provisions – chapter 10. SUIKZP (Directions).                                                                       |
| Areas subject to flooding in the event of damage or destruction of a dike | Restrictions resulting from the need of flood prevention – areas excluded from development.                                                                                      |
| Emergency flood wave zone                                                 | Areas subject to flooding resulting from a dam failure on Zemborzycki Lake.                                                                                                      |
| Restricted areas and their protection zones                               | Restrictions resulting from defence's need and national security – chapter 14. SUIKZP (Directions).                                                                              |

### Cultural environment

Source: Based on *Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Lublin*

| Element of functional and spatial structure                                                                                                                     | Direction of land development and use                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Historical Monument “Lublin – historical, architectural and urban complex”                                                                                      | Preservation of the urban-architectural complex, inseparably linked with numerous events in Polish history, in compliance with legal provisions referred to in chapter 3.3.1. SUIKZP (Directions).                                               |
| Monument of Fight and Martyrdom in Majdanek with the protection zone                                                                                            | Protection of former Nazi death camp and its protection zones in terms of economic activity, location of buildings and expropriation, resulting from legal provisions – chapter 12. SUIKZP (Directions).                                         |
| Lublin Culture Park                                                                                                                                             | Protection of cultural landscape and preservation of distinctive in terms of landscape areas with landmarks characteristic for the local building and settlement traditions, resulting from legal provisions – chapter 3.4. SUIKZP (Directions). |
| Structures and areas included in the Register of Historical Monuments in the Lubelskie Voivodeship (included in the Municipal Register of Historical Monuments) | Protection of the buildings or historical areas derived from conservator's guidelines, resulting from legal provisions – chapter 3.3.3. SUIKZP (Directions).                                                                                     |

|                                                                                                                                      |                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Structures and areas included in the Municipal Register of Monuments (not in the Register of Monuments of the Lubelskie Voivodeship) | Protection of historical buildings or areas based on the provisions of municipal spatial development plans (plan protection) – Chapter 3.3.4. SUIKZP (Directions). |
| Archaeological sites                                                                                                                 | Legal protection of archaeological monuments based on conservation guidelines – chapter 3.3.4. SUIKZP (Directions).                                                |
| Objects inscribed on the European Heritage List                                                                                      | Preservation and exposition of objects of symbolic importance to the history and cultural heritage of Europe – chapter 3.3.2. SUIKZP (Directions).                 |
| Ethnographic park (open-air museum)                                                                                                  | Protection of the material heritage of the cultural environment, mapping the historical settlement forms of villages and towns.                                    |
| View Protection Zone                                                                                                                 | Protection of scenic exposition of the Old Town area – chapter 3.3.5. SUIKZP (Directions).                                                                         |
| Priority landscapes                                                                                                                  | Lawful protection and landscaping, including architectural forms of development.                                                                                   |

### Natural environment

Source: Based on *Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Lublin*

| Element of functional and spatial structure                       | Direction of land development and use                                                                                                                                                                                                 |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ecological System of Protected Areas (ESOCh)                      | Preservation of natural features and existing terrain formations, in compliance with regulations specified in chapter 2.1.1. SUIKZP (Directions).                                                                                     |
| Protection forests                                                | Preservation and usage of forest areas for forestry, defence, national security and restrictions resulting from serving defense functions, in compliance with legal provisions – chapter 9. SUIKZP (Directions).                      |
| Grounds with elevation of over 15%                                | Protection against the risk of water erosion – areas excluded from development.                                                                                                                                                       |
| River valleys, dry valleys                                        | Protection of the ecological processes by not allowing intense building development, in compliance with the provisions specified in chapter 2.6. SUIKZP (Directions).                                                                 |
| Forms of nature conservation – already existing or planned        | Preservation, sustainable usage and renewal of the sources, creations and elements based on the needs of their protection, in compliance with legal provisions – chapter 2.1.2-4. SUIKZP (Directions).                                |
| Botanical/zoological garden                                       | Assurance of correct activity and development, including the protection of endangered plants, animals and fungi, both ex situ and in situ, in compliance with legal provisions – chapter 2.1.4. SUIKZP (Directions).                  |
| Main Underground Water Reservoir (GZPW no. 406 – Niecka Lubelska) | Protection of groundwater resources of the GZPW 406 in the city area based on the restrictions specified in chapter 2.1.3. SUIKZP (Directions).                                                                                       |
| Groundwater level at the depth of 2 m b.g.l.                      | Restrictions in permanent setting of building structures due to adverse hydrogeological conditions – area at risk of flooding.                                                                                                        |
| Mining area or terrain (boreholes)                                | Preservation of zones free from building development, closely connected with the location and operation of boreholes in the area of documented mineral resources, resulting from legal provisions – chapter 4.4. SUIKZP (Directions). |
| Zone of 30 meters from the forest wall                            | Preservation of the possibility of the ecological function of the forest and fire safety – area excluded from new development                                                                                                         |



## Areas of strategic intervention

Effective communal development policy should be conducted with potentials and development barriers identified. The awareness of possibilities and problems is crucial in the process of creating key actions and development priorities territorially diversified in terms of needs and abilities. Strategic intervention areas are the ones possessing great development potential, due to their special social, economic and spatial conditions, which may also turn them into a cause of a critical situation. Identification of such areas is crucial for the decision process to be accurate in order to conduct territorially sustainable development policy. The Act 8 March 1990 on Municipal Self-Government (Ustawa o samorządzie gminnym) stipulates the need to include in the municipality development strategy strategic intervention areas specified in the Voivodeship Development Strategy, along with the scope of planned activities and, if identified, strategic intervention areas of key importance for the communal along with the scope of planned activities.

In the *Development Strategy for the Lubelskie Voivodeship until 2030*, Lublin was identified as the largest urban centre of Eastern Poland, concentrating economic, scientific, cultural and social functions significant for the whole region. Lublin was recognised as an area of a unique development potential due to its

strong influence on the Lublin Metropolitan Area, identified as a strategic intervention area, which is reflected in operational objective 2.2 *Development of the City's Functional Areas* (LOM, subregional and local centres).

Within this goal, the Strategy envisages:

- developing Lublin's metropolitan functions, including economic, educational, scientific, tourist, cultural, conference-exhibition of regional, national and international nature;
- development of supralocal functions (secondary services) and specialised ones in county towns;
- organisation of investment areas including the ones contributing to logistic development (among others, on the basis of Lublin Airport's potential);;
- stimulation of local entrepreneurship development;
- integration of an environmentally friendly transport system in city functional areas, including infrastructure supporting electromobility;
- supporting actions, including infrastructure, in terms of climate change adaptation and natural disaster resilience, as well as reduction of pollution emissions in urban areas through the use of green and blue infrastructure and nature-based solutions;
- implementation of solutions derived from the idea of smart city, particularly social participation;
- leading degraded areas out of state of crisis (including regeneration);



- integration of actions for the effective social services' provision.

These actions should contribute to increasing the position of the Voivodship on both national and international scene, as well as influence reinforcement and development of the Lublin's metropolitan functions, thus stimulating and influencing the growth of the whole Lublin Metropolitan Area.

The statutory definition of a strategic intervention area at communal level is met by the revitalisation area. The Act of 9 October 2015 on Revitalization (Ustawa of rewitalizacji) defines the area of redevelopment as a municipality's area of competence in the state of crisis due to concentration of negative social phenomena as well as at least one occurrence of following phenomena: economic, environmental, spatial and functional as well as technical. The area of regeneration has been defined in Resolution no. 248/VII/2019 by the Lublin City Council of 30 May 2019 on Designation of the Demoted Area and Revitalization Area of the City of Lublin and includes 15 sub-areas with a total area of 1,511.59 ha (10.25% of city area), i.e.: Czwartek, Hajdów-Zadębie, Kośminek, Tatarska Neighbourhood, Przyjaźni Neighbourhood, Podzamcze, the train station area, Kalinowszczyzna St., Krochmalna St., Kunickiego St., Łęczyński St., the Old Town, City Centre, Turystyczna, Żmigród/Rusałka. It has been designated on the basis of delimitation diagnosis, which used primarily quantitative data from the social sphere, constituting the basis for its designation. An in-depth diagnosis of the revitalisation area was performed as part of the draft *Municipal Revitalization Programme for the City of Lublin for the Years 2021-2030*, in which the strategic objective was defined as well as redevelopment

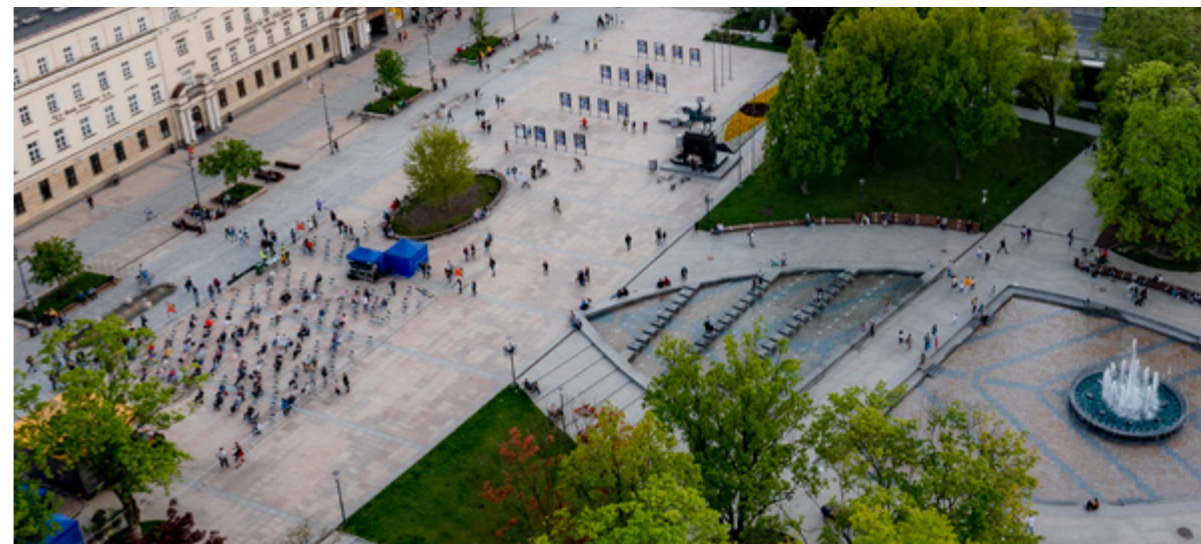
objectives, directions for action and key undertakings – 7 key undertakings and 30 basic undertakings,:

#### Key undertakings:

- *Programme to organise neighbourhood houses and places of local activity*
- *Programme to organise cultural institutions, as well as social and cultural centres and taking local cultural actions*
- *Pilot programme to modernise the communal housing stock*
- *Programme supporting local entrepreneurs*
- *Programme to give public spaces a local character*
- *Programme to form local green and recreational spaces*
- *Programme to improve accessibility to the revitalisation area by foot or bicycle.*

#### Basic undertakings:

- Green and blue infrastructure in the revitalisation area
- *Art Centre for Children and Youth in Lublin*
- Redevelopment/expansion of "Dom Słów"
- Redevelopment and expansion of facilities of the Prof. Zofia Sękowska Special School and Educational Centre for Disabled Children and Youth in Lublin in 31 Wyścigowa St. – creation of a centre of comprehensive educational, revalidation and integration support for children and youth with disabilities
- Comprehensive security system in the educational facilities
- *Urban Innovation Laboratory*
- Medialab Workshop



- Annual cycle of cultural events *Culture Workshop* in the revitalized area
- *Volunteer of Culture*
- *Strength in activity* – increasing socio-professional activity and improving access to the job market for people with disabilities
- Seniors' Club *JESTEM*
- Monastery in the Heart of the City – self-help club near the Dominican Monastery
- Seniors' Club - Integration through culture
- *LUBinclusion* – prevention and empowerment activities in the local environment and creation of new social service places
- Activation of young unemployed people in Lublin
- Professional activation of the unemployed
- 30 years old and older registered in the Lublin's Municipal Labour Office
- Annual cycle of cultural events in the revitalisation area organised by Centrum Kultury
- Comprehensive housing conservation
- Development of documentation for the preparation of investments in communal buildings
- Thermal modernisation of city's public buildings
- Social Rental Agency
- Debt restructuring plan supported by social policy tools
- Old Town's Culture Park
- Renovation of the Crown Tribunal
- Renovation, supervised by a conservator, with thermal modernisation of the building of Voivodship Headquarters of the State Fire Department in Lublin
- New space in the Tatarska district
- Cracow Gate – redevelopment and renovation, arrangement and exhibition works
- Conversion of the Lubomirski Palace into the Museum of the Eastern Territories of the Old Polish Republic
- Development of the former Podzamcze area
- *Przystanek Sempre* – a day support facility with a socio-therapeutic function.



# The Lublin 2030 Strategy implementation system







## Managing urban development

The *Lublin 2030 Strategy* is a document setting out the key development objectives for Lublin in the current decade. Achieving these objectives will contribute to social, economic and spatial change. The predominant part of tasks related to city development is within the competence of the local government. Tasks that do not fall within the statutory competencies and capacities of the local government provide a platform for action for a wide range of other actors, formal and informal organisations, socially engaged people and many other stakeholder groups. As a consequence, the process of implementation of the *Lublin 2030 Strategy* will involve not only the local government and organisational and auxiliary units of the city, but also, for example, non-governmental organisations, entrepreneurs, the academic community, business environment institutions, local social activists and all the

residents who express such a wish. For some tasks, it will be crucial to cooperate with the voivodeship authorities and neighbouring local governments, as well as with the government administration in the region. It is important that the implementation of the set goals should involve the largest possible number of residents and other persons who are not indifferent to the well-being of the local community and the quality of the surrounding space.

Lublin residents are an important development capital that cannot be overlooked. They are actively involved in city life and want to co-manage the city according to participatory principles. The catalogue of public participation tools offered to the residents of Lublin is already considerable. The city consistently implements measures to encourage residents to co-determine its future and its immediate neighbourhood. Residents can make use of such instruments as the *Participatory Budget*,<sup>27</sup> the *Green Budget*<sup>28</sup> and the Local Initiative.<sup>29</sup> The city's

<sup>27</sup> The *Participatory Budget* in Lublin is understood as a democratic process of social consultation and decision-making by all persons living in the city, regarding the annual spending of a separate part of the city budget for this purpose. In 2014, by the decision of Mayor Krzysztof Żuk, Lublin was one of the first cities in Poland to introduce the *Participatory Budget* – a participatory fund dedicated to its residents.

<sup>28</sup> In 2016, by the decision of Mayor Krzysztof Żuk, Lublin became the first city in Poland to introduce the *Green Budget* – a participatory fund dedicated to greenery. This came in response to suggestions made by residents during meetings and the growing number of applications related to greenery submitted to the *Participatory Budget*. Thanks to this idea, every resident of the city can have a say in the creation of new green spaces or the regeneration of existing ones.

<sup>29</sup> Local initiative is a tool enabling the implementation of activities proposed by residents in their immediate environment. It complements the existing instruments: the special-purpose reserve for tasks implemented by the District Councils, the *Participatory Budget* and the *Green Budget*. As part of the Local Initiative, residents submit their ideas and declare their participation in their implementation, which may take the form of contribution in kind, financial contribution or community work.

auxiliary units (districts) also have the opportunity to co-manage the city. They indicate the priorities to be implemented in their immediate environment through the possibility of allocating funds from the so-called target reserve. This is a way for the district councils to propose tasks for the city budget.

The implementation of the *Lublin 2030 Strategy* will also be performed by a number of executive documents (the so-called sectoral documents: strategies, programmes, policies, plans), which should be successfully correlated with the objectives of the *Lublin 2030 Strategy* within the framework of updating the already existing ones or by adopting new ones. With a large number of implementation documents, it is crucial to create the conditions for even better coordination of local government activities in strategic management. The efficiency of the delivery of public services and the pursuit of a specific development policy, will be enhanced by the development and implementation of strategic management rules based on implementation documents. The rules, defined in a separate document, will be adopted by an order of the Mayor of Lublin.

In order to effectively implement the *Lublin 2030 Strategy*, it is necessary to undertake extensive promotional and information activities to promote the ideas, values and objectives set out in this document. The basic task of the local government in this respect is to disseminate the document among the residents, employees of the local government (the Lublin City Office and its organisational and auxiliary units), entrepreneurs, academic community, social organisations and any other institutions and organisations. It is important that higher level authorities (at the district and voivodeship level), government administration in the voivodeship as well as local governments forming the Lublin Metropolitan Area also become acquainted with

the *Lublin 2030 Strategy*. A common understanding of the directions for Lublin's development set out in the perspective of the current decade will make it easier to achieve not only the objectives important for the local community but also those of key importance for the whole region. Moreover, the contents of the *Lublin 2030 Strategy* will be continuously discussed during all meetings and events concerning the local and regional development and the development of the smart cities.

## Monitoring of results and evaluation of the implementation of Lublin 2030 Strategy

Measuring results is a necessary part of any organisation's strategic management cycle allowing it to achieve or revise its objectives and tasks. The postulate of selecting and monitoring indicators for the implementation of strategic objectives is – just like the very idea of creating a development strategy – an element of the managerial approach used in private enterprises and introduced into local administration in accordance with the *New Public Governance* paradigm. Moreover, today, monitoring strategy results is no longer just a good practice for Polish local authorities, but a statutory obligation. As of 2018, the Act on Municipal Self-Government requires local authorities to prepare an annual report on the state of the commune, including, among other things, the implementation of policies, programmes and strategies, followed by a public debate at a session of the municipal council with the participation of councillors and residents. The amendment to the Act on the Rules of Conducting Development Policy (*Ustawa o zasadach prowadzenia polityki rozwoju*)

clearly stipulates that each development strategy should indicate the expected results of planned activities and the indicators for achieving them.

However, a city is a much more complex and multi-dimensional organism than any company, which makes it difficult to create and monitor the implementation of the objectives set out in a development strategy. Another problem arises from the fact that many development goals and processes are not subject to valuation or quantification of any kind. At the same time, the implementation of public policies and the use of public funds are prerequisites for much greater transparency than in the private sector. Business organisations find it relatively easy to collect information about their organisation, while local government institutions face much greater constraints in monitoring the processes taking place within their municipality – whether of a legal, financial or technological nature. Being aware of the difficulties in creating a comprehensive and reliable system for monitoring the implementation of the *Lublin 2030 Strategy* objectives does not mean, however, that the Lublin local government will give up all efforts in this respect. Only effective feedback in the form of monitoring and evaluation trigger the process of learning and improving the implementation of public policies.

Lublin has a lot of valuable experience both in monitoring the city's development strategy and in carrying out urban studies and analyses. Some solutions, such as ongoing cyclical social surveys, monitoring the development of the city's smart economic specialisations or annual surveys of migration of secondary school graduates, are rare or unique initiatives on a national or even international scale. These experiences were first used in the elaboration of the plan of surveys and analyses for the needs of the Lublin 2030 diagnosis, and then – after they had been enriched with the opinions of the

experts involved in the process of developing the *Lublin 2030 Strategy* – in the formulation of assumptions and guidelines both for the monitoring and evaluation of the implementation of the *Lublin 2030 Strategy* objectives and, more broadly, for the monitoring of the Lublin development. The monitoring and evaluation system consists of four main elements that complement each other and compensate for their weaknesses:

- monitoring quantitative indicators and measures;
- monitoring the accomplishment of key tasks and projects;
- social research;
- evaluation in the form of expert debates dedicated to the assessment of the implementation of the objectives in the five development areas.

### Guidelines for the analysis of quantitative indicators and measures

- The indicators specified in the *Lublin 2030 Strategy* should be presented and accompanied by an analytical commentary in the annual Report on the State of the City of Lublin.
- Indicators and measures should be shown in time series. The base value in the assessments of progress should be the data for the year preceding the adoption of the *Lublin 2030 Strategy*; however, for a more complete assessment of the dynamics in the first years of the monitoring of the *Lublin 2030 Strategy* it is recommended that the indicators are presented in time series covering a period of at least 5 years.
- Wherever possible, quantitative development indicators should be used and the results for Lublin should be referred to central measures (mean or median) for a group of voivodeship cities, indicating Lublin's position and its changes in the hierarchy of cities. The rationale



behind this approach can be explained as follows.

Firstly, an indicator – unlike measures which are often expressed in absolute numbers – should always allow for a comparison of phenomena over time or space.

- For example, a comparison of Lublin with other cities is possible by analysing indicators such as the unemployment rate or the number of enterprises per 1,000 residents, rather than the number of unemployed or the number of enterprises. Secondly, the reasons for fluctuations in the values of indicators for Lublin often have their source in national or even wider processes (e.g. economic prosperity, new social transfers or availability of EU funds). However, those conditions affect Polish cities with different intensity, and their use and changes in the hierarchy of cities may be to a much greater extent shaped by factors of local character, including the quality of the implemented development policy.
- Evaluating the implementation of the *Lublin 2030 Strategy* objectives on the basis of quantitative indicators poses various practical and interpretative problems. Firstly, it is important to be aware of the existence of different types of indicators used in monitoring public policies – some are defined as measures of resources involved (e.g. spending on culture per capita), while others refer to outputs produced (e.g. construction of a cycle path of a certain length). At the level of the city development strategy, the key result indicators are those that capture the essence of the strategic objective and that change their value as a result of public intervention. In practice, this intervention is not just one of the factors influencing the values of the indicators, and the effects of this intervention are revealed after a longer period of time. Secondly, it should also be borne in mind that many of the objectives of the *Lublin 2030 Strategy* involve a call for qualitative change, to

which a quantitative indicator cannot be attached.

These problems have been addressed in two ways. The first and most important action is to base the monitoring of the implementation of the *Lublin 2030 Strategy* not on one, but on four, complementary pillars. The second one is to specify in the objectives of *Lublin 2030 Strategy* not only key indicators presenting the situation of Lublin in comparison with voivodeship cities, but also additional indicators and monitored data, which are often contextual and can enable corrections of conclusions drawn from the analysis of key indicators.

- The list of indicators and measures specified in the *Lublin 2030 Strategy* may be subject to change in justified situations. Some indicators or measures may stop to be published, and in subsequent years new and more relevant (better expressing the essence of the objective) indicators may emerge. However, changes in indicators should always be based on rigorous factual grounds, with concern for a reliable evaluation of the implementation of the *Lublin 2030 Strategy*. It is recommended to be flexible especially with regard to additional measures and monitored data, changes and additions to which should be a natural result of increasing data resources at the disposal of the city or learning processes.
- The list of indicators and measures of *Lublin 2030 Strategy* is not and should not be too long or include very specialised indicators or input and output indicators referring to narrow fields of activity of the city. Instead, such indicators should be included in urban policies, programmes and sectoral strategies, according to the level of detail in the objectives and expected results indicated in these documents.
- In the *Lublin 2030 Strategy* the target values of the indicators were deliberately undetermined, as the implementation of the local government development

policy is only one of the factors influencing the variability of the indicators used in the *Lublin 2030 Strategy*. The pandemic period demonstrated well how a change in external conditions can lead to strong and partly permanent changes in the trajectories of development indicators. Abandoning the determination of target values is also accompanied by the assumption that the fourth pillar of the results monitoring system – independent and transparent expert assessment – will be a factor mobilising the local government to implement the development goals.

#### Guidelines for the analysis of the implementation of tasks and key projects

- The *Lublin 2030 Strategy* presents not only a list of general and detailed development objectives, but also the city's commitment to implement the specific tasks and key projects assigned to these objectives. Some of these tasks can be treated as tangible effects or products of the city's activities, possible to monitor and evaluate in unambiguous categories (task completed or not), in a manner similar to the practice of defining product indicators in EU projects. The monitoring of the *Lublin 2030 Strategy* implementation will present in a synthetic way the status of the implementation of these tasks and, if possible, point to sources allowing for more complete and up-to-date information on the task or project.
- When assessing the progress of the city in the the accomplishment of key tasks and projects, it should be borne in mind that their implementation will not focus on the first years of the current decade but will be spread over the entire time horizon of the *Lublin 2030 Strategy* – which is natural considering both the high time and resource consumption of some projects

and the limited financial resources as well as multi-annual programming of the cohesion policy.

- Rational multi-annual planning of territorial development must allow for the possibility of changing the list of key projects and tasks due to significant changes in the environment and, in particular, unpredictable changes in the sources of funding. New projects, not included in the *Lublin 2030 Strategy*, with a significant impact on the implementation of the Strategy 2030 objectives should also be subject to monitoring. On the other hand, resignation from or substantial modification of tasks and projects included in the *Lublin 2030 Strategy* should be communicated and reliably explained.
- A report on the implementation of tasks and key projects for the entire *Lublin 2030 Strategy*, or alternatively separate reports for individual development areas will be drawn up at least every 2 years and included in the Report on the State of the City of Lublin.

#### Guidelines for social surveys

- The implementation of the city development strategy should lead not only to the improvement of indicators or implementation of projects, but first of all, to the improvement of living conditions perceived by the residents of Lublin. Therefore, the implementation of social surveys is an integral part of the system of monitoring the results of the *Lublin 2030 Strategy*. These surveys are of particular cognitive value – while the opinions of the most active residents and NGOs, articulated through various participatory activities, are already easy to obtain, gaining knowledge about the opinions and needs of less engaged residents is more difficult to do, but it is a necessary element in assessment of the implementation of the *Lublin 2030 Strategy*.

- The main component of monitoring the implementation of the *Lublin 2030 Strategy* in this area will be the annual social survey, carried out on a representative sample<sup>30</sup> of not less than 500 residents, following the example of the surveys carried out so far in the Residents' Service Offices. A report on the survey should be publicly available and the most important conclusions of the survey should be included in the *Report on the State of the City of Lublin*.
- Previous experience has shown that one cognitively valuable and cost-effective research strategy is the online survey accompanying the *Participatory Budget* vote, which has allowed valuable opinions and assessments to be obtained from thousands of socially engaged residents on issues such as the different living conditions and investment priorities in the districts, the evaluation of the *Citizens' Budget* or climate change adaptation measures. In the coming years, the potential of online surveys, especially those connected with public participation tools, should be used to obtain the residents' assessments and recommendations regarding various strategic goals and tasks indicated both in the *Lublin 2030 Strategy* and in the city's sectoral strategies and urban programmes.

### Guidelines for evaluation of development goals implementation

- The use of on-going evaluation in the system of evaluation of the implementation of the *Lublin 2030 Strategy* results from several important premises.

Firstly, it addresses the imperfections of the monitoring of the implementation of the objectives and tasks of the *Lublin 2030 Strategy*, making possible especially the evaluation of the qualitative aspects of the implementation of the objectives and cross-cutting issues, including the horizontal objectives. Secondly, it constitutes a continuation of good practices from the development of the *Lublin 2030 Strategy*, in which a significant role was played by the 12 Thematic Working Groups. Since the *Lublin 2030 Strategy* has been developed in a participatory and expert way, the monitoring of its implementation should also involve a broader group of experts and thus provide an example of the implementation of the participation and co-management principles.

- The subject of each evaluation will be the assessment of the implementation of the objectives in each of the 5 development areas of the *Lublin 2030 Strategy*. However, this does not mean – when there are justified reasons – that it is impossible to evaluate individual objectives, the implementation of the horizontal objectives or the spatial policy recommendations.
- Each evaluation should take the form of a discussion involving representatives of local authorities, universities and non-governmental organisations. The proportions cannot be established in advance as they depend largely on the issues under evaluation, but the representation of local government should not be greater than half of the participants. The active role of universities is particularly important here. It is the practical expression of their mission to support the development of society and the economy, to use

<sup>30</sup> In social research practice, the assumption of representativeness is most often realised not by procedural representativeness (random sampling) but by subject representativeness (quota sample).

knowledge for the benefit of the local community of Lublin. Depending on the subject matter, this group should also include either openly recruited recruited residents with knowledge, competence and experience in the given topic, or business representatives. Optimally, the group should consist of 10–15 members. It is important that the size of the group ensures, on the one hand, a sufficient knowledge and competence to reliably assess progress in a given area, and on the other that each participant can speak freely and repeatedly and interact with one another.

- The evaluation should assess the progress in the implementation of each of the objectives of the *Lublin 2030 Strategy* with its component parts and tasks and, if necessary, identify the causes of delays and barriers in the implementation of the objective, and provide recommendations for improvement measures. Particular attention should be paid to the implementation of objectives that stimulate qualitative changes, which are difficult or impossible to monitor using quantitative indicators. However, the evaluation findings may include other aspects, e.g. verification of the list of indicators (especially in the first years of the implementation of the *Lublin 2030 Strategy*), indicating the significant changes in the external conditions or a proposal of modification or supplementation of the strategic priorities (especially in the final period of the implementation of the *Lublin 2030 Strategy*).
- Each evaluation must be based on information gathered within the remaining elements of the monitoring and evaluation system of *Lublin 2030 Strategy*,

i.e., monitoring indicators, additional measures and tasks implemented, and results of social surveys.

- The evaluation of the implementation of the objectives in each development area will be carried out at least every 2 years and will be submitted to the organisational units responsible for the implementation of the objectives of the *Lublin 2030 Strategy* and the conclusions of the evaluation will be included in the Report on the State of the City of Lublin.

## Financing

The implementation of the *Lublin 2030 Strategy* requires significant financial expenses on a number of investment and non-investment tasks in the following years. The costs of implementing the *Lublin 2030 Strategy* are within the reach of the city budget resulting from the accumulated own revenues, subsidies and purpose-specific subsidies from the state budget, with simultaneous effective use of financial support from repayable and non-repayable sources/mechanisms (e.g. credit facilities, loans, municipal bonds, revenue bonds, local government factoring and others).

Financing of the tasks resulting from the *Lublin 2030 Strategy* is possible thanks to national and international programmes connected with the European Union funds from the financial perspective for 2021–2027.<sup>31</sup> The European funds are distributed on the basis of assumptions resulting from the Partnership Agreement.<sup>32</sup> The Partnership Agreement is implemented through national and regional programmes. They define priority

<sup>31</sup> Detailed information on European funds under the EU financial perspective 2021–2027 is published on an ongoing basis on the European Funds Portal, [www.funduszeuropejskie.gov.pl/strony/o-funduszach](http://www.funduszeuropejskie.gov.pl/strony/o-funduszach).

<sup>32</sup> The Partnership Agreement sets out a strategy for the use of European funds under EU policies: cohesion policy and the Common Fisheries Policy in Poland in the period 2021–2027.





areas of support and set out specific measures. Another support instrument is the Recovery and Resilience Facility (RRF). It is the European Commission's response to the COVID-19 pandemic. The support under the RRF is additional to the support provided under other EU funds and programmes and needs to be coherent and coordinated with them. Financial resources from the above-mentioned instrument will be distributed on the basis of the *National Reconstruction Plan*. Additional funding opportunities are created by a number of programmes managed by the European Commission, providing support in various thematic areas.<sup>33</sup>

The Lublin authorities may also use non-refundable financial assistance from two instruments (the so-called Norway Grants): the EEA Financial Mechanism and the Norwegian Financial Mechanism. The funds come from three EFTA countries which are also members of the European Economic Area – Norway, Iceland and Liechtenstein. Both mechanisms are governed by uniform rules and procedures and are subject to a single management and implementation system in Poland.

Another source of funding the *Lublin 2030 Strategy* projects can be funds from the priority programmes implemented by the Provincial Fund for Environmental Protection and Water Management and the National Fund for Environmental Protection and Water Management. The programmes determine, among other things, the forms and conditions of co-financing and detailed project selection criteria.<sup>34</sup>

The City of Lublin may also take advantage of funding programmes for a variety of thematic projects, developed by individual national ministries. The funds

distributed under such programmes usually come from the state budget. The amended Act on the Rules of Conducting Development Policy has also introduced mechanisms for coordination of development activities between local governments: programme contract, sector contract and territorial agreement, which may be concluded between the government and local governments.

However, obtaining sources of funding for development investments cannot be limited to application for funds from EU and national programmes. The Lublin authorities must also consider the possibility of engaging private capital, incurring liabilities on the financial market and the current management of the commune's property. The City's investment capability can also be increased by incurring financial liabilities in the form of credit, loan or issue of municipal bonds, including revenue bonds. Instruments supporting local and regional development are offered by such financial institutions as the World Bank, the Council of Europe Development Bank, the European Bank for Reconstruction and Development, Bank Gospodarstwa Krajowego, and a number of commercial banks. In the case of using repayable sources of financing the basic criterion for choosing an offer should be the cost of acquiring funds, but also the conditions of cooperation with a given financial institution.

Public-private partnership is also an opportunity for local government to implement investment tasks. Appropriate allocation of risk and the method of recognising liabilities resulting from a contract creates the possibility of recognising financial expenses outside the deficit and public debt. Conducting the procedure of selecting a private partner and formalising

<sup>33</sup> Detailed information on EU programmes and funding from the EU budget and NextGenerationEU is published on the European Commission Portal, [www.ec.europa.eu/info/funding-tenders/find-funding/eu-funding-programmes\\_pl](http://www.ec.europa.eu/info/funding-tenders/find-funding/eu-funding-programmes_pl).

<sup>34</sup> Detailed information is published on the website of the National Fund for Environmental Protection and Water Management, [www.gov.pl/web/nfosigw](http://www.gov.pl/web/nfosigw).



the agreement is not an easy undertaking, but from the point of view of limitations related to the possibility of indebtedness of local government units, it may bring measurable benefits. A well thought-out and structured public-private partnership will make it possible to realise a given investment without overburdening the city budget.

The above-presented sources of money capital are but a few methods of obtaining funds for the implementation of the *Lublin 2030 Strategy*. It is necessary to constantly monitor the market as far as the opportunities of obtaining money capital are concerned. At times the city's ability to provide its own capital may be a limitation. However, various financial engineering options make it possible to deal effectively also with such limitations.





# Compliance of the Lublin 2030 Strategy with higher-order documents







## Compliance of the Lublin 2030 Strategy with strategic documents at the national and regional level

Strategic management from the self-government perspective should be compliant and coherent with higher-level strategic documents in order to ensure methodological correctness, role cohesion and complementarity of development directions. The *Lublin 2030 Strategy* is based on the directional arrangements resulting from the current regional and national policy, and at the same time it is in line with the development policy pursued by the European Union. The proposed development and horizontal objectives of the city of Lublin are consistent with the provisions contained in those documents. The *Lublin 2030 Strategy* is coherent with the *Strategy for Responsible Development until 2020 (with a perspective to 2030) (Strategia na rzecz odpowiedzialnego rozwoju do roku 2020 [z perspektywą do 2030 r.]*) (henceforth: *SOR*) and the *National Strategy for Regional Development 2030 (Krajowa Strategia Rozwoju Regionalnego 2030)* (henceforth: *NDSR 2030*) as strategic documents of the national level, as well as with the *Development Strategy of the Lubelskie Voivodeship until 2030 (Strategia Rozwoju Województwa*

*Lubelskiego do 2030 r.)* (henceforth: *SRWL 2030*) – as a strategic document of the regional level.

The analysis of the *Lublin 2030 Strategy* compliance with documents of a higher level was conducted based on an evaluation of the compliance of the objectives included in the compared documents and the determination of the degree of compliance: full compatibility, synergies, contradictions, and a lack of reference:

- Full compatibility: the maximum degree of compliance/integration of objectives in comparable documents. Objectives that achieve full congruence are identical in their content, implementing the same assumptions/directions.
- Synergy: a situation in which the comparable objectives/directions are not identical in terms of specific measures, but have a positive effect on each other, and the effect of interaction between them is much broader than the individual effects of each of the defined objectives.
- Contradiction: a situation where the comparable objectives/directions are mutually exclusive in their content.
- No reference: a situation where the comparable objective/direction is found only in one document and it is not possible to verify its compatibility.



The tables below provide a detailed analysis of the relationship and compliance of the Lublin 2030 Strategy objectives with higher-level strategic documents.

### Compliance of Lublin 2030 Strategy objectives with Strategy for Responsible Development until 2020 (Including the Perspective up to 2030)

Source: Own elaboration based on *Strategia na rzecz odpowiedzialnego rozwoju do roku 2020 (z perspektywą do 2030 r.)*.

| Lublin 2030 Strategy                                                  | Strategy for Responsible Development until 2020 (Including the Perspective up to 2030)                                                                                                                                                                                                      |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objectives                                                            | Objectives contained in the higher-level document                                                                                                                                                                                                                                           | Evaluation         | Justification                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>A. Lublin – creative, academic and entrepreneurial</b>             |                                                                                                                                                                                                                                                                                             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| A.1. High-quality of education at every stage of life                 | Specific objective I. Sustainable economic growth based increasingly on knowledge, data and organisational excellence<br>Strengthening human and social capital in the national innovation system<br>Area influencing the achievement of the Strategy's objectives – Education and learning | Full compatibility | Targeted measures focus on introducing changes in the education system aimed at shaping attitudes and features that favour innovativeness and adjusting education to the needs of a modern economy. Moreover, implementation of programmes promoting lifelong learning in its various forms.                                                                                                                                                               |
| A.2. Academic Lublin – international centre of education and research | Area influencing the achievement of the Strategy's objectives – Human and social capital                                                                                                                                                                                                    | Full compatibility | One of the measures proposed in the SOR is internationalisation and opening of Polish higher education institutions to innovations, e.g. through the National Agency for Academic Exchange, whose task will be to support international scientific and educational exchange and promotion of Polish higher education, creating a legal environment conducive to innovation and commercialisation of research results by universities and scientific units. |
| A.3. Synergy of the city and the university                           | Specific objective I. Sustainable economic growth based increasingly on knowledge, data and organisational excellence                                                                                                                                                                       | Synergy            | The objectives achieve synergy through activities aimed at implementing mechanisms of knowledge transfer from the education sector to the business sector and stimulating demand for innovation from the public sector.                                                                                                                                                                                                                                    |
| A.4. Innovative and sustainable economic ecosystems                   | Specific objective I. Sustainable economic growth based increasingly on knowledge, data and organisational excellence<br>Specific objective II. Socially sensitive and territorially balanced development                                                                                   | Full compatibility | The complementarity of these objectives occurs through actions aimed at strengthening regional competitive advantages based on economic specialisations and new market niches, matching the enterprise and education sector with the needs of a smart and sustainable economy and strengthening the legal and institutional environment for innovative enterprises.                                                                                        |
| A.5. Entrepreneurial culture and modern business infrastructure       | Specific objective I. Sustainable economic growth based increasingly on knowledge, data and organisational excellence                                                                                                                                                                       | Full compatibility | The full compatibility of the objectives is maintained thanks to the proposed activities focusing on the active promotion of entrepreneurial culture at universities and in the business and public administration sectors, at the same time strengthening competences and abilities to initiate innovative undertakings with participation of all the participants of the innovation process.                                                             |
| <b>B. The green and urbanistically sustainable Lublin</b>             |                                                                                                                                                                                                                                                                                             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| B.1. Coherent system of urban greenery                                | None                                                                                                                                                                                                                                                                                        | No references      | –                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| B.2. Sustainable transport network                                    | Area influencing the achievement of the Strategy's objectives – Transport<br>Objective: Increasing transport accessibility and improving conditions for provision of services related to transport of goods and passengers                                                                  | Full compatibility | The measures envisaged in the SOR focus on implementing a new system for planning the development of transport infrastructure in an integrated way, taking into account changing mobility patterns. Moreover, the measures focus on reducing the negative impact of transport on the environment through the implementation of zero-emission transport.                                                                                                    |

### Compliance of Lublin 2030 Strategy objectives with Strategy for Responsible Development until 2020 (Including the Perspective up to 2030)

Source: Own elaboration based on *Strategia na rzecz odpowiedzialnego rozwoju do roku 2020 (z perspektywą do 2030 r.)*.

| Lublin 2030 Strategy                                              | Strategy for Responsible Development until 2020 (Including the Perspective up to 2030)                                                                                |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objectives                                                        | Objectives contained in the higher-level document                                                                                                                     | Evaluation         | Justification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| B.3. Sustainable urban development                                | Objective I. Sustainable development of the country exploiting the individual potential of particular territories                                                     | Full compatibility | The objective in the SOR concerning the sustainable development of the country assumes as a direction of action the rational urbanisation in metropolitan areas with the use of legal tools and in-depth cooperation between self-governments within a functional area in the scope of joint planning of investments.                                                                                                                                                                                                     |
| B.4. Energy transformation of the city and clean air              | Area influencing the achievement of the Strategy's objectives – Energy                                                                                                | Full compatibility | The proposed directions of intervention in the SOR refer to the need to develop a long-term, predictable energy policy implemented on the basis of sectoral strategies and the system of legal and institutional regulations. In addition, the directional measures indicate the preservation of the priority role of improving the energy efficiency of the economy and ensuring energy security through diversification of sources, raw materials, distribution and generation methods.                                 |
| B.5. Closed-loop climate change mitigation                        | Area influencing the achievement of the Strategy's objectives – Environment<br>Waste management                                                                       | Full compatibility | The SOR indicates the need to develop modern waste management towards a closed-circuit economic model, through activities such as development of waste recycling, striving to maximise the use of waste as raw materials.                                                                                                                                                                                                                                                                                                 |
| <b>C. Lublin – open, multigenerational and socially involved</b>  |                                                                                                                                                                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| C.1. Open and inclusive city                                      | Specific objective II. Socially sensitive and territorially sustainable development                                                                                   | Full compatibility | The full compatibility of objectives is maintained through such actions as: making cohesive the system of programming and implementing social integration policy, creation and implementation of a network of activation, rehabilitation, re-socialisation services and programmes (in particular for persons with disabilities) – from social activation to social and professional inclusion and strengthening of intergenerational and neighbourly bonds in the environment of persons threatened by social exclusion. |
| C.2. Multigenerational city                                       | Specific objective II. Socially sensitive and territorially sustainable development                                                                                   | Full compatibility | The full compatibility of the objectives is maintained through actions aimed at strengthening intergenerational and neighbourly ties especially around people at risk of social exclusion, ensuring access to affordable housing and developing assisted and caring services.                                                                                                                                                                                                                                             |
| C.3. Active neighbourhood                                         | Specific objective II. Socially sensitive and territorially sustainable development<br>Area influencing the achievement of the Strategy's objectives – Social capital | Full compatibility | The objectives are fully compatible within the framework of the proposed actions aimed at improving demographic awareness of the society, promoting professional and social activity of the population (volunteering, neighborhood support) and increasing social participation and influence of citizens (and NGOs) on public life.                                                                                                                                                                                      |
| <b>D. Lublin – inventive, active and hospitable</b>               |                                                                                                                                                                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| D.1. City of cultural industries                                  | Specific objective I. Sustainable economic growth based increasingly on knowledge, data and organisational excellence                                                 | Full compatibility | The objective will be implemented through a package of projects targeted at creative industries, aimed at supporting innovation of cultural and creative products. The projects will enable building competitive advantage in the sector and counteract the outflow of creative capital.                                                                                                                                                                                                                                  |
| D.2. Attractive sports offer and wide range of leisure activities | Area influencing the achievement of the Strategy's objectives – Human and social capital<br>Development of social capital                                             | Full compatibility | The objective will be achieved through actions focusing on the use of sport and physical activity as a tool for building social capital (local sports initiatives, social inclusion through sport of disadvantaged groups – e.g. the disabled or poor people).                                                                                                                                                                                                                                                            |

### Compliance of Lublin 2030 Strategy objectives with Strategy for Responsible Development until 2020 (Including the Perspective up to 2030)

Source: Own elaboration based on *Strategia na rzecz odpowiedzialnego rozwoju do roku 2020 (z perspektywą do 2030 r.)*.

| Lublin 2030 Strategy                                      | Strategy for Responsible Development until 2020 (Including the Perspective up to 2030)                                |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objectives                                                | Objectives contained in the higher-level document                                                                     | Evaluation         | Justification                                                                                                                                                                                                                                                                                                                                                                                                                     |
| D.3. City recognised as a tourist destination             | Specific objective I. Sustainable economic growth based increasingly on knowledge, data and organisational excellence | Synergy            | Achieving the objective through systemic and comprehensive legal, organisational, financial and tool solutions in the area of integration, coordination, commercialisation and internationalisation of Polish brand tourist products based on the country's cultural and natural potential. In addition, the objective is achieved by building an integrated system for promoting Polish culture abroad under the "Poland" brand. |
| <b>E. Lublin – a metropolitan city</b>                    |                                                                                                                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| E.1. Lublin as the leader of the Lublin Metropolitan Area | Objective 1. Sustainable development of the country making use of individual potentials of particular territories     | Full compatibility | The directions of actions adopted in the SOR indicate the development and dissemination of flexible organisational and legal solutions facilitating the cooperation between cities and within the urban functional areas.                                                                                                                                                                                                         |
| E.2. Development of Lublin's metropolitan functions       | Objective 1. Sustainable development of the country making use of individual potentials of particular territories     | Full compatibility | The directions of actions adopted in the SOR indicate the development and dissemination of flexible organisational and legal solutions facilitating the cooperation between cities and within the urban functional areas.                                                                                                                                                                                                         |

### Compatibility of Lublin 2030 Strategy objectives with National Strategy for Regional Development 2030

Source: Own elaboration based on *Krajowa Strategia Rozwoju Regionalnego 2030*.

| Lublin 2030 Strategy                                                  | National Strategy for Regional Development 2030                                                                                                                                                                                                                                                                                                                                                                                      |                    |                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objectives                                                            | Objectives contained in the higher-level document                                                                                                                                                                                                                                                                                                                                                                                    | Objectives         | Objectives contained in the higher-level document                                                                                                                                                                                                                                                                                                                                       |
| <b>A. Lublin – creative, academic and entrepreneurial</b>             |                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |                                                                                                                                                                                                                                                                                                                                                                                         |
| A.1. High-quality of education at every stage of life                 | Objective 1. Increasing cohesion of the country's development in the social, economic, environmental and spatial dimensions<br>Direction of intervention 1.2. Increasing the exploitation of the development potential of medium-sized towns which are losing their socio-economic functions<br>Objective 2. Strengthening regional competitive advantages<br>Direction of intervention 2.1. Development of human and social capital | Full compatibility | The scope of intervention proposed by KSRR 2030 in the area of education quality refers to using the potential of local universities and supporting the development of education, in particular in sectors which are part of defined economic specialisations of a given functional area.                                                                                               |
| A.2. Academic Lublin – international centre of education and research | Objective 1. Improving the cohesion of the country's development in the social, economic, environmental and spatial dimensions<br>Direction of intervention 1.1. Strengthening the development opportunities of economically weaker areas                                                                                                                                                                                            | Full compatibility | The objectives of KSRR 2030 assume measures aimed at the development of suprarregional cooperation in the science and research sector and the creation of an educational offer for activities outside the region (domestic and foreign) in order to improve the quality of education and research conducted, and better adjustment of the education profile to the labour market needs. |

### Compatibility of Lublin 2030 Strategy objectives with National Strategy for Regional Development 2030

Source: Own elaboration based on *Krajowa Strategia Rozwoju Regionalnego 2030*.

| Lublin 2030 Strategy                                            | National Strategy for Regional Development 2030                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objectives                                                      | Objectives contained in the higher-level document                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Objectives         | Objectives contained in the higher-level document                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| A.3. Synergy of the city and the university                     | Objective 1. Improving the cohesion of the country's development in the social, economic, environmental and spatial dimensions<br>Direction of intervention 1.1. Strengthening the development opportunities of economically weaker areas<br>Objective 2. Strengthening regional competitive advantages<br>Direction of intervention 2.1. Development of human and social capital                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Full compatibility | The objectives of KSRR 2030 indicate the necessity of strengthening the social capital by strengthening the networking process and the creation of intersectoral partnerships as well as supporting the development of education, especially in sectors which are part of the defined economic specialisations of a given functional area.                                                                                                                                                                                                                                                       |
| A.4. Innovative and sustainable economic ecosystems             | Objective 1. Improving the cohesion of the country's development in the social, economic, environmental and spatial dimensions<br>Direction of intervention 1.1. Strengthening the development opportunities of economically weaker areas<br>Direction of intervention 1.2. Increasing the exploitation of the development potential of medium-sized towns which are losing their socio-economic functions<br>Objective 2. Strengthening regional competitive advantages<br>Direction of intervention 2.1. Development of human and social capital<br>Direction of intervention 2.3. Innovative development of the region and enhancing the approach based on Regional Intelligent Specialisation<br>Direction of intervention 2.3.1. Focusing on pro-innovative activities<br>Direction of intervention 2.3.2. Stimulating innovation growth in the regions | Full compatibility | KSRR 2030 indicates support for actions aimed at creation of a joint, complementary economic offer, based on endogenous potentials of the macroregion, including intelligent specialisations. Objective 2. focuses on stimulating innovation through scientific and research centres, especially through R&D development and cooperation of the business sector with universities. This objective also pays attention to promoting innovation in the field of smart city and smart villages, creating a culture of openness to experimentation and developing the networked and digital economy. |
| A.5. Entrepreneurial culture and modern business infrastructure | Objective 1. Improving the cohesion of the country's development in the social, economic, environmental and spatial dimensions<br>Direction of intervention 1.1. Strengthening the development opportunities of economically weaker areas<br>Objective 2. Strengthening regional competitive advantages<br>Direction of intervention 2.2.1. Services of business environment institutions for SMES<br>Direction of intervention 2.2.2. Business support                                                                                                                                                                                                                                                                                                                                                                                                      | Full compatibility | The KSRR 2030 assumes support for measures for the development of entrepreneurship, including start-ups, supplementing deficiencies in infrastructure, implementation of economic innovations and information and communication technologies. One of the directions of intervention are also measures aimed at developing support instruments for companies and separate instruments dedicated to SMES.                                                                                                                                                                                          |
| <b>B. The green and urbanistically sustainable Lublin</b>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| B.1. Coherent system of urban greenery                          | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No references      | –                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| B.2. Sustainable transport network                              | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No references      | –                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| B.3. Sustainable urban development                              | Objective 1. Sustainable development of the country exploiting the individual potential of particular territories<br>Direction of intervention 1.1.2. Strengthening the development opportunities of areas at risk of permanent marginalisation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Full compatibility | Objective 1. includes activities aimed at rational spatial management and conflict prevention in order to achieve spatial order and adaptation of local space to the needs of sustainable economic and social development.                                                                                                                                                                                                                                                                                                                                                                       |



**Compatibility of Lublin 2030 Strategy objectives with National Strategy for Regional Development 2030**

Source: Own elaboration based on *Krajowa Strategia Rozwoju Regionalnego 2030*.

| Lublin 2030 Strategy                                              | National Strategy for Regional Development 2030                                                                                                                                                                                                                                                                   |                    |                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objectives                                                        | Objectives contained in the higher-level document                                                                                                                                                                                                                                                                 | Objectives         | Objectives contained in the higher-level document                                                                                                                                                                                                                                                                                                                                    |
| B.4. Energy transformation of the city and clean air              | None                                                                                                                                                                                                                                                                                                              | No references      | –                                                                                                                                                                                                                                                                                                                                                                                    |
| B.5. Closed-loop climate change mitigation                        | None                                                                                                                                                                                                                                                                                                              | No references      | –                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>C. Lublin – open, multigenerational and socially engaged</b>   |                                                                                                                                                                                                                                                                                                                   |                    |                                                                                                                                                                                                                                                                                                                                                                                      |
| C.1. Open and inclusive city                                      | Objective 3. Improving the quality of governance and implementation of territorially-oriented policies<br>Direction of intervention 3.2. Strengthening cooperation and integrated approach to development at local, regional and supraregional levels                                                             | Full compatibility | The full compatibility of objectives is ensured by the proposed actions aimed at supporting the establishment and development of local social capital building organisations, their networking, supporting professionalisation of their activities, especially where the needs in this respect are the greatest.                                                                     |
| C.2. Multigenerational city                                       | Objective 1. Increasing cohesion of the country's development in the social, economic, environmental and spatial dimension<br>Direction of intervention 1.1.2. Strengthening of development opportunities of areas at risk of permanent marginalisation<br>Direction of intervention 1.5.3. Social infrastructure | Full compatibility | The objectives are fully consistent with each other due to the adopted complementary measures focusing on the activation of the local community to stimulate socio-economic development in terms of increasing the competences and skills of the inhabitants and strengthening the sense of identity and integration of the local community through the social infrastructure.       |
| C.3. Active neighbourhood                                         | Objective 2. Strengthening regional competitive advantages<br>Direction of intervention 2.1.3. Increasing labour market resources and development of social capital                                                                                                                                               | Full compatibility | The objectives are fully coherent due to the adopted complementary measures aimed at increasing social participation and influence of citizens (and non-governmental organisations) on life and public space, working out conditions for development of silver economy and social economy rooted locally and strengthening the sense of identity and integration of local community. |
| <b>D. Lublin – inventive, active and hospitable</b>               |                                                                                                                                                                                                                                                                                                                   |                    |                                                                                                                                                                                                                                                                                                                                                                                      |
| D.1. City of culture industries                                   | Objective 2. Strengthening regional competitive advantages<br>Direction of intervention 2.1.3. Increasing labour market resources and development of social capital                                                                                                                                               | Full compatibility | The compatibility of the strategic objectives is maintained by proposing measures aimed at increasing the access of citizens to cultural goods and services, developing creative industries and increasing the degree of use of information technology in accessing cultural goods.                                                                                                  |
| D.2. Attractive sports offer and wide range of leisure activities | None                                                                                                                                                                                                                                                                                                              | No compatibility   | –                                                                                                                                                                                                                                                                                                                                                                                    |

**Compatibility of Lublin 2030 Strategy objectives with National Strategy for Regional Development 2030**

Source: Own elaboration based on *Krajowa Strategia Rozwoju Regionalnego 2030*.

| Lublin 2030 Strategy                                      | National Strategy for Regional Development 2030                                                                                                                                                                                                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objectives                                                | Objectives contained in the higher-level document                                                                                                                                                                                                        | Objectives         | Objectives contained in the higher-level document                                                                                                                                                                                                                                                                                                                                                                     |
| D.3. City recognised as a tourist destination             | Objective 2. Strengthening regional competitive advantages<br>Direction of intervention 2.1.3. Increasing labour market resources and development of social capital<br>Direction of intervention 2.2.3. Support for the location of external investments | No compatibility   | Under Objective 3., the KSRR 2030 points to intervention measures consisting in the creation of a tourist and cultural offer based on the advantages of a given region, using territorial marketing tools.                                                                                                                                                                                                            |
| <b>E. Lublin – a metropolitan city</b>                    |                                                                                                                                                                                                                                                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                       |
| E.1. Lublin as the leader of the Lublin Metropolitan Area | Objective 3. Improving the quality of governance and implementation of territorially-oriented policies                                                                                                                                                   | Full compatibility | Under Objective 3., the KSRR 2030 indicates the necessity of assuming the role of a catalyst for growth by the largest agglomerations at the provincial level. Objective 3. also states that the policy should focus on the cooperation of voivodeship self-governments with self-governments of large cities with the use of cooperation platforms and newly established links between territorial self-governments. |
| E.2. Development of Lublin's metropolitan functions       | Objective 2. Strengthening regional competitive advantages                                                                                                                                                                                               | Full compatibility | Objective 2. adopts a course of action aimed at building up and developing metropolitan functions (in the economic, social, scientific and cultural spheres) as a condition for improving the capacity of urban centres to create development.                                                                                                                                                                        |

**Compatibility of the Lublin 2030 Strategy objectives with Development Strategy for Lublin Voivodeship until 2030 (*Strategia Rozwoju Województwa Lubelskiego do 2030 roku*)**

Source: Own compilation based on *Strategia Rozwoju Województwa Lubelskiego do 2030 roku*.

| Lublin 2030 Strategy                                                     | Development Strategy for Lublin Voivodeship until 2030                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objectives                                                               | Objectives contained in the higher-level document                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Objectives         | Objectives contained in the higher-level document                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>A. Lublin – creative, academic and entrepreneurial</b>                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| A.1. High-quality of education at every stage of life                    | Strategic objective 4. Strengthening the social capital<br>Operational objective 4.1. Developing human capital                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Full compatibility | The directions of SRWL 2030 assume support for lifelong learning activities aimed at improving knowledge, competencies, skills and qualifications, including those of people with special educational needs.                                                                                                                                                                                                                                                                                                                                                                                                                           |
| A.2. Academic Lublin – an international centre of education and research | Strategic objective 3. Innovative economic development based on the resources and potentials of the region<br>Operational objective 3.1. Use of the research and development potential of scientific entities and support for the transfer of knowledge and technology<br>Strategic objective 4. Strengthening the social capital<br>Operational objective 4.4. Strengthening cross-border and inter-regional cooperation                                                                                                                                                                                                             | Full compatibility | The directions of action set out in SRWL 2030 include support for the development of education, training and the use of specialist workforce in the context of international cooperation. In addition, an element of intervention proposed in the strategic document is to improve the quality of scientific research, e.g. through cooperation between research teams from scientific and research centres, strengthening of their connections in the national and international system and inclusion in international research and teaching cooperation networks.                                                                    |
| A.3. Synergy of the city and the university                              | Strategic objective 3. Innovative economic development based on the resources and potentials of the region<br>Operational objective 3.1. Use of the research and development potential of scientific entities and support for the transfer of knowledge and technology<br>Strategic objective 4. Strengthening social capital<br>Operational objective 4.1. Developing human capital                                                                                                                                                                                                                                                  | Full compatibility | The directions of intervention in the SRWL 2030 are directed at the development of education in terms of cooperation of universities, schools and educational institutions with their socio-economic environment.                                                                                                                                                                                                                                                                                                                                                                                                                      |
| A.4. Innovative and sustainable economic ecosystems                      | Strategic objective 3. Innovative economic development based on the resources and potentials of the region<br>Operational objective 3.2. Supporting competitiveness and innovation of enterprises<br>Strategic objective 4. Strengthening the social capital<br>Operational objective 4.6. Supporting grassroots initiatives and improving management efficiency                                                                                                                                                                                                                                                                      | Full compatibility | The directions of intervention of SRWL 2030 include support for supra-local network initiatives affecting the stimulation of economic development, but also building the capacity to implement innovation and to apply modern solutions increasing the competitiveness of enterprises (including automation, robotisation and digitalisation of production, service and organisational processes). Moreover, the document indicates measures aimed at facilitating entrepreneurs access to business consultancy (including pro-innovative one) and services aimed at developing competencies and skills necessary in a modern economy. |
| A.5. Entrepreneurial culture and modern business infrastructure          | Strategic goal 2. Strengthening functional connections and systems<br>Operational goal 2.1. Balanced development of technical infrastructure systems<br>Strategic goal 3. Innovative economic development based on the region's resources and potentials<br>Operational goal 3.1. Use of research and development potential of scientific entities and support for the transfer of knowledge and technology<br>Operational objective 3.2. Supporting competitiveness and innovativeness of enterprises<br>Supporting the transfer of knowledge<br>Operational objective 3.2. Supporting competitiveness and innovation of enterprises | Full compatibility | The directions of intervention of SRWL 2030 assume the creation of a friendly atmosphere and conditions for investment (including the organisation of investment areas) and support for startup companies.                                                                                                                                                                                                                                                                                                                                                                                                                             |

**Compatibility of the Lublin 2030 Strategy objectives with Development Strategy for Lublin Voivodeship until 2030 (*Strategia Rozwoju Województwa Lubelskiego do 2030 roku*)**

Source: Own compilation based on *Strategia Rozwoju Województwa Lubelskiego do 2030 roku*.

| Lublin 2030 Strategy                                             | Development Strategy for Lublin Voivodeship until 2030                                                                                                                                                                                                                      |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objectives                                                       | Objectives contained in the higher-level document                                                                                                                                                                                                                           | Objectives         | Objectives contained in the higher-level document                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>B. The green and urbanistically sustainable Lublin</b>        |                                                                                                                                                                                                                                                                             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| B.1. Coherent system of urban greenery                           | Strategic objective 2. Strengthening connections and functional systems<br>Operational objective 2.4. Protection of environmental values                                                                                                                                    | Synergy            | Objective B.1. is in synergy with the operational objective of SRWL 2030, under which measures in the form of protection of natural values, landscape, habitats and biodiversity were indicated.                                                                                                                                                                                                                                                          |
| B.2. Sustainable transport network                               | Strategic objective 2. Strengthening of connections and functional systems<br>Operational objective 2.1. Balanced development of technical infrastructure systems<br>Operational objective 2.2. Development of urban functional areas (LOM, sub-regional and local centres) | Full compatibility | Full compliance with SRWL 2030 is maintained due to the directions of actions adopted in the document in the form of integration of transport systems in urban functional areas, environmentally friendly, taking into account the infrastructure supporting electromobility.                                                                                                                                                                             |
| B.3. Sustainable urban development                               | Strategic objective 2. Strengthening connections and functional systems<br>Operational objective 2.2. Development of urban functional areas (LOM, sub-regional and local centres)                                                                                           | Synergy            | There are synergies between the adopted objectives due to the adopted direction in SRWL 2030, which includes integrated planning of suburban development in the supralocal dimension.                                                                                                                                                                                                                                                                     |
| B.4. Energy transformation of the city and clean air             | Strategic objective 2. Strengthening connections and functional systems<br>Operational objective 2.1. Sustainable development of technical infrastructure systems<br>Operational objective 2.4. Protection of environmental values                                          | Full compatibility | The directional measures adopted in the SRWL 2030 indicate the need to support solutions for increasing energy efficiency of buildings and public infrastructure while reducing emissions. Additionally, this objective assumes the development of a plan determining the directions of energy development in the Lubelskie Voivodeship including the aspects of energy security.                                                                         |
| B.5. Closed-loop climate change mitigation                       | Strategic objective 2. Strengthening connections and functional systems<br>Operational objective 2.4. Protection of environmental values                                                                                                                                    | Full compatibility | The directions of actions set out in the SRWL 2030 indicate the need for actions aimed at increasing the environmental awareness of the inhabitants, including those concerning saving resources and energy within the idea of a circular economy. In addition, one of the directions of intervention concerns measures to implement a system of rational waste management aimed at increasing reuse, recycling and recovery of raw materials and energy. |
| <b>C. Lublin – open, multigenerational and socially involved</b> |                                                                                                                                                                                                                                                                             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| C.1. Open and inclusive city                                     | Strategic objective 4. Strengthening the social capital<br>Operational objective 4.1. Developing human capital<br>Operational objective 4.3. Social inclusion and integration                                                                                               | Full compatibility | Full compliance with the SRWL 2030 objectives results from the complementarity of measures focusing on support for undertakings in favour of social integration and activation of marginalised communities, foreigners and re-emigrants, support for seniors, in favour of maintaining their independence and shaping and strengthening civic and socially friendly attitudes.                                                                            |
| C.2. Multigenerational city                                      | Strategic objective 4. Strengthening the social capital<br>Operational objective 4.1. Developing human capital<br>Operational objective 4.3. Social inclusion and integration                                                                                               | Full compatibility | Full compliance with the objectives of the SRWL 2030 results from the complementarity of measures aimed at supporting seniors, conducive to maintaining their activity and intellectual potential, activation of local communities as well as strengthening identity and integration, supporting families in fulfilling their caring and educational functions, also promoting activities aimed at the effective functioning of family foster care.       |



**Compatibility of the Lublin 2030 Strategy objectives with Development Strategy for Lublin Voivodeship until 2030 (Strategia Rozwoju Województwa Lubelskiego do 2030 roku)**

Source: Own compilation based on *Strategia Rozwoju Województwa Lubelskiego do 2030 roku*.

| Lublin 2030 Strategy                                              | Development Strategy for Lublin Voivodeship until 2030                                                                                                                                                                   |                    |                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objectives                                                        | Objectives contained in the higher-level document                                                                                                                                                                        | Objectives         | Objectives contained in the higher-level document                                                                                                                                                                                                                                                                      |
| C.3. Active neighbourhood                                         | Strategic objective 4. Strengthening the social capital<br>Operational objective 4.1. Developing human capital<br>Operational objective 4.3. Social inclusion and integration                                            | Full compatibility | Full compliance with SRWL 2030 objectives results from complementarity of measures aimed at supporting intergenerational integration, activation of local communities and strengthening the sense of identity and integration as well as shaping and strengthening civic and pro-social attitudes (e.g. volunteerism). |
| <b>D. Lublin – inventive, active and hospitable</b>               |                                                                                                                                                                                                                          |                    |                                                                                                                                                                                                                                                                                                                        |
| D.1. City of culture industries                                   | Strategic goal 3. Innovative economic development based on the resources and potentials of the region<br>Operational goal 3.4. Innovative use of natural and cultural assets, development of sports and leisure services | Full compatibility | Within the framework of operational objective 3.4., SRWL 2030 indicates the directions of intervention in the form of support for the development of creative industries and cultural industries, entrepreneurship based on local resources, cultural heritage and educational services.                               |
| D.2. Attractive sports offer and wide range of leisure activities | Strategic goal 3. Innovative economic development based on the resources and potentials of the region<br>Operational goal 3.4. Innovative use of natural and cultural assets, development of sports and leisure services | Full compatibility | Within the framework of operational objective 3.4., SRWL 2030 indicates the activities aimed at the development of sports and recreation services and infrastructure, popularisation of sports among various social groups and communities as well as supporting sport initiatives.                                    |
| D.3. City recognised as a tourist destination                     | Strategic goal 3. Innovative economic development based on the resources and potentials of the region<br>Operational goal 3.4. Innovative use of natural and cultural assets, development of sports and leisure services | Full compatibility | Within the framework of operational objective 3.4., SRWL 2030 indicates the activities focusing on support for creation of a comprehensive tourist offer based on regional and territorial brands, through development of products using unique local resources and cultural heritage.                                 |
| <b>E. Lublin – a metropolitan city</b>                            |                                                                                                                                                                                                                          |                    |                                                                                                                                                                                                                                                                                                                        |
| E.1. Lublin as the leader of the Lublin Metropolitan Area         | Strategic objective 2. Strengthening connections and functional systems<br>Operational objective 2.2. Development of urban functional areas (LOM, sub-regional and local centres)                                        | Full compatibility | SRWL 2030 assumes the implementation of measures aimed at improving the position of the voivodeship's capital on a national and international scale as a centre concentrating social and economic functions important for the entire region.                                                                           |
| E.2. Development of Lublin's metropolitan functions               | Strategic objective 2. Strengthening connections and functional systems<br>Operational objective 2.2. Development of urban functional areas (LOM, sub-regional and local centres)                                        | Full compatibility | SRWL 2030 in one of its directional activities directly defines the necessity of developing Lublin's metropolitan functions, especially economic, educational, scientific, tourist and cultural ones.                                                                                                                  |



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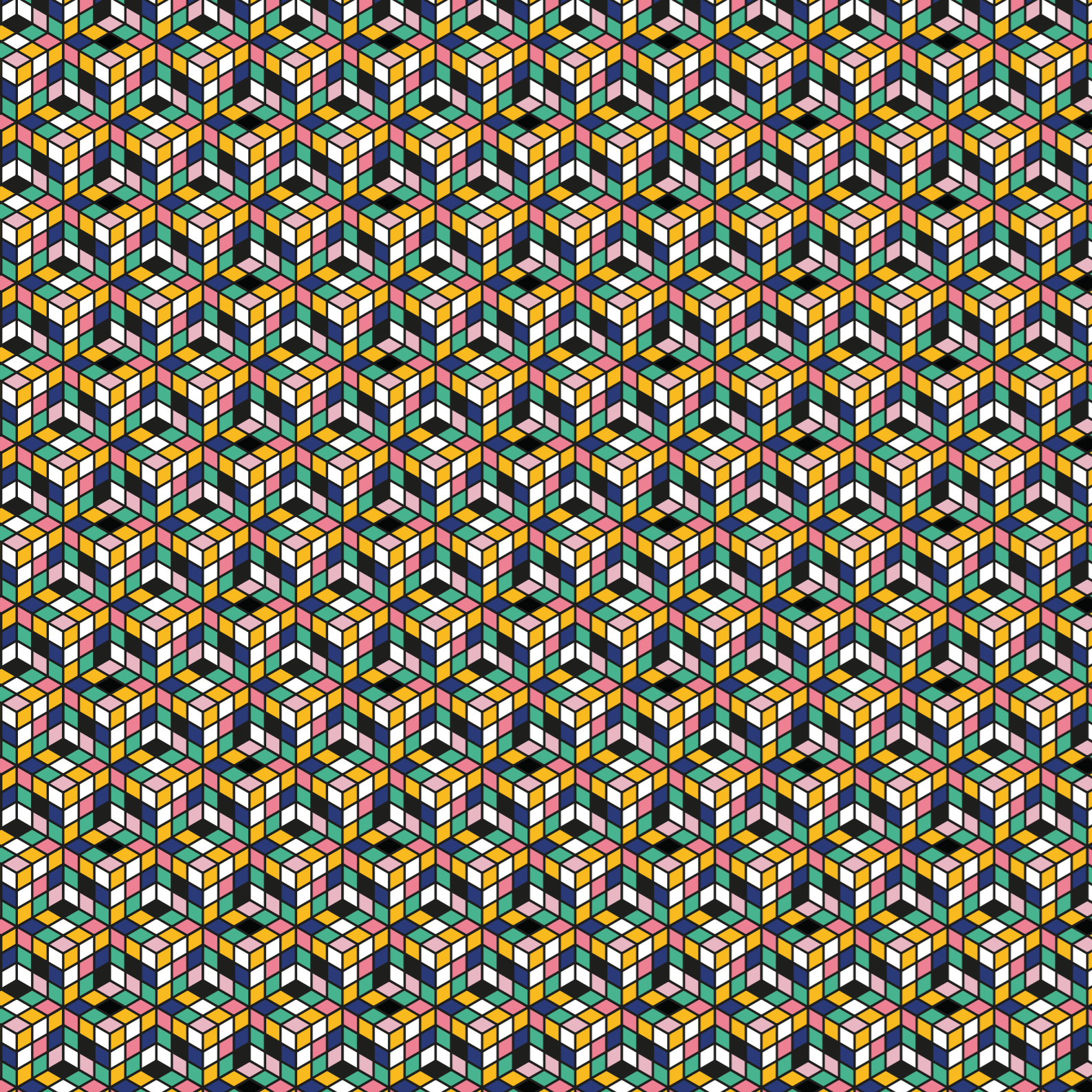
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## LUBLIN CITY OFFICE

Strategy and Entrepreneurship Department  
plac Litewski 1, 20-080 Lublin

phone: 81 466 25 00

e-mail: [biznes@lublin.eu](mailto:biznes@lublin.eu) | [2030@lublin.eu](mailto:2030@lublin.eu)

[www.2030.lublin.eu](http://www.2030.lublin.eu)

*The Lublin 2030 Strategy* is a vision of a modern European city for the 21st century, providing its residents with the best possible conditions for living, working and studying in a nearly 10-year perspective. It was developed using a participatory and expert method, and thus, what is worth emphasizing, is firmly based in the social, economic and spatial realities of Lublin and its close neighbourhood. The Lublin 2030 Strategy is an original idea of the people involved in the process of its preparation, inspired by the experience of other local governments and the output of scientific literature (...). The presented theoretical and practical concept of the Strategy can be inspiring for other local governments. The defined vision, mission and development areas linked to the model of the functional and spatial structure of Lublin are a holistic view of the city's development. The challenge facing the authors of the Strategy is the implementation, which in the current economic situation is fraught with high risk, but is not an impossible task.

*dr hab. M. Poniatowska-Jaksch, prof. SCH*

The Strategy recognizes the importance of key partnerships between academic, business, governmental, and social and cultural institutions while also, skillfully presenting an innovative attempt to deal with real-world uncertainties by developing an innovative and thriving ecosystem integrating the strategic sectors. The authors have delivered a precise map for those who want to engage with the city in the coming decade. The Strategy engages the reader in a deep understanding of the vision set for the city. While most strategic plans determine the direction and necessary resources and actions to achieve them, this plan clearly outlines the required steps and how the progress will be measured which gives it a high probability of success. (...) This detailed yet very accessible work is an excellent resource for a diverse audience who want to engage with Lublin, from investors, academics, students, professionals, non-governmental organizations, and its residents. It highlights fields in which Lublin already excels and identifies drivers of innovation, entrepreneurship, and making Lublin, the metropolis of the future.

*prof. A. Mironko, Indiana University East, USA*



#### LUBLIN CITY OFFICE

Strategy and Entrepreneurship Department

plac Litewski 1, 20-080 Lublin

phone: 81 466 25 00 | e-mail: [biznes@lublin.eu](mailto:biznes@lublin.eu) | [2030@lublin.eu](mailto:2030@lublin.eu) | [www.2030.lublin.eu](http://www.2030.lublin.eu)



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