

# Action Plan for Cities

## 11th World Urban Forum





Ministerstwo  
Funduszy  
i Polityki Regionalnej



# Action Plan for Cities. Model locality

Warsaw 2022

The document "Action Plan for Cities. Model Locality" was created as an initiative accompanying the 11th session of the World City Forum, financed from the state budget as part of the earmarked subsidy granted under the agreement No. 1 / WUF11 / DSR / 2021 of September 21, 2021 between the Minister of Funds and Regional Policy and the Institute of Urban and Regional Development.

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ISBN 978-83-67231-09-1



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## IDEA OF THE ACTION PLAN FOR CITIES

Accompanying the 11th session of the World City Forum, "Action Plan for Cities. Model Locality" is a unique program on a European scale, which was established on the initiative of the Ministry of Funds and Regional Policy. It gathers one hundred and four Polish cities that respond in various ways to local challenges in line with the sustainable development goals set out in the 2030 Agenda and the 2030 National Urban Policy. Its aim is to include Polish cities in the global discussion on sustainable urbanization trends and to popularize their implementation in as part of the cities' own tasks. The document "Action Plan for Cities. Model Locality" will be symbolically signed during the 11th session of the World City Forum, a prestigious international conference organized by UNHabitat on June 26-30, 2022 in Katowice. The conference is the most important global event on policy, transformation, development and the future of urban areas in Europe in 2022. The idea of the Program is to popularize contemporary urban thought from a local perspective. The "Action Plan for Cities" developed together with the cities is the Polish

response to the challenges related to the implementation of the sustainable development goals set by the 2030 Agenda. The program is an integral part of the World Urban Forum, during which it will be announced and signed. The mission of the "Action Plan for Cities" is to mobilize cities to undertake activities for sustainable transformation and implementation of the Sustainable Development Goals at the local level and to leave the legacy of WUF11 in the form of a catalogue of activities, a common vision of sustainable development developed through the exchange of experiences and transformations along to the long-term aspirations of cities. The program aims to include Polish cities in the global discussion on the development of urbanized areas and to create space for the systematic improvement and implementation of good practices in local urban policies. The objective of the Program was to involve at least 100 cities in the development and implementation of the document and to provide them with professional expert support at every stage of work. In the long term, the Program is to promote activities and initia-

tives undertaken in cities, that joined it, as well as provide inspiration and encouragement to contribute to a sustainable urban policy in all Polish municipalities. The participants of the Program are cities in Poland, regardless of their size (i.e. cities with poviatic rights, urban and rural-town communes). In the first stage of the Program, participating cities were selected based on the submitted applications. With advisory support, they prepared reports reflecting individual path to the "Model Locality" and presenting the project selected for implementation under the Program. The result of the participation of each city in the program will be the implementation of the selected project by the end of 2022, although a significant number of projects will also be continued in the following years. Each project complies with the declared Sustainable Development Goal in accordance with the city's needs. Most of the cities that applied to the program implement all the goals listed in the 2030 Agenda, therefore the selection of a maximum of three goals in the description of good practices and the declaration of only one goal as a big challenge.

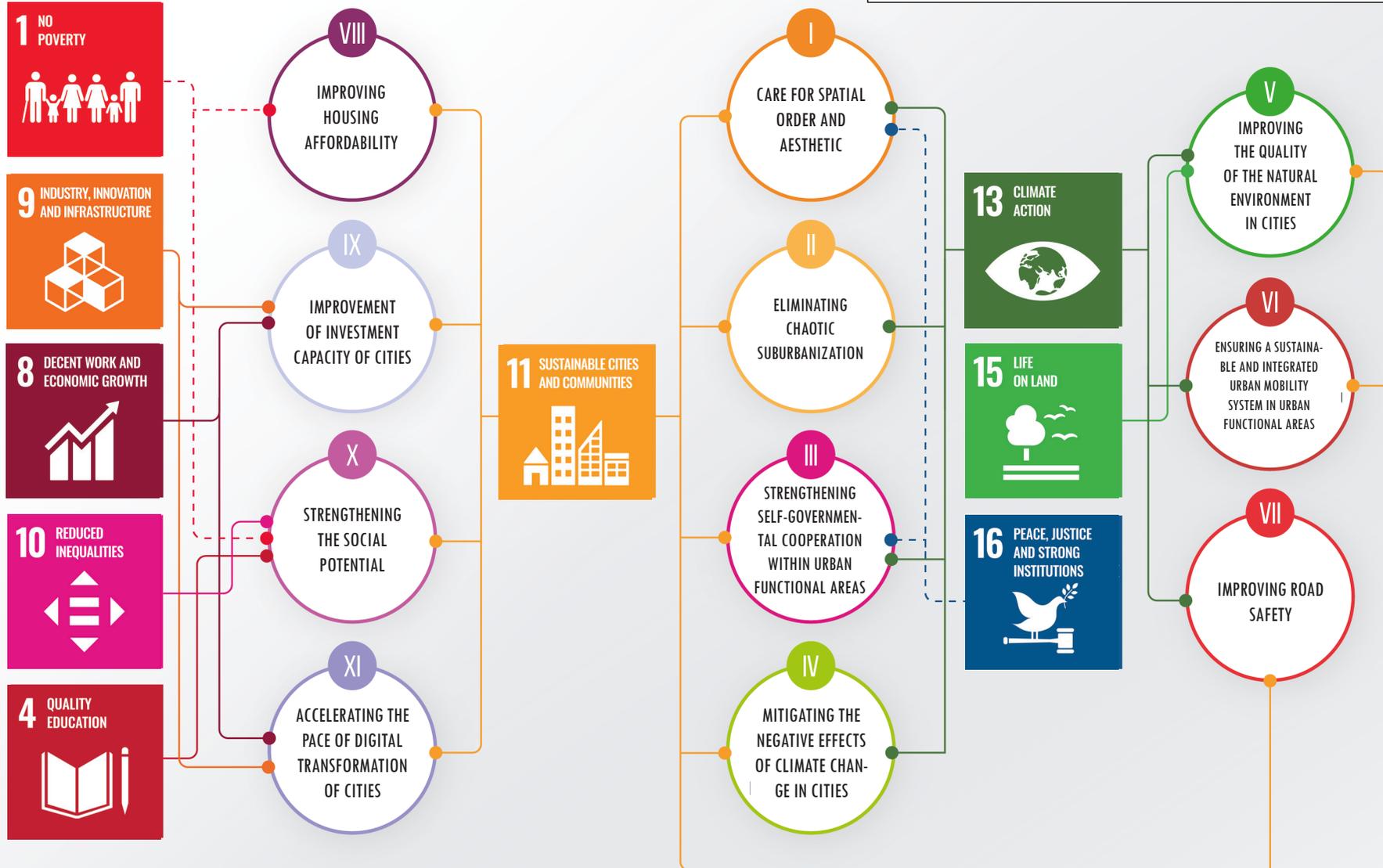
The criteria for qualifying for the program were the achievements of cities to date in the selected goal of su-

tainable development. The unique nature of the "Action Plan for Cities" is determined by the presentation in one document of the wealth of various experiences that Polish cities can share with other local governments in Poland, Europe and worldwide. The document, which is created on the basis of the submitted city projects, brings together the constellation of projects planned in cities for 2022. Although the World City Forum lasts several days, through these activities, the Forum will be present in over 100 Polish cities throughout the implementation of the Action Plan for Cities. It is complemented by a handbook showing good practices already developed by Polish cities in recent years to deal with challenges in 17 goals, including poverty of inhabitants, social inequalities, barriers to economic development and climate change. The PDM project was carried out in parallel to the work on the National Urban Policy 2030 (KPM 2030). The main goal of KPM 2030 is to carry out a sustainable transformation of Polish cities towards strong and resilient centres, ensuring a high quality of life for their inhabitants. The document identifies 11 challenges and proposes solutions that are part of the sustainable development of cities. The provisions

of the 2030 National Urban Policy often result directly from the Sustainable Development Goals as are the activities undertaken by cities of all sizes in this framework. As a result of the multitrack recruitment, 104 Polish cities joined the program. The participants of the "Action Plan for Cities" receive advisory support. Cities were included in the program on the basis of one of three qualification paths: open recruitment (36 cities), expert recruitment (36 cities) and through educational networks (32 cities). Among the winners of the competition procedure were the Capital City of Warsaw (project "EKOCapital - let's not waste food!"), Pleszew ("Model transformation of the city centre into compact Pleszew"), Rawicz ("The City of Rawicz a partner for sustainable development preventing the negative effects of climate change") and Katowice ("Time for Szopienice - We are changing our cities for a better future"). The recruitment for experts was joined by, inter alia, Rzeszów with an initiative related to the development of a pioneering Polish Centre for Urban Innovation - Urban Lab and the development of urban transport for the purpose of innovative industry and urban infrastructure, Gliwice with the project of participatory formulation

of the development strategy Gliwice 2040, Jarocin promoting the project "First apartment" or Tychy, where the master plan for the new city centre is being prepared. The mission of the document is to preserve the legacy of WUF11 in the form of a catalogue of good examples in local city policies. The "Action Plan for Cities" was created as the first joint document in Poland of so many Polish local governments. The role of the Institute of Urban and Regional Development was to gather the declared projects into a multithreaded common vision of sustainable development, which is to inspire cities also outside Poland. As part of the program, support for signatory cities, promotional and communication activities as well as educational activities dedicated to residents through generally available tools and the WUF certificates are planned. The following page reflects a framework list of the Sustainable Development Goals introduced by the 2030 Agenda, defining the thematic scope of projects eligible for the "Action Plan for Cities", together with references to the challenges of the 2030 National Urban Policy. The next page presents the detailed scope of NUP 2030 challenges.

CHALLENGES OF NATIONAL URBAN POLICY 2030  
IN THE PERSPECTIVE OF  
SUSTAINABLE DEVELOPMENT GOALS



**I CARE FOR SPATIAL AND AESTHETIC ORDER**

- Need for decisive changes in spatial planning
- Better integration of spatial planning and socio-economic activities
- Protection of landscape, cultural and aesthetic values
- Priority for high quality public spaces

**II ELIMINATING CHAOTIC SUBURBANIZATION PROCESSES**

- Central and local level solutions for sustainable territorial development
- Rational space management with the use of fiscal solutions
- Effective and functional incorporation of existing development areas into city structures

**III STRENGTHENING OF SELF-GOVERNMENTAL COOPERATION WITHIN THE URBAN FUNCTIONAL AREAS**

- Development and popularisation of instruments of trans-local cooperation
- Legal solutions for metropolitan and non-metropolitan areas

**IV MITIGATING THE NEGATIVE EFFECTS OF CLIMATE CHANGE IN CITIES**

- Introduction of standards of protection and shaping of greenery in investment processes
- Legal empowerment of "blue-green infrastructure"
- Mechanisms for increasing the natural retention of biologically active surface
- Legal instruments for preventing urban floods

**V IMPROVING THE QUALITY OF THE URBAN ENVIRONMENT**

- Intensification of activities in the field of inventory, monitoring and control of urban air quality
- Reducing energy intensity of residential buildings
- Eliminating the main sources of low emission in transport

**VI ENSURING A SUSTAINABLE AND INTEGRATED URBAN MOBILITY SYSTEM IN URBAN FUNCTIONAL AREAS**

- Eliminate legal barriers to integration of the public transport system
- Completing the legal framework for the technological and organizational development of public transport
- Actions to promote the growth of cycling and walking

**VII IMPROVING ROAD TRAFFIC SAFETY**

- Eliminating legal barriers to the integration of the public transport system
- Completion of the legal order for the technological and organizational development of public transport
- Measures to promote the growth of walking and cycling

**VIII IMPROVING HOUSING ACCESSIBILITY**

- Increase the pace of social housing development in cities
- Intensify processes of housing substance renewal
- Development of assisted housing

**IX IMPROVEMENT OF INVESTMENT CAPACITY OF CITIES**

- Promotion of PPP in the investment activities of cities
- Development of local labour markets and innovation ecosystems
- Increasing the income resilience of TSU

**X STRENGTHENING THE SOCIAL POTENTIAL**

- Measures in the field of urban migration policy
- Strengthening education and training systems in cities
- Development of social economy in cities

**XI ACCELERATING THE PACE OF DIGITAL TRANSFORMATION OF CITIES**

- Improving the level of digitization (systems) and competence
- Opening up public data
- Developing an ecosystem of digital public services

## All hands on deck - Co-authors of the Action Plan for Cities

"Action Plan for Cities. Model Locality" is a document that was prepared in a special way - on the basis of reports and cooperation with representatives of cities that joined the program. With each city an agreement was concluded, specifying the terms of cooperation and indicating the local coordinator. His/her role was to provide support to the team of the Institute of Urban and Regional Development in the preparation of the reports, which included following sections:

### I. Reasons for taking action in the selected sustainable development goal)

1.1. Brief characteristics of the city

1.2. The main challenges and their inclusion in the city's development strategy

### II. The selected goal of sustainable development - description of the goal from the perspective of the city

### III. The city's road to excellence in achieving the chosen goal of sustainable development

3.1. City activities on the way to implementation of the SDG

3.2. Model locality - good practice of the city

### 3.3. Description of the project selected for implementation under the Program

3.3.1. Brief characteristics of the project (activities, recipients, implementation time, potential impact)

3.3.2. Realization and implementation

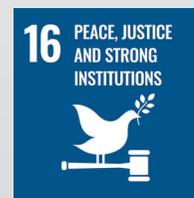
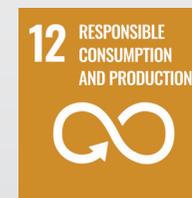
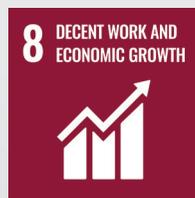
3.3.3. Products / results with reference to the indicators of sustainable development

### IV. Declaration of the direction for further activities under the WUF11 (WUF11 Legacy) in 2023-2024

V. Advisory-based recommendations (soft guidelines and tips that can be adapted to local conditions and which other cities with similar characteristics will be able to take advantage of)

These reports were then developed iteratively in a dialogue between the local coordinator and his/her colleagues in the city, the content supervisor of the selected sustainable development goal and the IRMiR team. As a result, more or less extensive materials were created that show the activities of each city to date, good practices (collected in the handbook which supplements this document) and detailed project descriptions. Subsequently, project descriptions were shortened in cooperation between local coordinators and the IRMiR team for the purpose of developing the "Action Plan for Cities" as a document. It also includes the aggregate effects of the program, as well as the WUF Legacy - recommendations and city plans for the near future.

## The sustainable development goals of Polish cities in best practices and ongoing projects



# 1 NO POVERTY



## 1. NO POVERTY

The tasks included in the 2030 Agenda for Sustainable Development for the SDG 1 assume counteracting extreme poverty. They refer to equal access to rights to economic and natural resources, basic services, ownership and control of land and other property, inheritance, appropriate new technologies and financial services. They assume strengthening the resilience of the poor and vulnerable to economic, social and environmental threats. The 2030 Agenda also indicates the role of national, regional and international policies that are based on development strategies, should invest in activities aimed at eradicating poverty. The model directions of development include: ending homelessness based on the "Housing First" model, streetworking, addiction treatment, de-institutionalization of services for people experiencing homelessness, providing support to people with difficulties in paying rent regularly, increasing the housing resources available to poor residents, social campaigns, building evidence-based policies, planning, implementing and evaluating a comprehensive approach to the phenomenon of homelessness and housing exclusion, or learning and adapting models from other local communities, including foreign ones.



## JAROCIN

The project entitled “First, the apartment. Housing economy as one of the main branches of the development of the Jarocin” comprises the construction by the Jarocin Society of Social Housing in the years 2021-2024 of additional rental apartments. The construction of two multi-family residential buildings in Potarzyca (a total of 78 apartments is to be built there) has already started and there are plans to build multifamily residential buildings in Witaszyce and Mieszków. The implementation of this project will contribute to improving the situation on the municipal real estate market by ensuring access to housing to a wider group of recipients - especially those who cannot afford to buy or rent a flat on the market, and in a broader context should affect the development of the commune and improve the quality of life of the commune's inhabitants. The commissioning of another 78 rental apartments in Potarzyca is one of the elements of the fight against poverty in the commune. The planned date for the implementation of this project is the third quarter of 2022.



Photo 1. Construction of Apartments Plus in Potarzyca. Source: Town Hall Jarocin







## 2. ZERO HUNGER

The SDG 2 aims to eliminate hunger and all forms of malnutrition and ensure that all people, especially the poor and vulnerable, are provided with safe and sufficiently nutritious food. The need to increase the efficiency of agriculture and the income of small food producers was emphasized. It is very important to create sustainable production systems and implement resilient farming practices. In addition, international cooperation should be strengthened and trade restrictions and irregularities in world agricultural markets reduced and prevented. The introduced mechanisms should ensure the proper functioning of the commodity markets. On a smaller scale, it is necessary to constantly improve the food safety of the inhabitants and fair access to food. Fighting hunger and malnutrition should focus on groups of risks and problems also by promoting healthy eating. It is also very important to prevent food waste, build a common model of healthy life based on good habits, integrate information campaigns on the basis of healthy eating and hygiene, and improve the supply of locally available and healthy food to the municipal food market.

## The second edition of the competition "Foodsharing in Wielkopolska"

For a year now, the Wielkopolska Region has been implementing the program "Program for reducing food waste and losses in Wielkopolska for the years 2021-2025". In February 2022,

Photo 2. Foodsharing in Szamotuły.  
Source: <https://konin.naszemiasto.pl/konindruga-edycja-konkursu-wielkopolskie-jadlodzielnie/iga/c1-8666019/zd/68767467>. Accessed: 12.03.2022



the Wielkopolska Regional Board announced the second edition of the competition "Foodsharing in Wielkopolska", which is one of the forms of implementing the programme's assumptions. The competition is addressed to local government units, non-governmental organizations and other entities conducting public benefit activities. The allocation of funds for local government units was 150 thousand PLN, and for NGOs - 75 thousand PLN. The maximum financing level in both competitions is up to 80% of the value of the entire task, but not more than PLN 25,000 for a single project. The aim of the competition is to support the initiatives of the inhabitants of the Wielkopolska Voivodeship to reduce food



# 3 GOOD HEALTH AND WELL-BEING



## 3. GOOD HEALTH AND WELL-BEING

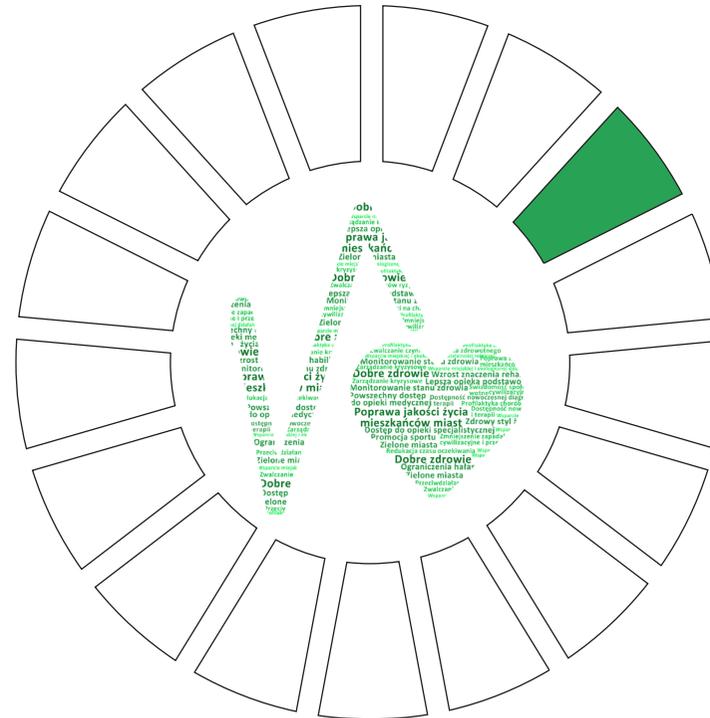
The SDG 3 aims primarily at increasing life expectancy and reducing the most common factors causing mortality. The most important tasks include reducing the global rate of perinatal mortality and eliminating deaths among newborns and children under five. Great emphasis is placed on fighting epidemics such as: AIDS, tuberculosis, malaria, tropical diseases and viral hepatitis. The need to reduce premature deaths from non-communicable diseases through prevention, treatment and promotion of mental health and well-being is also desirable. An important element are activities aimed at addiction to drugs, cigarettes and alcohol as well as reducing the number of injuries and deaths in road accidents. While implementing the above-mentioned assumptions, the most important are prospering, universal health care, significantly increased financing of health care, increasing the availability of people to modern diagnostics and therapy, and supporting hospitals and treatment centres in terms of infrastructure and equipment, supporting research and development of new vaccines and drugs against diseases communicable and non-communicable, and the ability of all countries, especially developing ones, to provide early warning and manage national and global health risks. Equally important aspect is to carry out preventive activities and raise public awareness about health.

## GLINOJECK

The project entitled "Practical aspects of the implementation of the circular economy in selected areas of urban policy - Clean air" is a continuation of measures taken to reduce gas emissions that cause air pollution. The concept of the development of Glińojek focuses on relationship between human beings and the environment. The key element is to raise the standard of living of the inhabitants while taking care of clean air. It is assumed that the high emission of gaseous and dust pollutants in the air will be reduced and the tasks resulting from the "Environmental Protection Program for the City and Commune of Glińojek for the years 2019-2022 with the perspective until 2026" will be implemented. So far, an inventory of individual heat sources has been carried out, thanks to which the number of inhabitants interested in heat exchange has been estimated and activities planned to replace existing heat sources with more ecological ones. For several years, solar collectors have been installed, mainly on residential buildings. As in previous years, the estimated number of collectors for 2022 is approximately seventy.

## KOŁOBRZEG

The project entitled "Rehabilitation for seniors of the City of Kołobrzeg for 2019-2023" is planned to be implemented as part of the City Action Plan by the end of the second quarter of 2022. Its addressees are seniors living in the city of Kołobrzeg. A well-functioning rehabilitation program offered to seniors by



the Kołobrzeg may not only improve their health, but also significantly increase the activity, involvement and satisfaction with life of the elderly inhabitants of the city. In 2022, as part of the program, the City of Kołobrzeg will finance rehabilitation therapies for 1,000 seniors from Kołobrzeg, including a 10-day therapy cycle, 3 one-day treatments and an initial and final medical visit, combined with education. The better access to comprehensive rehabilitation, the greater the chance of maintaining health and independence of older people. The residents of Kołobrzeg who

are 60 years of age and who have a referral from a family doctor and a Kołobrzeg Resident Card will be able to participate in the health policy program. Thanks to the proposed solutions, the mobility of older people will increase, and thus it will be possible to increase the activity of seniors in the local community. Physical condition is one of the most important elements of health, so seniors will be equipped with knowledge about an active lifestyle. Participation in the program will reduce the level of social alienation. The project will ensure wide cooperation with nongovernmental organizations, the Council of Seniors of the City of Kołobrzeg, the University of the Third Age and the Senior Club. Family doctors informing about the program and referring patients to rehabilitation will perform an important role. The treatments are activities of proven effectiveness and safety, and are consistent with current medical knowledge. Treatments will be tailored to the individual needs of patients, and their duration will be adapted to the rehabilitation possibilities. The decision on the duration of rehabilitation should rest with the doctor or physiotherapist after examining the patient. In order to ensure the continuity of the health effects achieved in the program, the participants will be educated in the field of individual physical activity. In 2022, an amount of PLN 320,000.00 has been planned to provide rehabilitation for 1,000 seniors from Kołobrzeg. The decision on the duration of rehabilitation should will be set with the doctor or physiotherapist after examining the

patient. In order to ensure the continuity of the health effects achieved in the program, the participants will be educated in the field of individual physical activity. In 2022, an amount of PLN 320,000.00 has been planned to provide rehabilitation for 1,000 seniors from Kołobrzeg.



Photo 3. Medical treatments – spinal massage. Source: City Hall in Kołobrzeg



## KRAPKOWICE

The project entitled "Sady Miejskie" aims to enlarge green urban spaces in Krapkowice, which perform a very important role in the urban space of the city. They are "green lungs" of the city, provide the opportunity to rest and rest in the open air, in summer green squares and shaded pavements give rest to passers-by and strollers. The aesthetic values of well-planned and well-kept plantings are also invaluable. They are mostly ornamental plants, both ornamental trees and shrubs as well as perennials and annual plants. The idea of the local authorities is to use fruit species, trees and shrubs, which, apart from their decorative value, will have a functional and educational function. They will introduce biodiversity in the urban space. Both residents and visitors will be able to use urban orchards established in the housing estate, urban space around public buildings. Planting cherries, apple trees, pears, currants in all their varieties, and blueberries will be an element of the richness of nature in the heart of a block of flats, a park and a school garden. With enormous benefit for various ecosystems, and above all for the benefit of residents. Orchard planting in schools and kindergartens may bring an educational element to school activities: "green lessons" throughout the growing year, harvesting and processing fruit, lessons with fruit growers, gardeners, beekeepers. The opportunity to eat a fruit that has ripened in front

of "our eyes" is undoubtedly an attractive experience, especially for children. On the other hand, it is learning to commune with nature, its changeability, it is learning to care for the environment and to take joint responsibility for what surrounds us.

## ŁASK

The project entitled "By bicycle through the green and blue Łask Commune" assumes the development of a program and spatial concept consisting in:

- construction of pedestrian and bicycle routes, paths, off-road routes;
- marking tourist routes;
- arrangement of urban space along the routes (including the design of pocket gardens, mini parks, flower meadows, landscape architecture, etc.);
- arranging places in natural areas, on the river for observation points, beaches, educational paths, etc.;
- creating consistent information promoting the routes.

Individual mobility and an active lifestyle will be promoted, as well as changes in transport habits and the use of complementary forms of transport, such as bike sharing. In creating this project, a special role will be played by residents and non-governmental organizations. It is planned that the project will provide an impulse for the development of entrepreneurship in the tourist and recreational sphere by shaping and making public spaces and facilities available in an attractive way, giving a development impulse.



Photo 4. The Grabia River Valley. Source: Town Hall in Łask

Currently, the areas of natural value that can be made available for tourism and recreational purposes lack adequate infrastructure. It is essential to unlock the potential of numerous charming parts of the commune by providing access to them while ensuring the protection of naturally valuable and protected species and habitats, hence the idea of designating, marking and building bicycle paths, pedestrian and bicycle routes, off-road bicycle routes connecting these places and creating a network. The basic assumption of the

project consisting in the creation of a system of routes, including pedestrian and bicycle routes and the accompanying educational and recreational infrastructure, is the activation of local resources and initiatives, the elimination of development barriers, the intensification of socio-economic activity and the development of entrepreneurship leading to stopping the loss of socio-economic functions by the City of Łask, and at a later stage to strengthen the role of the city as a centre and suburban areas, while caring for the environment and limiting the negative impact on climate change. At the same time, another assumption of the project is to ensure the safety of users of the planned bicycle paths and pedestrian and bicycle routes. Routes in urban space and

along paved roads will guarantee the safety of users by separating pedestrian and bicycle traffic from vehicle traffic. The routes led through sections of unpaved roads will be made of a surface that is safe for cyclists, but minimizes interference with nature (e.g. without the introduction of pavement or bituminous hardening, where it will be possible to preserve the natural character of the site). An important aspect is also the aesthetics and functionality of the designed public spaces, in particular the network of green nooks in the urban space along the routes (places for cyclists to

rest). Thanks to the planned changes around the paths, the attractiveness of the city space will increase, and green enclaves will be created in the city. At the same time, access to naturally valuable areas will be designed in a rational manner. One of the most important assumptions is the participation of the local community and non-governmental organizations in defining the concept of the routes, the location of the resting places for cyclists, and the deployment of accompanying infrastructure. Consultations are assumed at several stages of shaping the final concept, including the stage of crystallization of the design scope proposal, and then after analyzing the feasibility of individual runs and confirming their positive impact on the adopted sustainable development goals and consultation of the design concept.

## MIŃSK MAZOWIECKI

Actions taken in the project entitled "Adoption of a local spatial development plan to implement SIM-Mińsk Mazowiecki" will facilitate the construction of a modern housing estate with approx. 1,500 apartments in cooperation with the National Property Resource. The current plan, adopted in 2004, is no longer valid. The change of the local development plan for this area is necessary for the efficient implementation of the concept of a model housing estate and for ensuring the implementation of the investment in a thoughtful manner and in accordance with the current urban standards. The implementation of this action

is intended to contribute to the creation of high-quality public space on 18 hectares of land through a comprehensive revival of this part of the city in terms of not only social, but also economic impact on the local labor market by placing in the local plan provisions regarding the obligation to locate services on the ground floors of buildings multi-family houses or reserving the area for kindergarten and commercial facilities. The preparation of a new plan is to enable the implementation of multi-family and service buildings. The city has started cooperation with the National Property Resource and is planning to implement the first stage of the investment 32 Fig. 1. Draft of the local spatial development plan. Source: Town Hall in Mińsk Mazowiecki in the area under the Social Housing Initiative. It is planned to build a friendly, safe and ecological estate, equipped with renewable energy sources. In the first stage, 544 apartments are foreseen. The first necessary step to achieve this goal is to change the local spatial development plan in force since 2004, including designing the optimal communication system taking into account the needs of all road users, land development, designation of recreational areas, educational services, as well as the determination of other indicators enabling rational use of the area. Valuable trees and insulating greenery have been marked, which will remain intact during the construction of the estate, only the specimens that collide with the investment, including public roads, will be removed, the idea behind the whole idea is to leave as many trees

and shrubs as possible. In the course of work on the concept, after consulting the Thermal Energy Company in Mińsk Mazowiecki, the construction of a heating plant and a solar tower to support the planned housing estate are planned in the area. Currently, the draft of the local plan is being prepared to apply for an opinion and agreement in accordance with the planning procedure under the Act on spatial planning and development.

## SANNIKI

The project submitted by Sanniki is "Sustainable development of the city of Sanniki through infrastructure investments - Construction of a bicycle path along DW 577 in the town and commune of Sanniki in the villages of Czyżew, Brzezia and Szkarada". The aim of the activities undertaken under the project will be the construction of a bicycle path along the road in Czyżew, Brzezia and Szkarada.

The project will improve the quality and safety of communication for pedestrians, cyclists and motorists. Building bicycle paths is one of the most important priorities in terms of improving road safety in the town and commune of Sanniki, and also in the poviát and voivodship.

The area of the planned construction of the path is a special place in terms of road traffic hazards. The overriding goal of the investment is to take advantage of the opportunities offered by cycling both as an element of active tourism and as a traditional, safe and cheap way of travelling for the local community. The project is aimed at adjusting the layout of bicycle paths and accompanying infrastructure to the communication, tourist and recreational needs of Sanniki. Thus, the project will directly contribute to increasing the tourist attractiveness of the region, and will

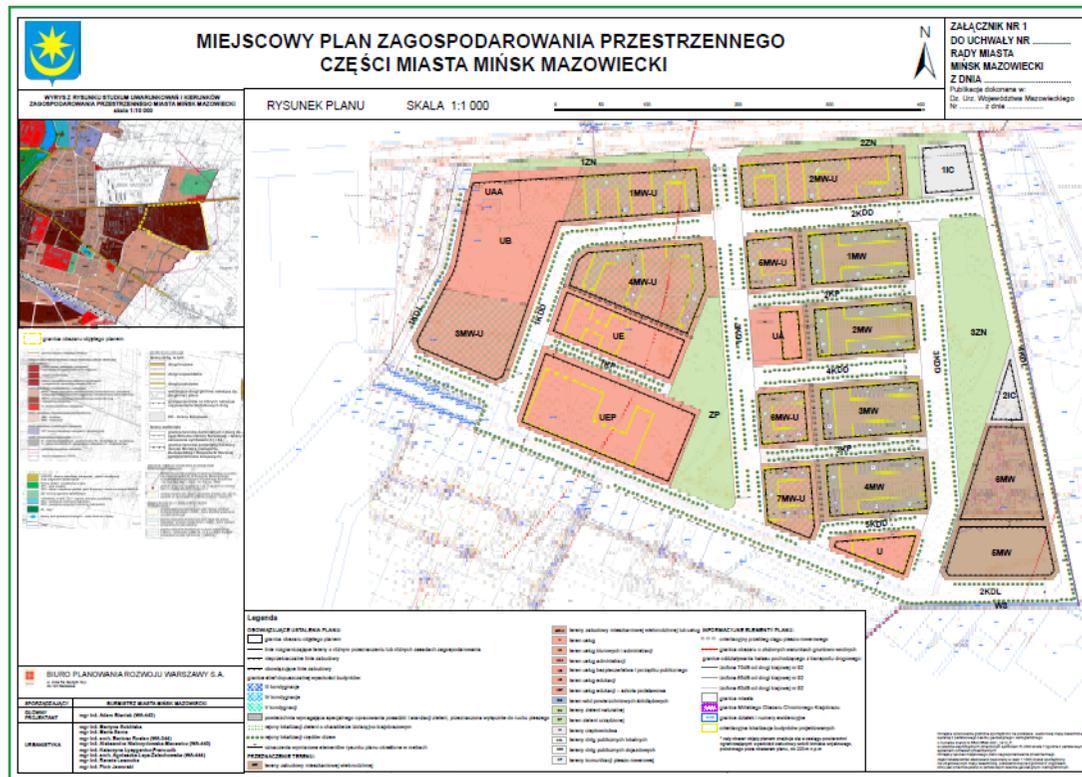


Fig. 1. Draft of the local spatial development plan. Source: Town Hall in Mińsk Mazowiecki. Source: Town Hall in Mińsk Mazowiecki

also increase its transport accessibility and stimulate residents to spend time actively and together. In Sanniki the European Art Centre is located, because in local palace Fryderyk Chopin seated for some time. This place is frequently visited by tourists and it is a very important point on the map of the Chopin trail. The constructed bicycle path will enable tourists to actively rest and visit this extremely important place in an ecological way, using the bicycle path. This is a very important investment. Above all, this means greater safety for cyclists and a change in transport habits. The design works will last until June 2024, and the documentation will be carried out as part of the project submitted to the "Action Plan for Cities".

## ŻYRARDÓW

The project entitled "Żyrardów in a closed circuit - practical aspects of implementing circular economy in selected areas of urban policy" co-financed by OP I&E 2014-2020 is a response to problems identified in previous years during the implementation of other projects co-financed by the EU, in particular in the project entitled "Revitalization of the City of Żyrardów as a driving force of socio-economic changes" implemented as part of the Model City Revitalization. The in-depth diagnosis of the revitalization area (qualitative and quantitative research) shows that there is a depopulation phenomenon in Żyrardów and an increase in the percentage of elderly people, which has a direct impact on the aging of the society. Moreover, despite the fact that the factory settlement was

recognized as a historical monument and the number of tourists increased, there is a lack of tourist products, and insufficiently developed tourist and tourism-related services. Traditional and craft industries are also disappearing. Entrepreneurs rarely introduce innovative elements, moreover, there is no consistent promotion of local entrepreneurs and their products. There is also a lack of active NGOs involved in the city's development. Technical problems overlap with the above-mentioned issues and environmental. There is a noticeable reduction in air quality (e.g. by low emissions); degraded greenery by the river and polluted waters. A significant part of the historic buildings is in poor technical condition, and thus there is a lack or a low level of accessibility standards. Moreover, the City also has to face endogenous and exogenous challenges. Lack of reaction to supra-local activities, i.e. Central Communication Port, water park, location between the duopolies Łódź-Warsaw - may result in its further regression. Internal potentials, i.e. making Żyrardów the capital of the subregion, its post-industrial material and intangible heritage and social capital, may contribute to raising the rank of the city and extracting benefits from supra-local projects. The main objective of the project will be to analyse the available solutions in the field of sustainable development of a medium-sized city and to develop the assumptions of the system based on the use of activities in its 5 pillars (i.e. the social and demographic, economic, environmental and spatial, cultural pillar and the pillar of intelligent city management). Each of them will propose solutions





Photo 5. Visualizations from the construction project entitled "Construction of pedestrian footbridges, small architecture, bird islands together with the terrain and land development and accompanying infrastructure, demolition of fences, hardening, walls as part of the task: Development of the area around the Upper Pond in Żyrardów as part of the project" Improving the quality of life of residents by developing green areas in the city of Żyrardów - stage II". Source: Żyrardów City Hall

Photo 6. Visualizations from the construction project entitled "Construction of pedestrian footbridges, small architecture, bird islands together with the terrain and land development and accompanying infrastructure, demolition of fences, hardening, walls as part of the task: Development of the area around the Upper Pond in Żyrardów as part of the project" Improving the quality of life of residents by developing green areas in the city of Żyrardów - stage II". Source: Żyrardów City Hall



# 4 QUALITY EDUCATION

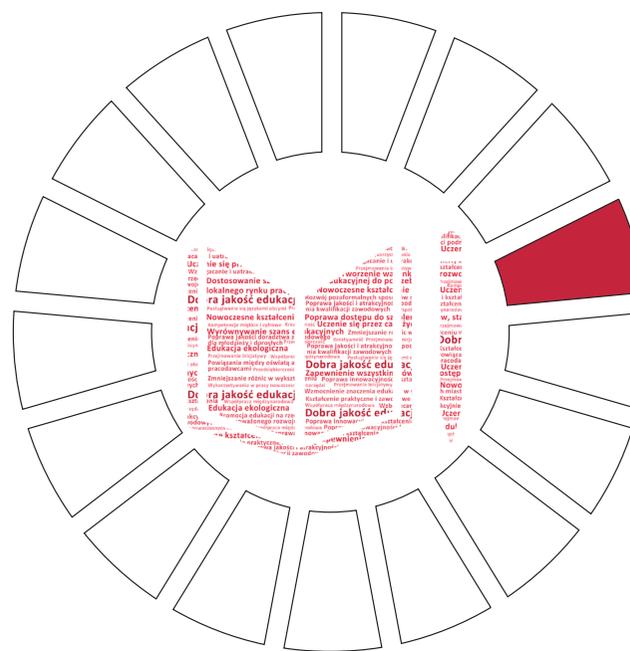


## 4. QUALITY EDUCATION

Providing all girls and boys with free, equitable, good-quality primary and secondary education leading to effective learning outcomes is a major goal defined by the SDG 4. Particular attention is paid not only to access to early childhood development and pre-school care, but also ensuring young people and adults equal, affordable right to high-quality technical, vocational and higher education, which is to guarantee employment in decent work and development of entrepreneurship. To achieve these goals, it is essential to eliminate gender inequalities in education, to create new and improve existing educational institutions, and to increase the number of scholarships for developing countries, in particular for people from least developed countries. It is very important to increase the number of qualified, well-paid teachers who would successively transfer knowledge, with particular emphasis on the principles of sustainable development. Additionally, it is necessary to constantly strengthen the links between the education system and employers, increase access to training courses, internships and apprenticeships, improve the quality of career counselling, and adjust training and educational offers to the needs of the local labour market. The philosophy of lifelong learning, the development of non-formal methods of teaching and education and the implementation of simple, cost-effective solutions for popularizing educational content, especially those using information technologies and media, require popularization.

## BRWINÓW

The purpose of the project entitled "Act for the climate. Initiatives to raise environmental awareness in schools in Brwinów and Michałowice communes in partnership with Sandgerdi Elementary School in Iceland", which since January 2022 the Brwinów commune has been running together with the Michałowice commune, is to raise the ecological awareness of students. Brwinów is the leader of the project that coordinates the activities carried out by schools in both communes. The project will be implemented in the years 2022–2023 in schools in Brwinów, Żółwin and Otrębusy, as well as in Nowa Wieś, Michałowice and Komorów. The foreign partner is the Primary School from Sandgerdi (Iceland), with which Primary School No. 1 in Brwinów started cooperation a few years ago. As part of the project, educational activities, workshops and trips are carried out in schools to raise environmental awareness. Pupils will take part in five interschool educational actions, the topics of which are related to pro-climate activities - waste segregation, carbon footprint, water and bicycle transport. Therefore, participants will take part in numerous competitions - art, knowledge, theater or a competition for a multimedia presentation and a film about waste segregation. Materials that will be created during educational campaigns, incl. artworks, posters and comics will be made available to residents on the websites of communes, in newsletters and on information boards. This should encourage residents to care for the climate and to an ecological lifestyle. The project not



only focuses on education, but also includes investment activities nearby the schools. Insect hotels, bird drinkers and webcams to watch the life of animals are just some of the devices facilitating closer encounters with the surrounding world, which can be seen near schools. There will also be solar benches, educational, rainy and meteorological gardens and a sundial. Thanks to the partnership with the Sandgerdi school, it will be possible to conduct online comparative research on plant development and the impact of climatic conditions on everyday life in Iceland and Poland. As part of the project, it is planned, inter alia, the preparation of educational materials and a survey addressed to schools of

the project partners, in order to analyse the methods and areas of environmental education, including circular economy. The analysis of the questionnaires will allow to assess the scale of the problem related to social awareness in the field of ecology and circular economy, as well as to take appropriate steps in the field of, for example, education in the field of proper waste management. The project benefits from financing worth over PLN 2.9 million under the EEA Financial Mechanism. EEA funds are the contribution of Iceland, Liechtenstein and Norway to the creation of a green, competitive and inclusive Europe. The project also received funding from the state budget in the amount of over PLN 0.5 million..

## **GDAŃSK**

Gdańsk project called "Gdańsk circular zone" provides for the implementation of a number of educational activities, including building awareness of new services in the field of municipal waste management. One of the elements is building relationships with property managers and housing cooperatives, the second - the development of systemic education of children and school youth, increasing awareness of the problem of incorrect collection of atypical waste in garbage sheds. An important element of the project is the identity rebranding - the image of Czyste Miasto Gdańsk should be performed in all communication and educational initiatives implemented by the city in the field of circular economy. It is also planned to implement a new online communication strategy

aimed at the most difficult target group, carry out social research on awareness in the field of waste management, professional collection and analysis of data obtained from communication activities and on its basis planning further communication and educational activities.

## **HALINÓW**

The project entitled "Ensuring a high standard of education in the commune of Halinów" will consist in the modernization of educational institutions in accordance with the outcomes of energy audit. In addition, it is planned to provide more space for children - this is related to the dynamic development of the commune and the need to provide places in schools and kindergartens for children and adolescents.

Currently, the number of places is insufficient. Classes are sometimes conducted in corridors or canteens because there are not enough classrooms for children. There is also the problem of the energy inefficiency of schools. The buildings are old, do not meet the permeability standards, and the installations are inefficient. As a result, the buildings are expensive to maintain and unfriendly for children and young people.

Buildings also do not meet the accessibility rules. There are no lifts in them, and the corridors do not have the required width. The windows are positioned high, there is no signage necessary for children with disabilities. The schools are multistorey with



no elevators and slipways that would allow children with physical disabilities to get to another level. In most schools, disabled people cannot get to school on their own, as the entrance is above ground level with stairs leading to it. Due to the high demand for additional spaces in schools and kindergartens, the commune plans to launch a new kindergarten and a new school, which will facilitate the process of access to education in the commune. At the moment, the scattered development of the commune does not pose a significant problem in terms of access to schools and kindergartens. In the commune, transport is organized for school children, school buses transport children from distant places to schools located in the commune.

Every year, new children are enrolled in schools and kindergartens, the number of children attending schools and kindergartens in the Halinów commune increases every year. Up to a point, it was possible to increase the number of pupils in class, but ultimately it is necessary to provide new spaces for children and teaching staff. Additionally, schools and kindergartens accept children from Ukraine who should be provided with a safe and decent space. In one of the schools there is also a room for Ukrainian families. All these elements resulted in intensified activities aimed at the construction of new educational and care buildings, which will significantly improve the housing situation in the commune. According to the forecasts related to the migration of the population, the commune expects an annual influx of new residents, which will translate into a greater number of children, and thus pupils, in commune schools.

## JASŁO

The project entitled "City of Knowledge - Jasło Strong with Its Residents" program will be implemented in the fourth quarter of 2022. It is a set of interconnected activities aimed at all social groups living in Jasło. The project aims to stimulate entrepreneurship, innovation and activation of the inhabitants of Jasło around the idea of the "City of Knowledge". The activities are based on previous experiences, but are enriched with new elements, the essence of which is to focus their implementation around the newly established Centre of Technology, Culture and Entrepreneurship (CTKiP), which will become the "heart" of the program - a place gathering Jasło residents of various ages and professions, who share the will to develop competences, the hunger for knowledge and the readiness to change Jasło.

CTKiP is a centre that includes an interactive industrial museum, experimental laboratories for children and young people (nature, mathematics), a social activity studio - the "home" of NGOs in Jasło, the seat of the Jasło Scientific Society, a coworking zone. There they will find their "place", among others Jasielska Liga Naukowa, Children's University and the University of the 3rd Age.

The essence of activities under the Program will be the preparation, on the basis of detailed social and expert consultations, of a long-term action plan for CTKiP, taking into account the main task, which is the educational activation of Jasło in all age groups to lifelong learning. For this to happen, it is essential to



involve external experts and local stakeholders in the decision-making process. The result of the activities should be readiness to fully use the potential of CTKiP as a centre of social change and a local centre for the development of education for all. The presented goals will be achieved by including various groups at the implementation stage through: surveys, diagnostic workshops, focus groups, consultation of documents developed as part of the participation in the program. The results of the consultations will be the basis for making decisions on the CTKiP action program, and the establishment of the CTKiP Stakeholder Council composed of representatives of various social circles in Jasło will ensure the durability of the actions.

## **PRZEWORSK**

For the purposes of the project entitled "Literary Garden" was designated a site at the Municipal Public Library. It is a square at the monument to the Constitution of May 3. The area to be implemented under the project covers an area of approx. 1.5 ares. The selected area is used once a year for the May 3rd celebration. The local authorities want to change that and invite residents to this place. Currently, there are elements of arranged greenery on a fragment of the plot, but they are fragmented and do not fit together. The area is surrounded by a well-kept privet hedge. It is necessary to cut a large Norway spruce, which is in poor sanitary condition. The development of the place will

also renew the library's front yard. It will be used by its readers. Currently, in the front garden, there is an external chute for returning books. Ultimately, there is to be an open-air place where you can take the book and read it. It can also be a place of rest not only for residents, but also for tourists, as this area is on the route of the most important monuments in the city, right next to the national road DK 94 and the "Przeworsk elephants". Currently, the implementation in the form of the "Literary Garden" is in its final stage. The works were accepted on April 29, 2022.

## **PULAWY**

As part of the project entitled "ZUK Puławy as a circular city - practical aspects of implementing a circular economy in selected areas of urban policy" the Municipal Services Company in Puławy gives a second life to waste. The company has prepared an Art Competition entitled "WE HAVE ADVICE FOR WASTE". 62 art works were submitted to the competition, of which the Organizer's Committee chose 12 works that will be composed as a calendar for the next year. This art competition is organized as part of the project "Construction of a Municipal Waste Selective Collection Point" (PSZOK), co-financed under Measure 2.2 Municipal waste management, priority axis II Environmental Protection, including adaptation to climate change of the Infrastructure and Environment Operational Program 2014-2020. At the Used Item Exchange, FULL SHELF, you can leave



an unnecessary but functional item for free. People who want to dispose of used, but functional and suitable for further use items free of charge, i.e. furniture, household goods, toys, books, sports equipment, textiles, works of art, may leave them at the Exchange Point at ul. Dęblińska 2 (PSZOK building) in Puławy. Visitors to the Exchange who need items currently available in the "Full Shelf" can take them home free of charge and give them a second life. Photos of currently available items are posted on the Facebook page - Exchange Point.

## **STARACHOWICE**

The project entitled "Ecological Education in EKO school" will be implemented in the fourth quarter of 2022. EKO school will be an accessible place, acting as a specific centre of social activity, educating students, and at the same time giving the opportunity to spend free time for all city residents. As part of the project, an offer of ecological education at the school's EKO will be developed, at every stage created closely with students, teachers, residents and experts.

We plan to carry out social campaigns, ecological courses for teachers and officials, further projects related to greening the city, and as part of good practices, a study visit to Norway has been planned. A study visit to the Centre for Education and Culture in Bergen will allow you to observe how similar institutions operate in another city.

The reconstruction and adaptation of the SP11 building and its surroundings is necessary for the implementation of the action consisting in the creation of the school's EKO, which will be a pilot project allowing to shape the ecological awareness of the inhabitants. Currently, no educational institution in the city has classrooms or spaces adapted to the implementation of environmental education classes (recycling laboratories, teaching aids for environmental education).

The complex of buildings and the surroundings of primary school no. 11 after appropriate adaptation, will play a centrecreative function in addition to educational purposes, just as the local community from Bergen uses the infrastructure of NyKrohnborg - Centre for Education and Culture.

The development of the building and the surroundings of the EKO School will also have a positive effect in the context of demographic changes. Due to the aging society (and the exceptional increase of elderly people in the north-eastern part of the city, where the ECO school is located), organizing green and friendly public spaces (Japanese garden, green fit-ness park, plantings) will make it easier for seniors to access green recreation areas. Primary schools SP11 and SP12 located in this part of the city, in distance of 650 m, in the next 7 years will suffer from a serious demographic decline and a shortage of teaching staff. Appropriate adaptation of the rooms and the building of primary school and the building of secondary school will allow, in a few years, to naturally connect the







Photo 7. Visualization of the school and kindergarten facility. Source: Town Hall in Szczawno-Zdrój



## 5. GENDER EQAULTY

The SDG 5 aims to end discrimination against women and girls around the world. All forms of gender-based violence in the public and private spheres, and all other gender-based harmful practices, should be eliminated. It is extremely important to value unpaid care and home work by providing public services, infrastructure and social protection. Women must be fully and effectively involved in decision-making processes at all levels in political, economic and public life, and have equal opportunities in exercising leadership functions. Universal access to sexual and reproductive health as well as technology, in particular information and communication technologies, is essential to contribute to the empowerment of women. Reforms, policies and effective legislation that promote gender equality and empower women and girls at all levels should play a major role. The main lines of action include combating the causes that create inequalities between men and women, promoting gender equality and raising social awareness of equal treatment, and eliminating the social narrative based on stereotypical thinking about the role of women in families. Equally important is strengthening social responsibility for equal opportunities, striving to strengthen and inspire women and men, as well as supporting the activities of grassroots organizations working for women's rights.





## 6 CLEAN WATER AND SANITATION



## 6. CLEAN WATER AND SANITATION

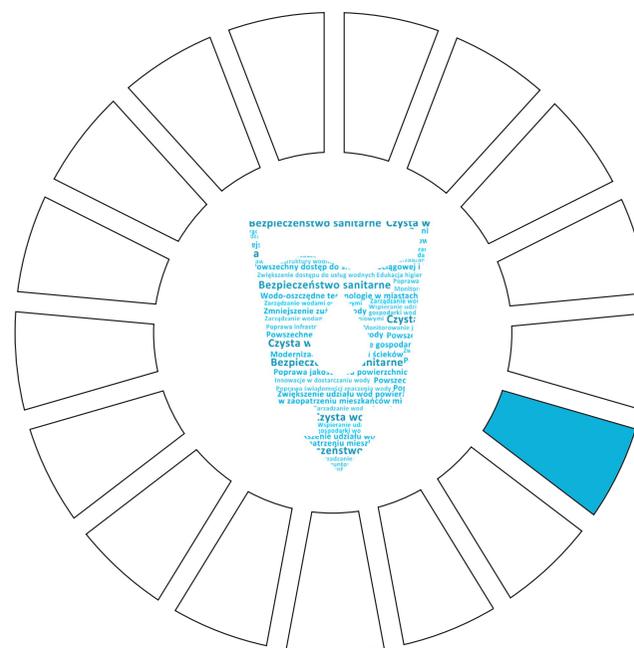
The main objective of the SDG 6 is to ensure universal and equitable access to safe drinking water at affordable cost, as well as adequate and decent sanitary, hygienic conditions and water quality by reducing pollution, eliminating landfills, and limiting the use of harmful chemicals and other materials. Water efficiency should be significantly increased in all sectors and drinking water supply must be ensured. It is extremely important to implement integrated water resource management at all levels and to ensure the protection and restoration of water-dependent ecosystems. It is crucial to both expand international cooperation as well as support and strengthen the participation of local communities in improving water resource management and sanitation. The main directions of development also include the review of environmental taxes and fees, providing financial incentives to reduce pollution and more efficient use of water, and the creation of legal and financial mechanisms favouring the rational use of water resources. Attention is paid to the implementation of water-saving technologies in cities, the intensification of investments consisting in the construction and modernization of wastewater treatment plants in accordance with international requirements and increasing the share of surface waters in the water supply to residents..

## BOLIMÓW

The project entitled "Bolimów as a circular city - practical aspects of the implementation of a circular economy in selected areas of urban policy" includes the modernization of the water supply infrastructure in the Bolimów commune and the implementation of digitization of water supply services. The project will contribute to the improvement of the quality of services provided by the commune to its inhabitants. The modernized network and water treatment stations will enable the supply of water of higher quality. They will contribute to the transmission of water at higher pressure, which will eliminate problems with water supply to properties located at the end sections of the network. Replacing hydrants will also increase the safety of residents. Higher pressure in the network and efficient hydrants will facilitate any rescue and extinguishing actions.

## JEDWABNE

In order to reduce running expenses and improve water quality and sanitation, the city and commune of Jedwabne ad to take steps towards innovation in the project entitled "Ensuring access to water and sanitation for all through the sustainable management of water resources". Saving electricity has both an economic and an ecological dimension. Less energy consumption means less environmental pollution, less exhaust fumes and less greenhouse



gases. As a result, less destruction of the ozone layer and limitation of the phenomenon of climate change.

For many years, the records of water meters were carried out by collectors who had to visit individual properties in order to read the data from the water meter. It was not only an extremely time-consuming task, but also a complicated one, as water meters were often installed in hard-to-reach places. All this contributed to considerable costs for enterprises dealing with water and sewage management. Therefore, it is planned to install a system of intelligent, wireless water meters with a remote reading system in the

city and commune of Jedwabne. Remote reading of water meters based on wireless communication is a convenient and, above all, safe access to data from any water meter operating within the water supply network.

Thanks to the implementation of an intelligent platform, enterprises dealing with water and sewage management can completely skip ineffective readings by collectors. However, the lack of the necessity to visit the premises of residents is not everything, the wireless water meter is also a lot of other advantages, both for enterprises and for the recipients themselves.

It is also planned to modernize and replace LED street lighting throughout the commune. LED light sources are much more environmentally friendly than all other types of light sources. LED lighting works much longer and consumes less energy, which makes it environmentally friendly. It is an opportunity for the development of the commune and increasing the quality of life of its inhabitants. The commune is located in one of the most beautiful places in Poland and even in Europe - the buffer zone of the Biebrza National Park - the largest, longest and wildest park in Poland. The commune is situated in Podlaskie Voivodeship, in the Kolneń Upland, and a large part of its area is covered by forests. The main goal of the project is to maintain the good condition of nature by introducing innovative solutions for good water quality, sanitation and reducing electricity consumption.

## NOWY TARG

Implemented project entitled "The partnership network of public and non-public actors for good water quality and improvement of sanitation" includes the expansion of wastewater treatment plants. The sewage treatment plant cooperates with the sanitary sewage system of the city of Nowy Targ and the municipalities of Nowy Targ (partially), Poronin, Szaflary and Biały Dunajec, serving the city and these municipalities. In addition to municipal wastewater flowing through the sewage system, the treatment plant also receives a certain amount of industrial wastewater and wastewater brought from the dispersed tanning industry, as well as other business entities within the reach of the sewage network and road transport. Currently, the sewage treatment plant performs the role of a regional wastewater treatment centre, with significant development potential.

Due to the regional nature of the sewage treatment plant, the activities will concern a large number of Podhale inhabitants. It can be estimated that about 60,000 inhabitants are within the project range, and in addition, a significant number of tourists visiting Poronin and Biały Dunajec communes each year. The total number of people using the sewage network supplying sewage to the sewage treatment plant in Nowy Targ may periodically reach one hundred thousand people. The project is of regional importance, because the extensive sludge management will also affect the surrounding enterprises - through the possibility of collecting the sludge and reducing the costs and nuisance of transport.



The investment area covers mainly the western part of the sewage treatment plant area. In this area, there are facilities belonging to the technological line for the management of sewage sludge generated in the process of biological wastewater treatment, as well as facilities for a biogas line.

The main goal of the investment is to improve the energy balance of the sewage treatment plant in Nowy Targ. In particular, it was planned to adapt the pumping station of the floating parts to receive added sludge, fats and other liquid substances, which will also be subject to fermentation and may significantly contribute to increasing the amount of biogas produced. The appropriate time of sludge fermentation will additionally contribute to better stabilization effects and increase the production of biogas. Increasing the production of biogas will generate electricity and heat for the operation of the sewage treatment plant, which may enable the energy self-sufficiency of the facility. The primary goal of the entire investment is to try to completely balance the external energy demand by the sewage treatment plant in Nowy Targ. This task is extremely difficult to achieve. In the case of the sewage treatment plant in Nowy Targ, this goal can be achieved by supplying the sewage treatment plant with sludge and fats externally, which will allow for a greater energy production than would result from the incoming sewage load alone. Therefore, appropriate process control and parameter selection will be particularly important.



Photo 8. Sewage treatment plant. Source: Nowy Targ City Hall



## SIEMIANOWICE

As part of the project entitled „Siemianowice Śląskie as a circular city - practical aspects of the implementation of a circular economy in selected areas of urban policy” activities are planned in two areas - strategic analyses of planned activities and the development of network infrastructure with remote notification of detected irregularities. It is important due to the need to guarantee uninterrupted water supply to the inhabitants, as well as to estimate its quantity and manage the circulation.

The implemented modernization will provide residents with supplies and adequate water quality, as well as optimization of equipment efficiency. The lack of the system resulted in a lack of data on infrastructure failures, amounts of water losses in the network, information on the technical condition and results of

monitoring its operation. The innovation will make it possible to reliably verify long-term plans for the development and modernization of water supply and sewage systems, as well as tariffs for collective water supply. The conducted analysis will determine the directions of activities in the future, directly subordinated to the implementation of goals aimed at the circular economy, including planning of new projects.

## SOSNOWIEC

Sosnowiec is implementing a project entitled "Municipal Waste Management Enterprise in Sosnowiec as a circular company - practical aspects of implementing a circular economy in selected areas of urban policy". Due to the existing water and sewage management policy, Municipal Waste Management Enterprise has undertaken to build a sewage pre-treatment plant. Until now, wastewater from the Municipal Waste Treatment and Neutralization Plant was transported by a slurry truck to Oświęcim and discharged to the sewage system of the Sosnowiec Waterworks. Due to the high parameters of pollutants in the sewage, this discharge into the sewage system is strictly limited. Transport logistics adversely affects the operation of the Company and has an impact on the environment - through the emission of exhaust fumes during transport. The leachate disposal costs have also become burdensome operating costs, which is why the Company, after consulting the city and the Sosnowiec Waterworks decided to implement an investment consisting in the construction of an on-site industrial wastewater pretreatment plant.

During the planning and design of the investment, a number of consultations and activities were undertaken to ensure that the project meets all the latest requirements and guidelines. The optimal technology for the Company was selected - MBR reactors - which ensures stable pre-treatment of wastewater from all sources and its discharge to the municipal sewage network. Thanks to this solution, sewage will be collected and treated within one location without the need to transport it with slurry trucks, which will positively affect not only the organization of the company's work, but also reduce the negative impact on the environment (in the form of exhaust emissions resulting from the need to transport sewage).

## ŚRODA WIELKOPOLSKA

The commune of Środa Wielkopolska is a friendly place with an aesthetic and well-kept space for residents and tourists. A developed labour market is guaranteed by local and incoming investors who, while remaining in harmony with the valuable natural area, run a non-burdensome economic activity in cooperation with local upper secondary schools. Cultural heritage and a deeply rooted sense of local identity build a very active local community open to the challenges of the modern world.

The area of the Środa Wielkopolska commune belongs to the areas of particular natural attractiveness due to the Protected Landscape Area of Średzkie Marshes located here. The area of Średzkie Marshes is directly adjacent to the city of Środa Wielkopolska,



occupying an area of 120 ha. It was established in 1995. In 2005, in the area of Średzkie Marshes, an educational trail was created, becoming an attractive place for residents and tourists visiting Środa Wielkopolska. The Powiat Ecological Education Centre runs an educational campaign for the inhabitants of the commune.

The Environmental Protection Program for the Środa Wielkopolska Commune developed for the years 2013-2016 with a perspective for 2017-2020 defines the following objectives: protection of nature and landscape, protection of land and soil, protection of water resources and rationalization of water and sewage management, protection of ambient air, protection against major accidents, protection against noise, protection against electromagnetic radiation and the use of energy from renewable sources. As part of the "Action Plan for Cities", Środa Wielkopolska will implement a project entitled "Reconstruction and expansion of the wastewater treatment plant in Chwałków together with the expansion of the laboratory in order to increase the efficiency of operation". In the commune there is a municipal sewage treatment plant in Chwałków, as well as rural sewage treatment plants with a low capacity. In areas where, due to technical reasons, it is impossible to connect to the network, wastewater is collected in septic tanks and in household sewage treatment plants, the construction of which was co-financed by the commune. The redevelopment will consist of the construction of a second chamber of the wastewater treatment plant, a laboratory and the modernization of existing buildings.

## TŁUSZCZ

The project entitled "Expansion of the water and sewage network to improve the quality of life of residents in the Tłuszcz commune" is aimed at building a sewage treatment plant and installing a photovoltaic installation in the Tłuszcz commune. As part of the project, a series of meetings and discussions is planned in order to select the appropriate model of investment implementation, which will be the most beneficial from the point of view of the inhabitants, as well as factors such as the environment or finances.

The planned sewage treatment plant requires water supply, electricity and gas to operate. Sewage from the city will be discharged into the treatment plant, therefore it is planned to build a pumping station and a rolling pipeline. In order to ensure access to the planned facilities, an access road has been planned that runs through the existing railway tracks and the Cienka River, and the access road to the planned sewage treatment plant requires the construction of a bridge over the river.

The recipients of the project will be, first of all, the inhabitants of the commune, and the implementation period is assumed to be 24 months, from the moment of obtaining financing for the activities. One of the most important effects of the described project will be the increase in the quality of life of the inhabitants because of cleaner environment, reduced costs of water purification and related energy production



# 7 AFFORDABLE AND CLEAN ENERGY



## 7. AFFORDABLE AND CLEAN ENERGY

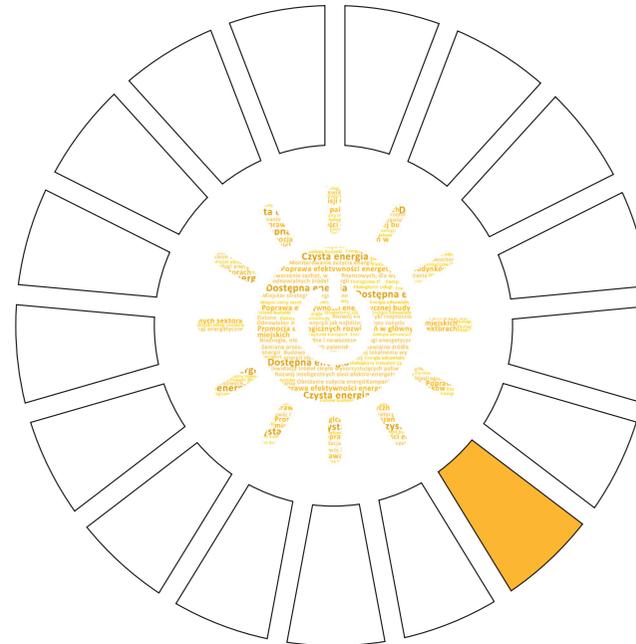
The main tasks of the SDG 7 include ensuring universal access to affordable, reliable and modern energy services. These comprise a significant increase in the share of renewable energy sources in the global energy mix and international cooperation facilitating access to research and technology in the field of renewable energy, energy efficiency and cleaner fossil fuel technologies. It is extremely important to double the growth rates of global energy consumption efficiency thanks to the expansion of infrastructure and modernization of technologies, the use of the existing surplus and local resources of fuels and energy, including electricity and heat generated in renewable energy sources, electricity and utility heat produced in cogeneration and management of waste heat from industrial installations..

## BYDGOSZCZ

The project entitled "The study of the application of local energy balancing areas for the optimization and development of distributed networks with the acronym eNeuron" enables the use of a set of pioneering tools for the optimal design and operation of energy systems using multiple energy carriers. For this purpose map of regulatory and technical bottlenecks in the existing LECs (Local Energy Communities) will be developed, and then new use cases and business models will be mapped for use at different scales and conditions. They will be based on the latest software and hardware solutions, including a cloud-based management platform for the dynamic balancing of supply and demand from energy carriers.

After fine-tuning, the eNeuron LEC framework will be tested in four pilot projects in the following areas: the city and its main energy hubs (Bydgoszcz), the football stadium and its vicinity (Skagerak, Norway), the navy district with its own distribution network (Lisbon, Portugal) and a university campus with several locations (Ancona, Italy).

In Bydgoszcz, the pilot project covers the main power nodes connected to both the low (LV) and medium (MV) voltage grids. Most of the buildings selected for the project are new and to some extent energy self-sufficient. They are equipped with smart meters that record energy consumption profiles every 15 minutes and phase voltage profiles every 10 minutes. Almost all MV / LV networks in the pilot area stations are equipped with balancing



meters connected to the central system of Advanced Metering Infrastructure (AMI) via a cellular network. 10-minute voltage profiles and 15-minute energy import / export profiles are possible. Detailed network topology is available and modeled with PowerFactory analysis software.

Local energy networks will be optimized to ensure high penetration of renewable energy sources together with related power electronics, monitoring and control devices. The measure will cover the improvement of energy demand management of buildings (including waste heat recovery and district heating and cooling, integration for economies of scale 62 and diversification of heat

and electricity supply from renewable sources), use of electric vehicles and minimization of energy consumption through intelligent management energy flows and technologies. As a result, the implementation of the project will contribute to the reduction of energy costs borne by prosumers and the dissemination of advantages related to the use of energy from local low-emission sources.

## KONIN

The main goal of the project entitled "Konin - Green City of Energy - a new direction of development" is to involve the local community, non-governmental organizations and entrepreneurs in the process of energy transformation. The specific goal of the project is to encourage the local community, non-governmental organizations and entrepreneurs to join the development of the City. The implemented activities are a broadly understood educational campaign consisting in the organization of trainings, workshops, seminars and conferences. The project will result in increased knowledge and exchange of experiences. The planned date of the project implementation is the fourth quarter of 2022.

The educational campaign and activities planned under it will be based on proven techniques and tools of social participation, by inviting all groups to workshops (brainstorming), group work, training (stationary and online) and joint educational seminars.

The selection of participatory tools results from many years of experience and recent works related to the preparation of the Local Development Strategy and Plan. The educational campaign and

the exchange of good practices takes place during the implementation of two projects. The following activities are planned in the project "Urban energy generator as a source of Konin's success": 2 conferences, 2 seminars, promotional films, a website, 2 articles in the press, sitilouts at bus stops, competitions for students, etc. In the project "Green city corridors - climate awakening in Konin" - 3 conferences, 2 press articles, promotional films, one publication, website, competitions, workshops, etc. are planned.

## KOŃSKIE

The project initiated by the Konskie authorities is called: "Heating Company (PEC) in Końskie - the road to energy transformation". The project involves the introduction of modern, effective and economical energy solutions for the currently operating heating system at PEC in Końskie. Due to changes in environmental regulations and in the business environment (volatility of raw material prices, energy supplies, gas), it is necessary to find solutions that ensure predictable, in the long term, prices for heat consumers. The design of the project is based on two equal research concepts.

The first concept of the "Heat Plant of the Future, i.e. a RES heatgenerating system at PEC Końskie" concerns the verification of the research hypothesis and its potential to be used in the market system. According to this hypothesis, it would be possible to obtain at least 80% of heat from renewable energy sources in the heating subsystem (part of the heating network in the city of Konskie - covering over 2,000 inhabitants) with an installed capacity



of approx. 5.5 MW. The project will be implemented in two stages, but this project covers only the first stage. The assumption of the first stage of the project is to develop a solution created with the use of numerical modeling and digital simulator of the heating system. Phase 2 is a full-scale demonstration (not included in this project). The system is to be based on: large-scale solar collectors operating all year round, seasonal water heat storage and power-to-heat solutions: installation of an electrode boiler, which is responsible for converting energy from RES into low-emission heat and short-term heat storage. Moreover, in order to optimize the work, a uniform system will be implemented responsible for monitoring, controlling and forecasting the use of energy in the proposed cycle.

The purpose of the second concept is to create a specific type of energy cooperative. The project entitled "CHP plant in the local energy system - PEC in Końskie - the path to transformation", like the first, will be implemented in two stages: development (stage 1) and demonstration (stage 2), the latter not being covered by this project. The project covers only the first stage concerning the development of an innovative technology for a universal system of generation and storage of energy for heating purposes in combination with hydro-cogeneration based on renewable energy sources for the self-balancing of the local power system. The system is to be based on green energy from solar collectors, photovoltaics and heat pumps with seasonal and daily heat storage, an electric boiler

powered by green electricity from RES, as well as elements of the system for the production and storage of hydrogen.

By using solar thermal energy and unbalanced energy from wind farms and the operation of a seasonal heat storage supported only by the peak operation of a coal-fired boiler, it will be possible to obtain a high, over 80% zero-emission level of heat for the heating network. The concept also enables the complete replacement of carbon sources with renewable energy sources. The basic scope covers a part of the heating network in a multi-family housing estate in Końskie, and on an optimal scale it enables the entire heating system in the city to be covered and new recipients to be connected.

In both cases, the task is to create research concepts, i.e. feasibility studies for a given concept. They would correspond to the main assumptions of a research project financed by the National Centre for Research and Development under a twostage grant competition. In the executive part, the partnership 64 between PEC in Końskie and Końskie Housing Association is planned. After selecting the research concept by both partners, it is planned to provide the network for the implementation of the demonstrator.

## KROSNO

Implementation of the project entitled "Development of the Krosno Energy Cluster" contribute to the construction of the local energy market in Krosno, to the benefit of the inhabitants and the environment, through access to clean energy produced locally. As



part of the cluster, the founders (the Municipality of Krosno City, MPGK Krosno Municipal Holding and the Karpacka State University in Krosno) will take steps to improve the energy efficiency of Krosno. The created cluster is also to be the foundation for the creation of a local energy market.

Krosno Municipal Holding selected a contractor to build an energy block in Krosno powered by fuel produced on the basis of municipal waste sorting residues. The construction of the Power Unit in Krosno is to cost over PLN 135 million (gross) and is to be completed by 2024. The installation is to be built on the premises of the Krosno Heat and Power Plant (formerly: Łężańska Power Plant), is to burn annually about 22 thousand tonnes of waste and co-produce thermal energy (6.4 MW capacity) and electricity (1.6 MW). It is to be a modern facility that meets all environmental standards and is safe for the surroundings.

As part of the "Action Plan for Cities. Model Locality" will be developed in 2022. Development Strategy of the Krosno Energy Cluster. It was also planned to analyse the potential on the side of electricity generation, prepare project documentation for agreed investments, monitor aid programs dedicated to clusters, monitor and search for funding opportunities for planned investments under aid programs dedicated to clusters.

## **MAKÓW MAZOWIECKI**

The system task, called Turbine, related to the reconstruction of the dam on the Orzyc River in Maków Mazowiecki, along with

its preparation for the possibility of hydropower use, began in 2016 with the conclusion of the contract with Instytut OZE Sp. z o.o. from Kielce. The Institute developed concepts of land development solutions in the area functionally related to the existing damming, together with the technical concept of the proposed solutions in the field of: buildings, the need to reconstruct the technical infrastructure and the technology of investment implementation for three variants. The investment will be based on a hybrid system that uses renewable sources, including photovoltaic and wind installations. The generated electricity is to be used, inter alia, to illuminate the market. The hybrid system with the use of a remote collection and visualization system for measurement data, apart from ensuring the efficiency of using renewable energy sources, will also perform a demonstration and educational function.

The entire project entitled "Energy transformation with a city development turbine - restoration of a hydropower plant in order to better use local resources of renewable energy sources", worth PLN 14 million, includes the reconstruction of the damming weir, drainage of the Sopera Park area, construction of a fish pass, deepening of the canopy and permanent supply of water to the water reservoir in Maków Mazowiecki, as well as tourist management of the area, including: construction of a pedestrian and bicycle path around the lagoon, wooden platforms, a marina, infrastructure for anglers, sports infrastructure, a recreation area, a playground for children, fountains in the middle of the lagoon, parking lot and beach modernization. A small power plant costs about PLN 7.5



million. For this purpose, the city first received 4 million from the Marshal's Office, and then 4 million from the COVID-19 Counteracting Fund for local government units.

In December 2020, the first stage of work was completed, which included, inter alia, on the drainage on the western side of the Orzyc River and renovation of the pumping station building. The investment task has been divided for two years, of which in 2020 the contractor prepared design documentation for the entire investment project, drainage of the banks of the Orzyc River, drainage of the Sapera Park, renovation of the pumping station



Photo 9. Visualization of the surroundings of the hydroelectric power plant in Maków Mazowiecki. Source: Town Hall in Maków Mazowiecki

building and technological works related to the installation of renewable energy sources and equipment of a small hydroelectric power plant. In 2022, the barrage is planned to be rebuilt. A small hydropower plant with the installation of renewable energy infrastructure is also planned.

The small hydropower plant will supply electricity to public buildings: Primary School No. 1, Pre-school Local Government No. 2 and the City Hall. The buildings will be powered by direct power cable connections from the Small Hydroelectric Power Plant distributed directly to the energy consumption points in the buildings.

## SIERADZ

Energy security, energy independence and utilization of endogenous potentials of the City of Sieradz are the basic assumptions of the local municipal policy in pursuit of the goal of becoming a self-sufficient City. In order to achieve this goal, the City has been implementing a number of programs and projects targeted directly at children (mainly environmental education), adult residents of the City (investment programs in renewable energy sources), public local government institutions (investments in renewable energy sources), but in the perspective of the next 10 years, the City has set itself a comprehensive goal - energy self-sufficiency (strategic programs).



The project entitled. "Sieradz in a Closed Circuit - Safe and Energy Self-sufficient City" is based on strategic approach and systemic solutions. The assumptions concern both future safety in terms of e.g. district heating implemented through construction of a geothermal-biomass heat plant together with an injection well and construction of a cogeneration module supporting the heat plant operation as well as safety in terms of electric energy based on future construction of a municipal energy cluster. These will be the final investments in the adopted urban policy outlined in the Development Strategy of Sieradz until 2030.

However, the first steps towards energy independence are smaller projects initiated, coordinated and co-implemented by the City of Sieradz. The project titled "Installation of photovoltaic installations on public buildings in Sieradz - phase 1" is a project that stands out among other similar urban centers. Its goal is to improve energy efficiency of public buildings - 7 kindergartens in Sieradz in order to reduce the amount of pollutants into the atmosphere. The program will also include in further stages elementary school and institutions subordinate to the local government. The assumed aim of the project is to increase the production of energy from renewable sources, improve the environment by reducing emissions to the atmosphere, reduce the use of traditional energy sources through the use of RES, save natural resources by using RES, improve health conditions

of the region's inhabitants by reducing emissions to the atmosphere, increase public awareness of the need to protect nature and its resources. An important role in the project - as a good example for the residents of Sieradz - is played by the City which through its facilities promotes the benefits of RES and their direct impact on improving the quality of life in the City. As far as the strategic projects are concerned, it is necessary to point out the already implemented projects. Such projects include currently implemented investments:

1. construction of a geothermal and biomass heating plant in Sieradz together with the Sieradz GT2 injection well;
2. construction of a cogeneration module with the capacity of 0.9 MWe and 1.1 MWt supporting the operation of the geothermal and biomass heating plant;

Within the framework of the above-mentioned investment, a high-performance cogeneration module of 0.9 MWe and 1.1 MWt capacity will be built to support a geothermal-biomass heat plant. The produced electricity will be used for the needs of the heat plant, while the obtained heat energy will support the operation of the heat plant. The total capacity of the geothermal-biomass heating plant will be 28 MW. The heat produced by the new plant will secure the daily needs (heating and hot water) of the residents of Sieradz for approx. 9 months a year without the need to use coal-fired boilers. It will also reduce the emission of greenhouse gases emitted by burning





Photo 10. PV installation - Kindergarten no. 1 in Sieradz, 2 Provincial Square Source: Municipality of Sieradz



Photo. 11. Conceptual design of a geothermal-biomass district heating plant, 2 Zachodnia St. Source: sieradz.eu

coal by approx. 40 thousand tons of CO<sub>2</sub> per year, which will result in the reduction of related charges that are currently borne by Przedsiębiorstwo Energetyki Ciepłej in Sieradz.

Geothermal water (existing borehole GT-1) and biomass will be the primary sources of heat energy for the new plant. Diversification of heat energy sources will allow Przedsiębiorstwo Energetyki Ciepłej to adjust to the market situation in terms of energy carriers' prices.

The value of the investment is nearly PLN 130.000.000,00 net. For this investment, the municipal company obtained co-financing from NFOŚiGW in the amount of nearly 73.000.000,00 PLN. The remaining amount securing full execution of the investment will be covered from a low-interest loan from NFOŚiGW.

The creation of an energy cluster as an alternative, safe and stable source of electricity generation from RES (including the construction of a photovoltaic farm and an energy storage facility) will be a complementary and binding element of investments in energy security and independence of the City. In case of realization of this investment, the City plans to build a photovoltaic farm with a capacity of about 5MW along with the possibility of energy storage within the purposely established energy cluster.



## SZCZECIN

The project entitled "Using the full potential of the municipal wastewater treatment plant of the city of Szczecin in the pursuit of energy self-sufficiency" consists in increasing the potential of fermentation capacity in the Pomorzany Sewage Treatment Plant and the Zdroje Sewage Treatment Plant in Szczecin.

The oldest and so far the most frequently used method of sludge stabilization is anaerobic digestion. The first anaerobic digestion chambers were commissioned in the United States over a hundred years ago. Concentrated organic and inorganic sludges undergo anaerobic microbiological decomposition into methane and inorganic substances. The main benefits of the fermentation process are the stabilization of sewage sludge, reduction of its volume (reduction of the organic matter content of the sludge) and the production of biogas.

The project involves the commissioning of new facilities (closed separate fermentation chambers) and the modernization of the existing ones in order to increase biogas production. The biogas is then directed to cogenerators, where electricity and heat are generated. Both energy and heat are used by sewage treatment plants for their own needs, which reduces the costs of wastewater 67 treatment. Currently, the last phase of the project is being implemented, i.e. equipping the separate fermentation chambers with equipment and commissioning of individual facilities. The assumed completion date of the investment is the fourth quarter of 2022. During the implementation of subsequent facilities, an

increasing share of own energy and lower purchases of external energy are observed. Parallel to increasing the production potential into energy itself, modernization processes are carried out by replacing energy-consuming installations with those whose overall demand for electricity is lower. Exhausted blowers, mixers and sewage aeration systems are being replaced. In the coming years, it is planned to optimize the sludge fermentation and dewatering process; it is also possible to use a disintegration process. The result of the project is to increase the own energy production potential from 42% to 55% in the first stage. In subsequent stages, Water and Sewerage Company in Szczecin intends to become energy self-sufficient through investments in photovoltaics and the replacement of cogenerators. As a result, the inhabitants of Szczecin will benefit from the production of ecological electricity through lower bills for sewage discharged to the sewage system and the natural environment.

Experiences related to the pursuit of energy self-sufficiency can be transferred to other municipalities and the municipal company operating sewage treatment plants. Advanced processes introduced by the company can serve as a model for other water and sewage companies.

In the area of the sewage treatment plant, numerous educational and activating activities are carried out aimed at participants of the urban ecosystem - both residents, research units and schools. Explaining wastewater treatment processes and presenting the benefits of closing energy cycles and using it by sewage treat-





Photo 12. Sludge fermentation chambers and gas tanks of the Pomorzany sewage treatment plant in Szczecin Source: Water and Sewerage Company in Szczecin

ment plants allows to increase the knowledge about the circular economy, which in turn influences development of the ecosystem, including the creation of new research and development projects or educational paths.

### **SZYDŁOWIEC**

In Szydłowiec, a project entitled "Clean air in the commune of Szydłowiec". The need to improve air quality and reduce greenhouse gas emissions by replacing heat sources and improving the energy efficiency of residential buildings as a result of legal regulations impose an obligation on building owners to replace old, ineffective solid fuel boilers. This is a big, especially financial, problem for most of the inhabitants. The investment related to the replacement of heating devices is an expensive matter and

not everyone can afford such an expense. By 2029, homeowners are required to replace old and ineffective solid fuel heat sources with modern heat sources. The Regional Fund for Environmental Protection and Water Management, meeting the need for co-financing of thermo-modernization investments, created the Clean Air Program. As part of the program, it is also possible to carry out thermomodernization works in the building, and the maximum amount of cofinancing is almost PLN 70,000. zloty. The amount of funding depends on the beneficiary's income. As part of the project, financial support can

be obtained for:

- replacement of old solid fuel stoves with ecological heat sources that meet the requirements of the Program,
- central heating or domestic hot water installation,
- mechanical ventilation,
- photovoltaic micro-installation,
- insulation of houses and replacement of windows and doors (costs of materials and labour).

Financial support may be obtained for completed, in progress or not yet started projects, but costs can be incurred not earlier than 6 months before submitting the application.



In the Szydłowiec Commune, the Clean Air Consultation Point was established in response to social needs. As a result, residents have an easier contact with the Regional Fund for Environmental Protection and Water Management in Warsaw in order to obtain funding for the replacement of heating devices, and thermo-modernization of a residential buildings. This is a response to social needs, but also the broadly understood necessity to protect the natural environment in order to reduce harmful emissions of pollutants and the significant consumption of nonrenewable energy sources.

As part of the point's regular activities, advice is given to residents on how to obtain funding for the replacement of heating devices, photovoltaic installations, and carrying out thermomodernization works in single-family residential buildings. People who need support can report to the point, obtain information as well as help in completing and submitting documents for funding. The commune employee also helps to settle the project implemented by the resident. This is the help from the city that is highly appreciated by the inhabitants, because individually a small group of people would be able to obtain funding.

Due to the fact that there is a consultation point in the commune of Szydłowiec, the number of ecological heating sources mentioned is significantly increasing. Comprehensive thermo-modernization works have been carried out in many houses, consisting in thermal insulation of external walls, flat roof, roof, and ground floors. Windows and doors in residential buildings have been replaced, photovoltaic panels have been installed, central

heating installations have been modernized. and hot water. All materials or devices purchased as part of the project must meet the appropriate requirements, parameters, indicators, but with the support of a Commune employee, the process of meeting the requirements is not difficult.

## ŚWIDNICA

The aim of the project entitled "Ecologic Świdnica" is to limit the low emission of air pollutants from the combustion of solid fuels in individual heating installations in Świdnica and the neighboring communes. The need to implement the project results mainly from the bad air condition in the area of Świdnica and the municipalities of the Wałbrzych Agglomeration and the necessity to meet the EU standards for air quality and counteracting climate change. Each of the already completed tasks, as well as each planned to be performed, is aimed at reducing air pollution, reducing low emissions and improving the health of the region's inhabitants (the need to counteract cardiovascular and respiratory diseases).

The first module of the project will consist in the preparation and supplementation of strategic documents, plans, programs and projects with activities consistent with the Clean Energy SDG. The result of the preparation of relevant strategic documents will be the intensification of activities related to the protection of the environment and climate, which are among the most difficult and costly transformations related to the socio-economic trans-



formation. In this way, operational decisions made on the basis of the developed documents will be consistent and beneficial for the natural environment and adjusted to climate protection.

Sustainable development requires new, precise provisions included in strategic documents, and therefore, by the end of 2022, Świdnica will prepare the following documents: Municipal Climate Adaptation Plan for the City of Świdnica by 2030, "Assumptions for the plan of supplying the City of Świdnica with gas, electricity and heat" and the Low-Emission Economy Plan.

For many owners of properties heated with out-of-class solid fuel CO boilers, the purchase of a new furnace is a huge expense that is difficult to afford. The cost associated with the purchase of a boiler is not the only expenses for which you need to prepare, because very often the replacement of the furnace is also associated with the need to modernize the boiler room and the heating system. Therefore, the second module of the project focuses on providing financial support for the replacement of heat sources and improving the energy efficiency of buildings and dwellings, and preventing energy poverty. The activities included in this part of the project are carried out cyclically in annual editions.

Component I: Project entitled "Replacement of high-emission heat sources in buildings and residential premises in selected municipalities of the Wałbrzych Agglomeration".

Component II: A subsidy program from the city budget for the replacement of a heating source - consists in providing targeted subsidies for natural persons, legal persons and business entities changing the heating method from coal stoves to ecological heating (gas, electric).

Component III: Regardless of the municipal and agglomeration program, which subsidize the replacement of "old stoves" with ecological heat sources, in Świdnica you can take advantage of the government's Clean Air program through the Regional Fund for Environmental Protection and Water Management in Wrocław.

The project entitled "Ecological Świdnica" is about implementing measures related to environmental and climate protection, which are difficult and expensive. The recipients of the project will be not only the inhabitants of Świdnica, but also the inhabitants of the entire region, as reducing low emissions and improving air quality will have an impact on the quality of life of the wider community of the region. In March 2022, the Municipal Plan for Adaptation to Climate Change was adopted for the Municipality of the City of Świdnica until 2030, which will be a response to the processes taking place in the environment caused by climate change. The first module of the project will end in 2022, while the second part of the project brings together long-term activities divided into annual editions.

## WAŁBRZYCH

The project entitled "Improving the quality of life of residents by adapting to climate change and ensuring access to green energy at an affordable price" is planned to be implemented by the end of the fourth quarter of 2022. The recipients of the project are the inhabitants of Wałbrzych, especially in the area of revitalization, where there is an accumulation of problems - mainly social and environmental.



The main goal of the project is to improve the quality of life of the inhabitants of Wałbrzych. It is assumed that the city and its inhabitants will be prepared for climate change, incl. through the elimination of heat islands and the development of blue-green infrastructure in degraded areas and in the area of revitalization, as well as by improving the energy efficiency of buildings and the elimination of low-emission sources. A key role in the implementation of the project will be performed by the participation of the local community at every stage. Social participation will be implemented through, inter alia, educational activities and inclusive activities.

The project will consist in the implementation of measures aimed at adapting urbanized and degraded areas of the city to climate change, as well as allowing the residents of these areas to have access to green energy at an affordable price. The preparation and implementation of the project requires the participation of the inhabitants of the city of Wałbrzych and social organizations, in particular those working for the protection of the environment, as well as excluded social groups. Therefore, an important element will be inclusive activities and education of residents, especially those affected by or at risk of energy poverty.

Implementation of the task Improving the energy efficiency of buildings at ul. Gen. Zajęczka 7 and 8 in Wałbrzych began in 2020 through thermal modernization. Works completed demolition works, the ceilings and stairs in the building were replaced. Roofing works have also been completed. Facade and installation works are in progress. The tasks include thermomodernization

of the building along with land development and adaptation of municipal housing premises to new standards.

There will be 8 and 11 apartments, respectively. The scope of the task is the performance of a major renovation, which will include: a new functional layout of residential premises with the implementation of individual hygienic and sanitary rooms, adaptation of the premises after the commercial premises into residential premises, replacement of the roof covering, roof insulation, possibly replacement or reinforcement of the truss elements roof, replacement of structural elements of buildings, thermal insulation of external walls and building facades, execution of horizontal and vertical

insulation of the building, replacement of window and door joinery, replacement of all necessary installations, including central heating, water and sewage, electricity, telecommunication, TV, with separate metering for individual users, construction of a central boiler room with the building at ul. Gen. Zajęczka 8, with metering Photo 11.

A residential building at



Photo 13. A residential building at Zajęczka street 7 before modernization. Source: Town Hall in Wałbrzych





Photo 14. Residential building at Zajęczka street 8 before modernization. Source: Town Hall in Wałbrzych

Zajęczka street 7 before modernization. Source: City Hall in Wałbrzych  
 Photo 12. Residential building at Zajęczka street 8 before modernization Source: City Hall in Wałbrzych of individual apartments, the use of renewable energy sources, building an elevator, liquidation of the basement. The planned completion date is June 30, 2022. The tangible part of the task is carried out with funds from the European Investment Bank and with financial support from the Subsidy Fund from Bank Gospodarstwa Krajowego. The value of the investment is over PLN 1.5 million and less than PLN 2 million, respectively

## WĘGRÓW

The main goal of the project entitled "The City of Węgrów in sustainable development - practical aspects of improving the condition of the natural environment in selected areas of urban policy" will be aimed at counteracting climate change. It is planned to replace heat sources, invest in renewable energy sources and further thermo-modernization of residential, production, service and public buildings in Węgrów. Additionally, it is planned to increase the number of energysaving street lighting.

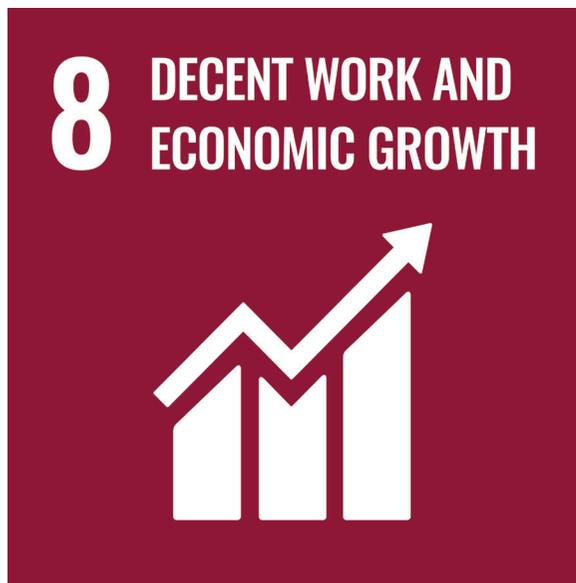
Therefore, the task "Green transformation and new energy in the Liwiec Valley" is planned, which involves the mobilization of as many households as possible in the city to switch to less-emission energy sources.

In addition, it is also planned to carry out activities aimed at sustainable water management, including the accumulation of rainwater and its use for economic purposes. There are also planned tasks related to the improvement of the condition of the waste management infrastructure in accordance with the challenges of the European Green Deal by increasing the efficiency of the Selective Waste Collection Point and rehabilitation of the former landfill. The construction of a centralized heating system with the use of a renewable energy source was also taken into account, including the use of municipal waste processing for heating.

This task will provide residents with access to the heating network, i.e. continuous access to district heat, but also reducing low emissions and improving the efficiency of waste management in the city.

7 AFFORDABLE AND CLEAN ENERGY





## 8. DECENT WORK AND ECONOMIC GROWTH

The assumption of the SDG 8 is, above all, to maintain economic growth per capita, taking into account national conditions. The main tasks include achieving a higher level of economic efficiency through diversification, technological modernization and innovation, and the promotion of development policy supporting production activities, creating decent jobs, entrepreneurship and creativity. Full and productive employment and decent work must also be ensured for all women and men, and the proportion of young people not in employment, education and training should be significantly reduced. It is equally important to take immediate and effective measures to eliminate forced labour, modern forms of slavery and human trafficking, as well as protecting workers' rights and promoting a safe working environment for all. Action projects should concern support of residents in taking an active attitude on the labour market by raising competences, creating entrepreneurial attitudes, supporting companies at various stages of their operation, constant contact with business entities in order to learn about their needs, shaping an adequate educational offer tailored to the needs and in cooperation with local businesses. It is necessary to create a platform of knowledge about the local labor market along with its monitoring, taking into account the differences within the city, and undertaking general development activities, important from the point of view of the possibility of running a business and building the economic brand of the city.

## SZCZUCZYN

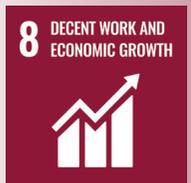
The city of Szczuczyn as a small urban-rural commune (approx. 6,500 inhabitants), along with the increase in the mobility of the population, from year to year experienced the outflow of human capital, which only intensified over time. The only chance to stop this process was to increase the economic and investment attractiveness of the city. To this end, one of the first activities was to connect investment areas to the Suwałki SEZ in 2015 and attract investors who would be the driving force behind local entrepreneurship. At the moment, 2 companies are successfully operating there (Torpol and Hartika), and in June the largest beef slaughterhouse in Poland will be opened.

A natural process was the emergence of a demand for business-related services at large production plants. However, Szczuczyn, being a commune until now, where most of the economic activity was determined by agriculture, did not have the appropriate infrastructure. The city's response to this demand was the participation in a pilot project financed from EU funds, the construction of the Local Business Incubator. The facility consists of an administrative and office part (8 offices and 3 commercial premises) and a production part (4 production halls up to 500m<sup>2</sup>). Planned commissioning is September 2022.

The project entitled "Increasing the investment competitiveness of the urban-rural commune of Szczuczyn in relation to large urban centres" is a response to the challenges related to the development of entrepreneurship. The increase in the number of



jobs and the need to commute from the neighbouring communes, as well as the increase in the prices of energy resources and energy alone, forced the city to undertake two further activities, which will be implemented under the project. The first is the creation of an energy cluster which, first of all, will give greater energy security to the production plants operating in the commune, through greater flexibility and decentralization, and will also reduce their costs. This action is planned for the fourth quarter of 2022. 77 Another activity is the construction of a new housing estate, friendly to young people, supporting activity, modern and ecological, being an attractive alternative to the standard proposed by large urban



centres. The municipality has already secured land for this project, and this week it has received the first designs for the planned buildings. Construction is scheduled to start in 2023

## ZDUŃSKA WOLA

The project entitled "Live local, work globally" will be carried out throughout 2022. It will be partially based on the city's achievements to date. It will include four sub-projects: (1) Virtual Hub of Micro-Companies, (2) Climate-Neutral Early Education, (3) Education + Work, and (4) Universal Digital Education.

Zduńska Wola operates in the spirit of open innovations. It uses innovations, especially technological ones, to improve the operation of public institutions and to provide citizens with services of an increasingly higher quality. Education remains an important component of the project. The dissemination of digital skills and inspiring the development of ICT businesses is an important impulse for the development of a modern economy which - in line with the adopted vision - although developed locally, provides services and products to global markets

### Virtual Hub of Microfirms

As part of this sub-project, the city authorities have already started a technology dialogue with digital component suppliers to jointly develop the concept of the MVP (Minimum Viable Product - a product that is minimally market-ready). The goal is to build an IT platform through which micro-companies will receive a package

of cloud computing services that allow them to easily digitize their business processes. As a result, entrepreneurs improve the management efficiency of their companies, as well as optimize processes and costs, which will allow them to increase their competitiveness. They will also receive tools to build mutual business relations and operate on the global digital market.

The project to create a Virtual Micro-Hub in Zduńska Wola won the competition for an innovative development project for the local government, organized by the Polish Development Fund (2021). The National Cloud is a partner of the local government of Zduńska Wola

### Climate Neutral Early Education

The sub-project covers the implementation of an innovative system for energy management and balancing as well as CO2 neutrality certification in one of the primary schools in Zduńska Wola. Its purpose is to optimize the use of green energy obtained from a photovoltaic system installed on the roof.

The pilot project on the municipal infrastructure is being carried out by the startup Greenstock. It will end with the distri-

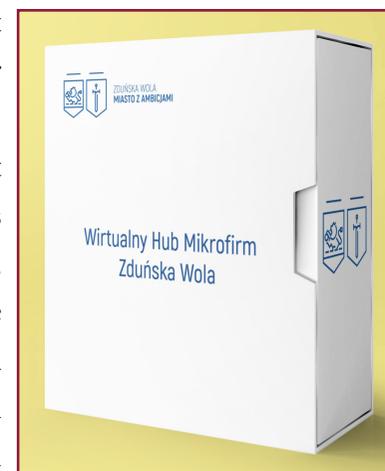


Photo 15. Virtual Hub of Microfirms.  
Source: Zduńska Wola City Hall



bution of the world's first certificates to students with a mark of their carbon footprint in education.

The City Hall is also developing design documentation for the installation of PV panels on the roofs of all primary schools and kindergartens it manages, i.e. a total of sixteen educational establishments. The aim of the measures is to create a climate neutral early childhood education system. As a result of the project, the city will popularize the following products: IT innovation efficiency analysis, a set of guidelines for building a climate-neutral education system, a certificate template for pupils.

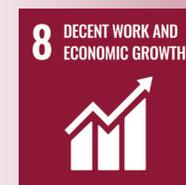
## Education + Work

As part of this sub-project, residents will have access to free online training in the use of information systems using AI for marketing automation. Thanks to this, they will gain competences for which there is a high market demand and increase the possibility of employment in e-commerce, i.e. in ecommerce. It is a broad concept that covers access to online stores, various types of structu-

red e-commerce platforms such as Allegro or Amazon, advertising portals, various forums and groups, and social media. The training will be conducted by the city's partner - Persooa, which will offer the best trainees internships or work in a distance model. After implementation, the project will be subject to efficiency analysis and recommendations.

## Universal digital education

Under this sub-project, the local government will start creating an ecosystem of universal digital skills education. Together with partners (the Municipal Cultural Centre and the University of the Third Age), the City Hall will launch a series of courses and workshops. It will also prepare open inspirational meetings, during which residents will meet people who pursue their professional and business fulfillment in the digital world.



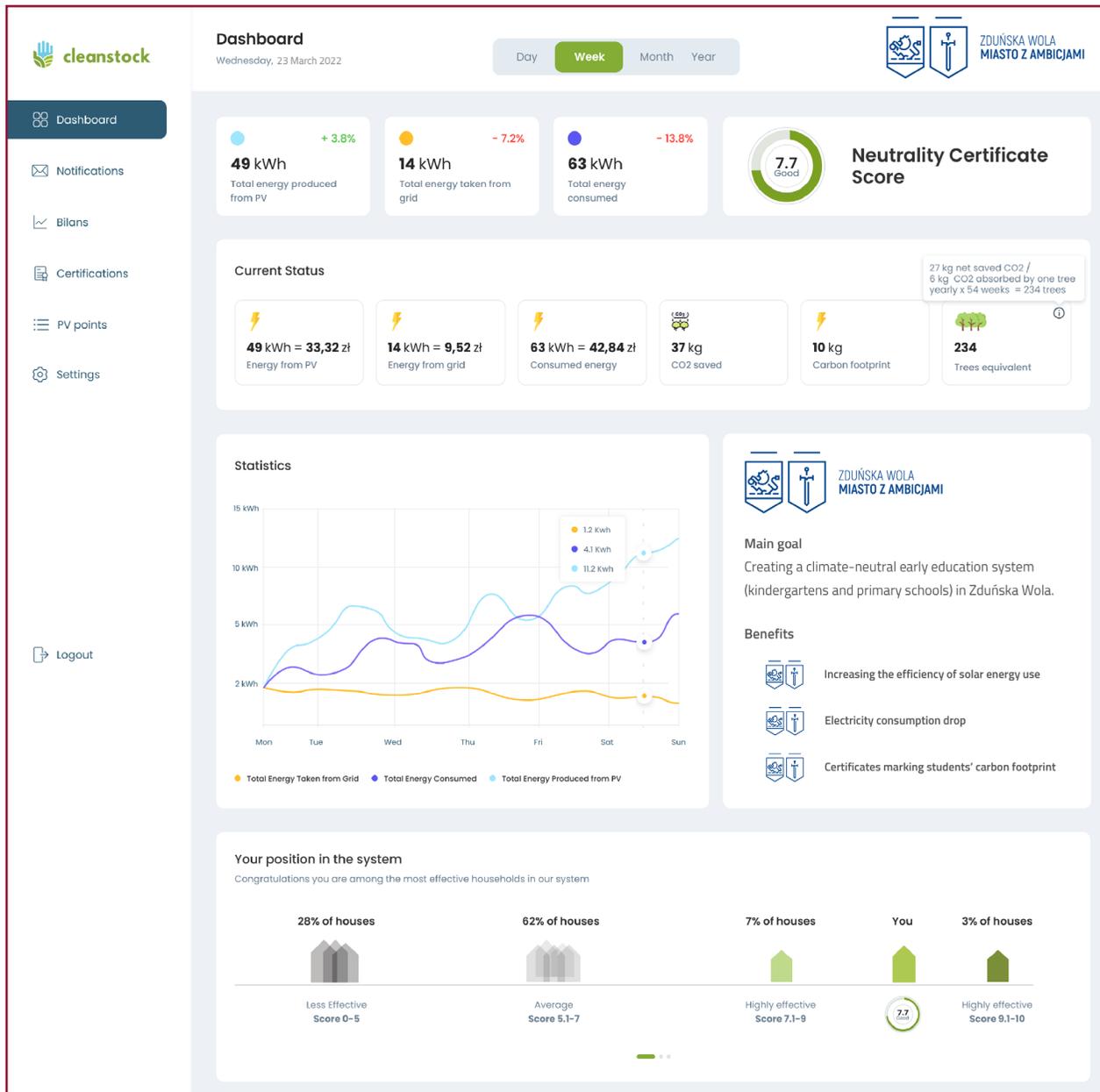
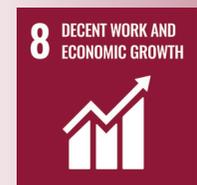


Photo 16. Virtual Hub of Microfirms. Source: Zduńska Wola City Hall



## 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

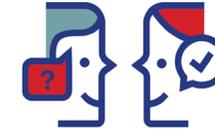


## 9. INDUSTRY, INNOVATION AND INFRASTRUCTURE

SDG's 9 tasks relate to the development of reliable, sustainable and resilient good quality infrastructure, including regional and cross-border infrastructure, supporting economic development and people's well-being. It is important to ensure equal access to affordable infrastructure for all city dwellers and to promote inclusive and sustainable industrialization. It is extremely important to increase the access of enterprises, especially small and medium-sized ones, and to improve the quality of infrastructure and to introduce sustainable development of the industry by increasing the efficiency of resource use and the use of clean and environmentally friendly technologies and production processes. In addition, research and the technological level of the industrial sector need to be strengthened, facilitated the development of a sustainable and resilient infrastructure, support for national technological development, research and innovation, and significantly increase access to information and communication technologies. Development directions should also concern the development of green and blue infrastructure, the circular economy, the promotion and development of zero-emission transport for residents and tourists, and the transition of industrial enterprises to the use of green energy. It is also necessary to improve the awareness of entrepreneurs and employees about the sustainable production process, optimize the legal and institutional environment, and develop R&D.



**2040**  
Gliwice



# INWESTYCJE MIEJSKIE

BEZEMISHYJNY W CENTRUM

PROBLEMY BEZPIECZEŃSTWA PRZECHODZĄ NA ULICACH

PROBLEM CIĄGOSY PRZESTRZENNEGO

ROZWIENIE ULICY ZMIESZCZANA

\* BRAK DOSTĘPU DO PRZESTRZENI NA INICJATYWY SPOŁECZNE  
\* BRAK LOKALI  
\* BRAK DOSTĘPU DO INFRASTRUKTURY

> PROROZUCHA - CENTRUM AKTYWNOŚCI SPOŁECZNEJ W DZIELNICACH

## MOBILNOŚĆ

FABRYKA DRUTU DO REWITALIZACJI

## KULTURA

\* GALERIA MIASTA GILWICE  
\* BRAK SYSTEMU ZARZĄDZANIA PRZESTRZENIA DLA ORGANIZACJI

SZANSĄ NA ROZWOJ ORGANIZACJI KULTURALNYCH JEST STWORZENIE GALERII, MIASTA GILWICE - ŚWIĄTYNI SZTUKI

## ROZWOJ

WYKORZYSTANIE POTENCJAŁU POLITECHNIKI ŚLĄSKIEJ  
\* INICJATYWY MIASTA NA KAMPUSIE  
\* ANGAŻOWANIE STUDENTÓW  
\* PROMOWAĆ MIASTO WSPERAJĄC POLITECHNIKĘ

\* DOSTĘPNOŚĆ PRZESTRZENI I USŁUG DLA OSÓB Z OGRANICZENIAMI  
\* ROZWOJ INFRASTRUKTURY POPRAWIAJĄCEJ BEZPIECZEŃSTWO NA DRÓGACH (PARK & DRIVE KOS & DRIVE)

## TRANSPORT PUBLICZNY



WAZNA TRASA  
DWOJEC PŁ. PIASTÓW <-> POLITECHNIKA ŚLĄSKA  
STUDENCI WĄSĄ WYKORZYSTUJĄC WYKONANIE ROZWIENIA, ALE GODZINIE JAZDU NA P3 ATEM  
\* BRAK SPRAWNYCH POŁĄCZEŃ Z INSTITUTEM ONKOLOGII

## ROWER

\* RUCH DWUSTRONNY NA JEDYNOKIERUNKOWYCH DRÓGACH  
\* TRASY DOJAZDU DO PRACY  
\* PROJEKT DLA ROWERÓW I PRZECHODZÓW NA SKRZYŻOWANIACH

WYPRACOWANIE ZINTEGROWANEGO SYSTEMU ROWEROWEGO



## GIS

\* PROBLEM KOMUNIKACJI Z JEDNOSTKAMI MIEJSKIMI  
\* WYKASZA SIĘ ENERGIA ORGANIZACJI POZARZĄDOWYCH  
\* ZABYDKO WSPARCIA SAMOPOMOCY NA PORZĄTEK PANDEMII

## INICJATYWY SPOŁECZNE

## WSPÓLPRACA

\* BRAK WIZJI WSPÓLPRACY Z MIESZKAŃCAMI  
\* POLITYKA WSPÓLPRACY POWINNA POWSTAĆ Z MIESZKAŃCAMI  
\* WYKORZYSTANIE POTENCJAŁU EKSPERCKIEGO MIESZKAŃCÓW  
\* NOWE OTWARCIE NA GRUPY ROBOCZE ORGANIZACJI



## ODPADY

\* ŚMIEĆ W PRZESTRZENI PUBLICZNEJ NA PLAC GOSPODARCY  
\* GODZINY OTWARCIA PRZOKU NIE SĄ DLA OSÓB PRACUJĄCYCH  
\* ZA MAŁO KOSZTÓW NA-MIESCIE  
\* POTRZEBA ORGANIZACJI ZBIÓREK ELEKTROŚMIECI I WIELKICH GABARYTÓW

## ĘKOLOGIA

SMOG  
JEST PRIORYTETEM!

## KONFLIKT PRZESTRZENNY

AUTA <-> DRZEWA

## ZIELEŃ

OGRODNIK MIEJSKI OSOBA, KTÓRA BĘDZIE DBAŁA O ZIELEŃ W GILWICACH

\* WTYCZNE DOP. PROJEKOWANIA I PREZENTACJI ZIELENI  
\* ZACHOWANIE KAPITAŁU PRZENIEŻANIA  
\* EDUKACJA EKOWISCIENIA  
\* WIĘCEJ ZIELENI

## CZAS WOLNY

\* USPRAWNIEŃ RUCHU ROWEROWEGO INFRASTRUKTURY W CENTRUM  
\* WYKORZYSTANIE POTENCJAŁU KŁODNICZY NA REKREACJĘ  
\* WIĘCEJ WYPARZEŃ KULTURALNYCH W CENTRUM  
\* PROBLEM Z CIEŁNOŚCIĄ OFERTY KULTURALNEJ MIASTA

PROBLEM CENTRALIZACJI KULTURY W CENTRUM

## KULTURA

\* TRUDNOŚĆ W DOSTĘPIE DO LOKALI MIEJSKICH & MOŻE LOKAL NA KULTURĘ  
\* BRAK DIAGNOZY POTRZEB ORGANIZACJI POZARZĄDOWYCH  
\* BRAK DOSTĘPU DO INFRASTRUKTURY MIEJSKIEJ



## ZDROWIE

PROPOZYCJA WYPOŻYCZALNIE SPRZĘTU REHABILITACYJNEGO



## DOSTĘPNOŚĆ

WYKORZYSTAĆ LUDZI KULTURY DO POPRAWY DOSTĘPNOŚCI DO KULTURY WYSOKIEJ

## MIEJSKIE STANDARDY DOSTĘPNOŚCI DO USŁUG MIEJSKICH

## TECHNOLOGIE

\* ROZWOJ E-MOBILNOŚCI  
\* MIEJSKIE ŁADOWNIKI STONECZNE

SKETCH BY SYLWID

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Fig. 2. A board from an online meeting with the inhabitants of the districts of the Polish army, University of Technology, March 2021. Source: Sylwia Widzisz-Pronobis.

(<https://strategia2040.gliwice.eu/eksperci>).

This method of work concerns the basic elements of the strategy: vision, strategic and operational goals, areas of strategic intervention. Other aspects:

- expected results of planned activities (also with regard to space) and indicators of their achievement;
- model of the functional and spatial structure of the city;

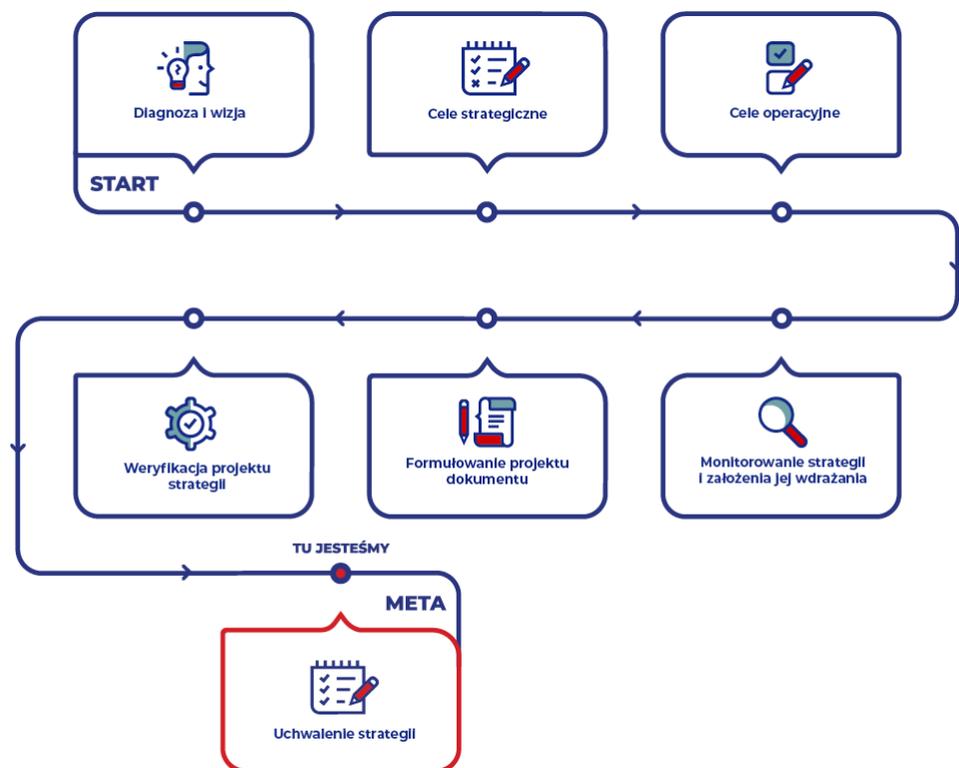
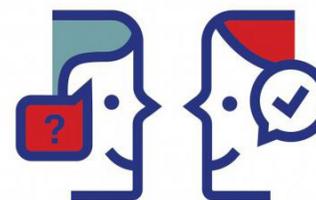


Fig. 3. The process of creating the Gliwice 2040 strategy. Source: Gliwice City Hall

#Gliwice2040

2040  
Gliwice



## Spotkajmy się!

Fig. 4. A board inviting you to a meeting as part of the work on the Gliwice 2040 strategy. Source: City Hall in Gliwice

- arrangements and recommendations in the field of shaping and conducting spatial policy in the city;
  - strategy implementation system, including guidelines for the preparation of executive documents;
  - financial framework and sources of funding
- are the subject of internal works, carried out by a leading expert with the support of an operational team, which was established in the City Hall and which developed the assumptions of the entire process and currently monitors and substantively supports it. The ready draft strategy will be fully subject to further public consultations and an independent assessment of the effectiveness of the proposed solutions.

The project assumes the adoption of a new strategy in the third quarter of 2022. The recipient of the project is the entire



community of Gliwice understood as residents, all entities operating in the city or having a direct impact on the city, including local government authorities, universities, research units, enterprises, and non-governmental organizations. In a broader perspective, the implementation of the Gliwice 2040 strategy will also affect the neighboring municipalities, the Metropolis of Upper Silesia and Zagłębie and the Silesian Voivodeship.

The process of creating the Gliwice 2040 strategy began in February 2021 with the adoption by the City Council of a resolution to commence work on the draft strategy. The resolution clearly defined that work on the new "Gliwice 2040" strategy would be carried out in a participatory approach, which is understood as broad consultations, involvement of residents and entities operating in the city, while at the same time submitting submitted proposals for discussion of established working groups.

## **MASZEWO**

Project entitled "Improving the efficiency of lighting in the municipality of Maszewo" consists in the comprehensive replacement of road lighting and park lighting with LED lighting, which will contribute to savings in electricity costs, improve the safety of residents, and reduce waste related to the repair and replacement of lamps, thanks to the lower failure rate of this type of lamps.

The project is part of the programs co-financing emission reduction activities. The replacement of lighting will apply to street routes in all localities in the commune in place of the existing li-

ghting. The replacement of lighting in the park in Maszewo will be treated separately. The investment is to be of a local nature, the commune authorities hope that its effects will contribute to building pro-ecological attitudes among the commune inhabitants. Replacing lamps with LED lamps will be a significant step in increasing energy efficiency. The commune will significantly reduce the expenditure on lighting maintenance by over PLN 1 million in 2022-2031.

All road lighting points throughout the commune and lighting points in the park in Maszewo will be replaced. The scope of these works includes: disassembly of the old lamp with the arm, installation of a new LED luminaire with an arm, power cord, fuse protection and a clamp for the neutral wire. The total number of street lamps replaced is to amount to 738. The Park LED luminaires will be installed in the park, and the number of lamps is 66. As part of the project, the local community is to perform mainly the role of the beneficiary, but its participation is also to be taken into account in the course of the investment. The expected duration of the project is till the third quarter of 2022.

The next stages of the investment will focus on the development of road infrastructure, improving the safety of residents, modernization of ineffective heat sources in the buildings of rural community centres, and modernization of the existing sewage network. The plans include the construction of a bicycle pedestrian route from Maszewo to the town of Dębice, which will significantly improve communication between towns and increase safety. In turn, new heat pumps at rural community centres will improve air quality and increase the awareness of residents regarding the modernization of heating methods.



## NOWE MIASTO

Project entitled "Nowe Miasto as a circular city - practical aspects of the implementation of a circular economy in selected areas of urban policy" is closely related to the investment project entitled "Improvement of the road infrastructure in the Nowe Miasto Commune". Investment areas for road construction include the following city streets: Ogrodowa, Pogodna, Młodzieżowa, Zaci-sze and Wspólna. As part of the investment, parking will also be made at Targowa street and the renovation of the commune road No. 300605 Wólka Szczawińska-Modzele Bartłomieje. The total number of newly created and renovated roads is 4,981.50 km.

The implementation of the investment is in line with the De-velopment Strategy of the Nowe Miasto Commune for 2015-2024. As part of the implementation of the SDG 9, Nowe Miasto performs tasks aimed at improving the city's infrastructure. Actions will be directed to green public procurement in the area of municipal investments.

## PŁOCK

As part of the Action Plan for Cities. Model locality " Płock initiated a programming marathon based on the idea of a smart city entitled "City Coders Hackathon Płock". The organizers of the event strive to implement innovative and original projects, but above all to promote the active involvement of citizens in the city life and stimulate entrepreneurial attitudes of young people, giving them specific skills that are valuable on the labor market.

The Płock Hackathon is not only about competition, program-ming and coding. The event is also an injection of comprehensive knowledge and practical advice for participants. During each edi-tion, the organizers ensure full comfort of work and high-quality food for all participants. There is also a relaxation zone with sun loungers, mattresses and massage chairs, as well as a relaxation zone where young programmers can relax at the game console or table football. The main goal of HACKATHON is to build the image of Płock as an innovative city, open to cooperation with residents, investing in their potential. Cities that think stra-tegically about their development and are ready to implement innovative solutions.

Participants in teams of three, using open databases provided by the City Hall, create applications that correspond with the topics and functionality selected by the organizers to the issues selected by the organizers. During the 36-hour marathon, the programmers are supported by mentors and experts who will provide the necessary knowledge and help improve the solutions created. In addition to purely technical knowledge in the field of coding, participants also receive support in the area of presentation, marketing and changing their ideas into a profitable business.

Project activities include the comprehensive organization of the event itself, including its promotion, recruitment of par-ticipants, mentors and partners, and the provision of attractive prizes for the winners. The experience and contacts gained during the activities can help other cities to implement their own project.





Photo 17. The third edition of City Coders Hackathon Płock. Source: Płock City Hall

The implementation of the project involves many months of preparations, which allow you to organize the event at the highest level. Hackathon is 36 hours of work not only of participants, but also of a team of carefully selected mentors, who are always divided into groups according to their specialization, so that they can provide comprehensive substantive support. High work comfort is guaranteed by a properly arranged space divided into individual zones: the main room where teams work on their projects; gastronomic zone, where meals in the form of a smorgasbord are available throughout the duration of the event; a relax zone where you can relax while playing games, listen to music or sleep on a comfortable deckchair; and a mentoring zone where project con-

sultations with experts take place. The agenda of the event always includes physical exercises, workshops and short training sessions, which are an additional dose of knowledge for young programmers.

The Płock Hackathon is always preceded by a promotional campaign with a wide range. Marketing activities reach mainly the inhabitants of Płock and the surrounding area, but thanks to communication in social media channels and publications in national media, information about the event appears throughout the country. Communication about the Płock programming marathon appears in city cinemas, buses, on billboards and posters in schools, as well as in the local press and radio. Thanks to this, effectively conducted promotional activities in the last Hackathon

Photo 18. Fourth edition of City Coders Hackathon Płock. Source: Płock City Hall





Photo 19. Fourth edition of City Coders Hackathon Płock. Source: Płock City Hall

were participants from Kutno, Warsaw and even Kielce! The growing popularity of the event allows you to establish cooperation with many partners. Thanks to this, Participants not only receive attractive material prizes, but also have a chance to participate in professional courses, acceleration programs, mentoring and investor pitching.

The main result of City Coders Hackathon Płock are applications or their projects in response to problems arising from the main issues of each edition of the event. The solutions proposed by the participants are the result of their work consulted at every stage with mentors who have the necessary knowledge and experience in a given field. At the end of the Hackathon, each team presents the project of their application to the jury - its

purpose, functionality and level of technical advancement. The winning and awarded teams have a chance to continue work on their project under the supervision of experienced specialists. It is very important for the city that, under the supervision of specialists, they can work on their first business, which may one day become a huge success!

Caring for the potential of the local community, already educated with specialist focus on the implementation of technology and innovation, is one of the key elements in the implementation of Płock's vision as an innovation and technology hub. The effect of such action will be building a civil society among young people, encouraging them to look for innovative solutions using the latest technologies. Another effect will be building and supporting entrepreneurial attitudes among the city's inhabitants. These are practices that other cities will be able to use when organizing similar events at the local level.

## RZESZÓW

The Municipality of the City of Rzeszów emphasizes the economic, social and environmental sphere for building a strong industry, investing in innovation as a factor improving productivity, promoting sustainable industrialization and strengthening investment financing. Therefore, activities under the SDG 9 are consistent, first of all, with the tasks set, also in the field of ensu-



ring high-quality education and scaling the developed solutions within the assumed challenges:

**Challenge 1.** Building a Partnership that will contribute to the implementation of the assumed challenges and thus start cooperation with a wide group of stakeholders for a new model based on the principles of "5P": People, Planet, Prosperity, Peace, Partnership.

**Challenge 2.** Creating a prototype of the 3D Printing Integrator platform (PRINT HACK - HACKATHON FOR 3D PRINTING INTEGRATION) based on the experience of Urban Lab. Integration of the city area focused on building a technological platform using artificial intelligence.

**Challenge 3.** Methodology of designing and manufacturing personalized water retention systems and small hydropower with the use of additive technologies.

**Challenge 4.** Designing and conducting a study entitled "Rzeszów as the Laboratory of the Future. The impact of 3D printing on the economy and social life of the City of Rzeszów. "

**Challenge 1.** Building a Partnership that will contribute to the implementation of the assumed challenges and thus start cooperation with a wide group of stakeholders for a new model based on the principles of "5P": People, Planet, Prosperity, Peace, Partnership.

The implementation of the challenges set in a specific area in the form of partnership will enable the implementation of valuable projects that will not only benefit the city but will also be a scalable element in the form of good practices, e.g. for Partner Cities of the City of Rzeszów. It is important that the partner (or partners)

brings added value to the project, influencing, for example, the possibility of implementing a wider material scope of the project, the possibility of maintaining the project objectives, improving the effectiveness and efficiency of the project implementation. In connection with the assumptions made for cooperation on the implementation of activities, partnerships were built between the Municipality of the City of Rzeszów and the Rzeszów University of Technology and Industry 4.0 Cluster.

Characteristics of Partners:

Rzeszów University of Technology is a public technical academic university that is part of the national education and science system. It conducts education and undertakes scientific - research and development tasks in accordance with the scientific potential of the staff in the fields of science they represent. Detailed information about the university can be found on the website: <https://w.prz.edu.pl/>

The INDUSTRY 4.0 cluster was founded as a result of an initiative by industry in cooperation with the Rzeszów University of Technology, as a response to the dynamic development of innovative computerized production support systems, automation and computerization of production processes in accordance with the idea of INDUSTRY 4.0.

**Challenge 2.** Creating a prototype of the 3D Printing Integrator platform (PRINT HACK - HACKATHON FOR 3D PRINTING INTEGRATION) based on the experience of Urban Lab. Integration of the city area focused on building a technological platform using artificial intelligence.



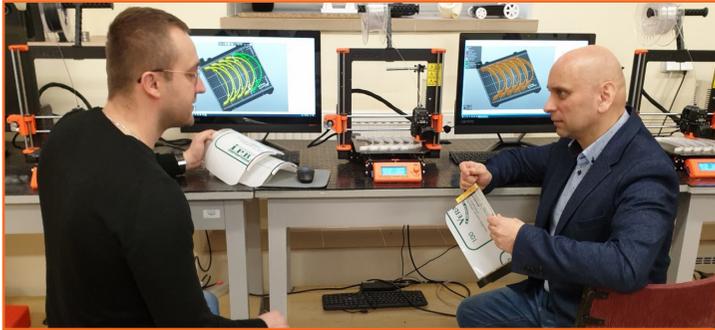


Photo 20. Equipment of the Department of Machine Design, Rzeszów University of Technology and the Team. Source: prof. dr hab. eng. G. Budzik



Photo 21. Equipment of the Department of Machine Design, Rzeszów University of Technology and the Team. Source: prof. dr hab. eng. G. Budzik

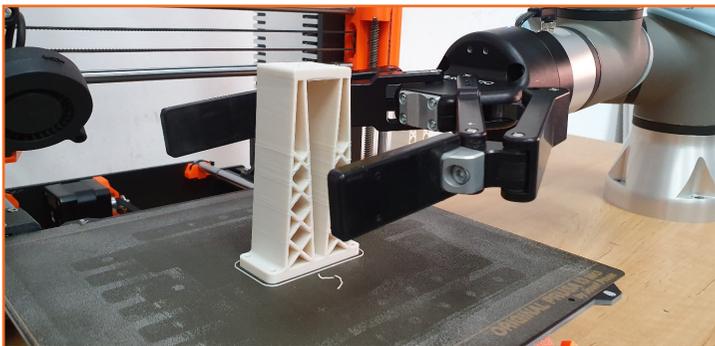


Photo 22. Equipment of the Department of Machine Design, Rzeszów University of Technology and the Team. Source: prof. dr hab. eng. G. Budzik

Hackathon is a space where experts, programmers, IT specialists and other related people with software development, such as graphic designers, interface developers and project managers are faced with the task of solving a specific problem set at the beginning of the hackathon. The Rzeszów hackathon turned out to be an important form of trying to work out an idea that could be tested in the urban space in the next stages.

One topic will be selected for the hackathon workshop recommended by the City of Rzeszów. The hackathon will be held in a stationary form with the possibility of meeting experts also in a hybrid form. The concept of the 3D Printing Integrator (ID3D) assumes the presentation of information, current trends and applications of 3D printing systems regarding educational processes, scientific research, industrial applications, production of models at home and many other areas, including medicine, advertising, art, design and museology. Users will also be able to see the current number of 3D printers submitted to the integration platform, the potential demand for 3D prints and knowledge in the area of additive technologies. It will be possible to exchange experiences in the field of 3D printing as a discussion forum dedicated to various users of 3D printers, including in the field of education, science, industry and hobby. The integrator's task will also be to create a knowledge platform both about 3D printing and in closely related areas, which include 3D-CAD modeling, 3D reconstruction, 3D scanning, software processing of data, virtual design and virtual reality. The integrator will also enable the creation of a virtual gallery of designs and 3D prints in technical and artistic areas.



**Challenge 3.** Methodology of designing and manufacturing personalized water retention systems and small hydropower with the use of additive technologies

The aim of the research task is to develop a methodology for designing and producing incremental and hybrid personalized rainwater storage and processing systems intended for applications in small hydropower and current operation in small and medium-sized households.

The implementation of the research task will allow for the development of a methodology for the design and incremental and hybrid production of personalized rainwater storage and processing systems intended for use in small hydropower and for ongoing operation in small and medium-sized households. A test stand will be built for testing small water generators, including actuators and propulsion systems, as an element of the renewable energy source system. As part of the project implementation, procedures for the identification of farm infrastructure will be developed in terms of the possibility of developing a model of a system for collecting, treating, storing and using rainwater and using it for small hydropower purposes. The key elements of small energy systems will be tested for the efficiency and reliability of the system. A technology demonstrator in the form of a small hydropower system will be developed and made, allowing for the study of the geometry of key elements of a water generator such as turbines, drive transmission systems, steering and drain systems. The system will enable it to be combined with other renewable energy modules and accumulation systems.

**Challenge 4.** Designing and conducting a study entitled "Rzeszów as the Laboratory of the Future. The impact of 3D printing on the economy and social life of the City of Rzeszów".

Modern technologies based on various methods of artificial intelligence are used in many areas of the economy and production systems. When analysing the impact of 3D printing on the economy, attention should be paid to using them to solve emerging problems in cities, e.g. climate change or in industry or smart homes. The use of artificial intelligence in the field of 3D technology development allows machines for 3D printing, modelling and scanning without operator intervention to solve emerging problems. As a result, production is simplified and automated. Moreover, artificial intelligence in 3D technology creates a wide range of possibilities to generate 3D objects, including human figures, based on photos, even those whose resolution is low. The artificial intelligence program analyzes one loaded image and on its basis creates a perfectly illuminated 3D object with a high level of realism. It was possible thanks to the analysis of thousands of photos of objects by artificial intelligence.

## USTRZYKI DOLNE

In the case of the project entitled "A new model of tourist transfer in the Bieszczady Mountains" planned to be implemented under the Action Plan for Cities, the key problem is, and at the same time a benefit, namely the development of tourism in the Bieszczady Mountains, which is currently a threat to the natural



environment, and at the same time is an opportunity for the development of the region and improvement of quality the lives of its inhabitants. As an answer to the challenge, the commune intends to build parking lots and charging stations for electric cars and to purchase electric vehicles. It is also planned to create a prototype of an electric car for tourists with a built-in Stay Wizard.

Ustrzyki Dolne is one of the most beautiful cities in Podkarpacie, especially the Bieszczady Mountains. The commune is situated in the Sanocko-Turczańskie Mountains, and a large part of its area is covered by forests. The main objective of the project is to preserve the good condition of nature by promoting ecotourism in the Carpathians and promoting innovative solutions in the field of tourism on an international scale, including the Carpathian countries.

There are following tasks scheduled to achieve:

1. Proposing a more environmentally friendly means of communication than currently used by tourists;
2. Proposing a free ways of transport or at least cheaper in operation than currently used by tourists;
3. Raising awareness and promoting pro-ecological behaviour as well as broadly understood ecological education;
4. Decreasing the importance of the human factor in servicing tourist traffic and independence from growing personnel costs in tourism;
5. Using the travel time between tourist points to obtain knowledge about the history, culture and nature of the

Bieszczady Mountains (optimization of tourism);

6. Promotion of electromobility and the use of the potential of means of communication powered by electric motors;
7. Dissemination of renewable energy sources..

As part of the project are planned:

1. Popularization of types of vehicles such as electric car, electric motorcycle and off-road four-wheeled electric vehicle, electric mountain bike, electric scooter, electric boat (battery used - innovation on a national scale);
2. Creating a Stay Wizard - an application installed on a tablet built into the vehicle, which, thanks to a programmed algorithm, will propose a travel plan to a tourist taking into account the variables - world-wide innovation / prototype;
3. Tourist points - introducing the concept of a tourist point for the purpose of the Stay Wizard; tourist points will be monuments, tourist attractions, dining facilities, accommodation;
4. Establishing a network of parking lots.

The entire project assumes counteracting climate change. The enormous interference and expansion of humans in the natural environment leads to many negative consequences, including climate warming. Ecotourism, on which this project is based, significantly reduces CO2 emissions to the atmosphere and popularizes environmentally friendly transport on a large scale. The expected duration of the project is the fourth quarter of 2022.



In order to implement the project, the present informal partnership will be established, the members of which are Ustrzyki Dolne Commune, Czarna Commune, Lutowska Commune. The project's foreign partners are the City of Galanta (Slovakia), the City of Snina (Slovakia), and the City of Boryslav (Ukraine). The cross-sector partners are the Polish Electromobility Association, the Carpathian Euroregion Poland and independent specialists. The expected scope of cooperation assumes content-related and technical consultations, joint acquisition of external funds and monitoring of the project progress.



Photo 23. Design of a multi-storey car park - part of the ecological transfer tourist model in the Ustrzyki Dolne Commune. Source: Town Hall in Ustrzyki Dolne



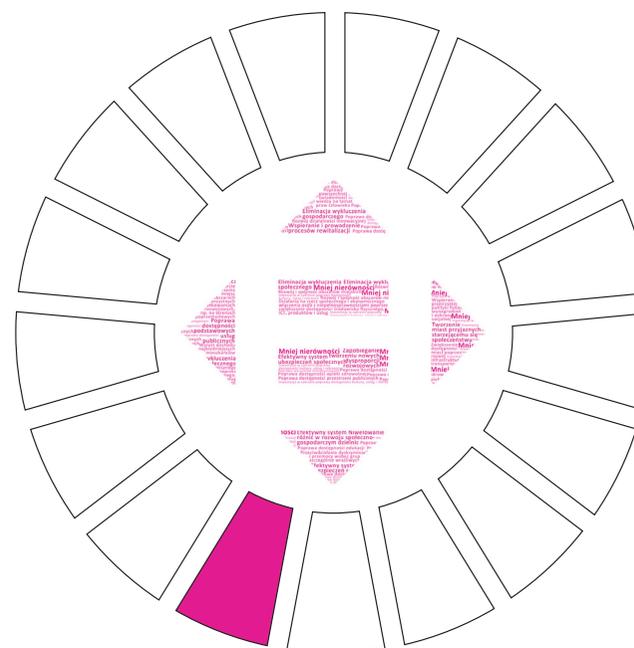
## 10. REDUCED INEQUALITIES

The SDG 10 is primarily concerned with gradually achieving and sustaining income growth for the poorest 40% of the population. It is therefore necessary to promote and strengthen the social, economic and political inclusion of all peoples irrespective of age, gender, disability, race, ethnic origin, nationality, religion or economic or other status, and to ensure equal opportunities by reducing existing inequalities by eliminating discriminatory laws, policies and practice and promote relevant legislation, policies and actions in this field. Policies, in particular fiscal, social protection and wage policies should be adopted, with greater equality gradually being achieved. Develop regulations and monitoring of global financial markets and institutions, and strengthen their implementation, and facilitate thoughtful, safe, regular and responsible migration and movement of people, including through the implementation of planned and well-managed migration policies. The preferred directions of development are supporting an effective social security system, adjusting the policy in the field of development and cohesion of urban areas, providing effective development aid, eliminating differences in the socio-economic development of districts, supporting job creation, supporting and conducting revitalization processes, and developing innovative activities. It is equally important to provide all residents, including in particular the elderly and people with disabilities, equal opportunities, improve the accessibility of public spaces and improve public awareness and knowledge about human rights and employee rights and obligations.

## BOGUCHWAŁA

An innovative project called "Towards coherence and effectiveness of actions in the field of sustainable and smart city development" is aimed at spreading knowledge among all social groups about the created monitoring system regarding environmental protection and climate change and increasing the sense of local identity of residents. The integration of these two areas, i.e. measures aimed at climate protection and measures aimed at social cohesion, is a necessary condition to achieve the desired goal. The project will be implemented in the fourth quarter of 2022.

The aim of the project will be to increase the awareness of residents, schoolchildren and entrepreneurs in the field of the monitoring system regarding environmental protection and climate change. The aim is also to increase the sense of local identity of the inhabitants, guaranteeing the social cohesion of the area through a series of meetings and thematic workshops, following the Urban Lab model, aimed at stimulating the local community to become more involved in the functioning of the urban space and developing innovative solutions to the existing problems of the city. Active participation of an informed society in planning, creating and managing cities, in particular, is extremely important. Conscious participation of residents in this process must result from the belief that creating and developing a smart city is not only a fashion and a fascination with technology, but also a genuine effort to improve living conditions. Convincing the inhabitants



to do so is a difficult task and a challenge for the city authorities. Inhabitants often do not see any benefits for themselves and are reluctant to engage in activities. Educational activities can be considered relatively easy to undertake, as they do not require significant financial outlays, but they play a very important role in the context of shaping pro-ecological and civic attitudes, in particular among the young generation, because without the appropriate social attitude, achieving the effectiveness of such activities is not possible. Intensive education and activities aimed at improving air quality and climate protection play a key role in the fight against smog.



The project involves various types of activities aimed at various social groups - the inhabitants of Boguchwała, ranging from meetings, workshops to local events.

It is planned to involve various groups: school youth, NGOs, entrepreneurs' organizations, seniors, residents operating in the city to actively participate in the planned events. As part of these initiatives, there will be discussions on space and local development, planning joint activities, as well as workshops on data management in the city or training in environmental education.

1. Activities addressed to the Youth City Council - open space workshop "Creative for Climate" and organization of the event - mural in the city - September / October 2022
2. IT workshop for local government officials and councillors - in the field of data management in the city, using public databases of the BDL, SMUP, Eurostat, - November 2022
3. Workshops for the Club of Entrepreneurs of the Boguchwała commune - on the possibility of using the scope of thermomodernization activities in enterprises as part of subsidies from various sources, as well as a circular economy for a cleaner and more competitive Europe - December 2022
4. For associations operating in the city and residents - information meeting and training on the functionality of the air monitoring system in the city and shaping public space - November 2022.

5. Joint operation of various groups - preparation of a contact database REmending - people dealing with various types of repairs, as well as the creation of REusers - point of exchange of used things - December 2022.
6. Floristic workshops for the Municipal Council of Seniors - Workshops on setting up and using plants in rain gardens - October 2022.

## **DĄBROWA GÓRNICZA**

The project entitled "Included in the city" is planned to be implemented as part of the City Action Plan by the end of the third quarter of 2022. It includes a program of micro-grants implemented by activists, social activists, informal groups and non-governmental organizations, which will contribute to the revitalization activity in the city through, inter alia, culture and art, sport and recreation, charity work for families and people with disabilities, entrepreneurship and economic development in the centre of Dąbrowa Górnicza, with particular emphasis on the area of the Factory Full of Life, with the support of an entity selected in a competition - "operator" selected on the basis of Art. 16a of the Act on Public Benefit and Volunteer Work.

The project is attractive, it is characterized by a variety of forms and the selection of methods and techniques appropriate to various groups of recipients. The choice of this form of support for the activities of local communities will contribute to the creation of a stable, sustainable and inclusive city. It allows for the



accumulation of potentials of all participants of social activities in the revitalized areas. Both in the implementation and in the selection of implemented projects (competition committee), the residents and residents as well as the users of the public space of the Factory Full of Life are involved. Residents and residents as well as other stakeholders have a direct impact on the nature, type and manner of implementation of activities in the new city centre. Thanks to the actions taken, they can in practice test functions or innovative and tailor-made solutions for the local community that build a sense of belonging and identity of a place. The model of inclusion in activities in revitalized areas, tested for three years in Dąbrowa Górnicza, can be replicated in other local communities / local governments, regardless of their size and experiences related to social and civic participation.

The goals of the project are foremost:

1. creating a concept or implementing it in the multifunctional and representative city centre space in the post-industrial area of Defum, taking into account the development of the adjacent areas of the railway station;
2. creating new and strengthening the existing business, administrative and cultural functions within the city centre, including the Priority Area of Centre Revitalization with particular emphasis on the area of the Factory Full of Life;
3. activating professional and civic potentials and strengthening the integration and cohesion of the community

living and operating in the centre of Dąbrowa Górnicza, with particular emphasis on the area of the Factory Full of Life;

4. creating a friendly public space, conducive to spending free time, undertaking cultural and artistic activities, which will have a chance to become a new showcase of Dąbrowa Górnicza - a city developed on industrial traditions - with particular emphasis on the area of the Factory Full of Life;
5. implementation of the development program for the leisure industries - culture, sport, tourism and recreation in Dąbrowa Górnicza for 2020-2023, according to which events should be carried out in one of the three development areas of these industries: Civic urban culture (developing civic activity of residents, integrating the urban community), The recreational capital of the Metropolis (creating an attractive cultural offer for both city residents and visitors from the entire Metropolis), The Forge of Talents (creating space for the development of talents for young city residents);
6. fitting the project with the strategic goals of the company the Factory Full of Life, described in the form of main promotional slogans covering 4 clearly defined spheres:
  - Factory For Climate (ecology, sustainable development, circular economy, etc.),



- Factory 3.0 (new technologies, creative industries, innovative solutions, etc.),
- Factory for Culture and Arts (cultural events, artistic activities, a vibrant place, etc.),
- Factory. Full of History (promoting the history of the place, references to Zagłębie and Dąbrowa identity, etc.).

## EŁK

The project entitled "New perspectives - time for changes" will be implemented in the second half of 2022. The project is part of the model revitalization process carried out in Śródmieście. It consists of two activities.

The first of these are the "New Perspectives" streetworkers' activities in the area of local animation and services for the local community, based on the experience of the city of Ełk. It assumes further activities in the field of services for the local community:

- organization of activities supporting the integration of families with the local environment, leading to active participation in the life of the local community,
- supporting the family in its environment and public space (squares, yards, playgrounds, etc.) through streetworker's services, specialist counselling,
- implementation of mini-projects that are initiatives of local communities,
- animation of free time for whole families and developing passions of children, adolescents and adults.

The second activity addressed to the residents of the revitalization area will be cyclical meetings entitled "Sources". They are aimed at showing the richness of the multicultural, multi-faith society of Śródmieście, using places and spaces created as part of the revitalization process (including the "Stable", historic sports hall). Multigenerational meetings, presenting various stories of growing up in Ełk will be extremely enriching for young people. They will also perpetuate the memory of the city's former inhabitants. Young people will have the opportunity to present to adults what inspires them to act and creative activity. During the meetings, stories of people, places, non-governmental organizations that exist and operate in the city, creators and artists will be presented. The presentations will take the form of discussions, lectures, exhibitions and concerts, depending on the needs of groups and individuals. As part of this multi-annual activity, two events will take place a year - in spring (a symbol of youth), the organizers of the initiative will be young people, and in autumn (a symbol of maturity), adults and the 50+ generation will be the organizers of the initiative.

The action "New Perspectives" provides for participation tools used in the work of street workers - integration meetings in the urban space, mini-projects, physical activities, art, dance and music. The task will be carried out by street workers in five yards in Ełk. It will include work with children, youth, adults and whole families outside the institution, i.e. in the environment of multi-problem families requiring support. Working in the community



will increase the chance for social integration in the immediate vicinity. As part of the planned specialist counseling, a diagnosis and an individual family support plan will be developed:

- psychological support and individual consultations of a psychologist who will react to emerging family / personality difficulties on an ongoing basis, discuss family problems, including care and educational problems;
- an addiction specialist will diagnose the family for addiction and violence.

Multigenerational events will also be organized:

- Elk Family Days - the aim of which is to promote family values, social integration, as well as active spending of free time by participating in picnics, festivals, sports activities, trips, and thematic meetings about the family;
- Intergenerational Solidarity Day - it is a day of meetings, integration and games, devoted to promoting intergenerational dialogue and solidarity and disseminating this idea among the inhabitants; the organization of the event involves non-governmental organizations associating seniors from Elk, as well as children and youth.

As part of the action "Sources" (to be implemented in the years 2022-2024), social inclusion is planned through cultural activities co-created by the participants: concerts, lectures, discussions, small theatre forms, music and theatre workshops, games with children, etc., depending on the participants' needs. In 2022, a meeting will be held. "Roots", intended primarily for young people from Elk. Special

guests will be members of the Society of Elk Enthusiasts (TME) and the Society of Friends of Grodno and Vilnius. The aim of the meeting will be to show the identity of the former inhabitants and the history of Elk, and to try to establish an intergenerational dialogue. The event will be accompanied by an exhibition, presentation and speeches of the inhabitants of Elk, which will present their stories with the help of private, archival photos and chronicles.

## MALBORK

The activities to be implemented complement part of the integrated project "Malbork for plus". Their goal is, above all, the social inclusion of the inhabitants of the revitalized spaces, the renovation of the existing green areas and the construction of small architecture. Accordingly, the following activities were scheduled:

1. identity activities in the backyards, such as: inventing the name of the yard together with the residents, developing social rules of order, appointing a yard guardian, developing neighbourly rules in the yard, conducting a campaign building a sense of responsibility, creating a common calendar of events, creating an element identifying the yard, e.g. an image, murals, mural;
2. climate actions, within which it is planned to jointly establish community gardens, including vegetable, herbal and rainy gardens, detonation of the areas adjacent to the yards, and setting up nesting boxes;



3. as part of the activities of the social partner, leadership workshops shaping entrepreneurial attitudes and activity of residents, responsibility for the environment with the participation of a tutor, and supporting grass-roots initiatives such as Neighbour's Day, Entrepreneurship Day, lighting the lights on a jointly planted Christmas tree, preceded by workshops on making Christmas decorations.

The city authorities see a further need for greater involvement of local citizens, in particular issues related to building a sense of local identity and climate aspects. The activities will take place in the revitalized spaces: Sienkiewicza Street, Orzeszkowa Street, Reymonta Street, Kasztanowy Park, and 3 Maja Square. All these places are important from the point of view of the inhabitants of the revitalization area. The project will be implemented in the second quarter of 2022.

Project activities will be implemented in accordance with the Act on Providing Accessibility to People with Special Needs. The addressees of the activities will be children, adolescents, carers, disabled people, seniors. Buildings and spaces are to be free from architectural and communication barriers, both horizontal and vertical. The use of an induction loop and an interpreter for PSL (Polish Sign Language) on-line will contribute to a better quality and promotion of a wide range of activities, which will contribute to their greater availability for participants. A proven cross-sector partner is Association of Polish Scouting, Banner of Gdańsk (ZHP), with which the city implements a revitalization project. The

partner will be responsible for the animation of children, adolescents and parents in the facilities and selected spaces. Thanks to the work done so far, the facilities gained a host, and the work of the partner was highly appreciated by the participants. Over 100 years of experience makes the ZHP a perfect fit for the animations of local activities, meetings, lectures, and integration events. All activities will take place in revitalized spaces - in the backyards in the quarter of the following streets: Sienkiewicza, Orzeszkowa, Reymonta, Krakowska, on the Chestnut Square, and on May 3 Square. All these places are important from the point of view of the inhabitants of the revitalization area.

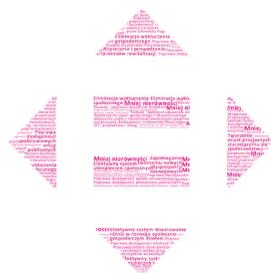
## NISKO

The municipality and the City of Nisko together with the Management Board of Municipal Buildings and Greenery in Nisko participate in the program of cascade training in the field of greenery in cities organized by the Institute of Urban and Regional Development named "Program of cascade training for employees of local governments in the design and management of greenery in cities" co-financed by the National Fund for Environmental Protection and Water Management under the priority program no. 5.5 "Ecological education".

As part of the training, we will undertake activities aimed at revitalizing green areas in our city, also as part of the project entitled "Freedom Square - a place to meet and rest". The area of lawns located at Freedom Street was selected as the site for revi-



talization. It will include new plantings and integrated benches. It will create a place of rest and relaxation for residents staying in the city as well as those using nearby buildings, e.g. a bank, restaurant or high school. The project is in the post-project phase, individual activities and implementation are being prepared. The relevant documents were submitted, and after obtaining the permit, among others for the felling of the old hedge, its implementation will begin in the spring. The expected duration of the project is the second quarter of 2022.



# 11 SUSTAINABLE CITIES AND COMMUNITIES



## 11. SUSTAINABLE CITIES AND COMMUNITIES

The main task of the SDG 11 is to ensure that all people have access to adequate, safe and affordable housing, basic services, and access to affordable and sustainable transport systems, together with improved road safety. It is very important to increase the degree of inclusion, ensuring sustainable urbanization and participation in integrated and sustainable planning and management of human settlements, as well as strengthening efforts to protect and safeguard the world's cultural and natural heritage. The tasks also include the need to significantly reduce the number of deaths as a result of natural disasters, reduce the negative indicators of the city's negative environmental impact per capita, and ensure easy and universal access to green areas. In particular, it is important to promote favourable economic, social and environmental links between urban, suburban and rural areas and significantly increase the number of cities and human settlements benefiting from the development and implementing integrated policies and plans aiming at increasing the inclusion and efficiency of resource use, mitigation and adaptation to change climate, resistance to the effects of disasters. The chosen directions of development should include sustainable strategic planning based on diagnosis and forecasts, social participation in city management, leading to safe life in cities. Additionally, sustainable mobility plans should be adopted with an emphasis on the development of public and pedestrian transport and cycling, improve the accessibility of services, buildings, public spaces for all social groups and people with special requirements, and ensure adequate access to infrastructure while maintaining spatial order.

## BIELSKO-BIAŁA

Bielsko-Biała, implementing the project entitled "Assessment of the implementation of the revitalization program of urban areas in Bielsko-Biała for 2014-2021", is currently facing the need to develop a municipal revitalization program in accordance with the Revitalization Act, which will indicate the directions and actions necessary to take in order to eliminate unfavourable social and economic phenomena, spatial, environmental and infrastructural in the area of revitalization. It is necessary to develop a final evaluation of the Revitalization Program for 2014-2021, covering the state of implementation of projects included in it and the achievement of the Program objectives. This action will make it possible to draw conclusions as to whether a satisfactory level of



Photo 24. Visualization of the 2nd Revitalization Zone area. Photo Paweł Sowa - City Hall in Bielsko-Biała



revitalization objectives has been achieved in the revitalization area as a result of the implementation of the document. A possible change in the area of revitalization should be considered. As a result of the Integrated Diagnosis of the City carried out in 2019, a degraded area was designated, and revitalization was indicated as an area of strategic intervention, key for the development of the commune. The diagnosis showed that one of the city's development goals is the need to continue comprehensive revitalization activities aimed at revitalizing degraded areas. The premise for taking such actions is also the growing number of post-industrial areas and facilities that require adaptation to



new functions. Thanks to this, it will be possible to ensure consistency between the Bielsko-Biała Strategy until 2030 and new revitalization program.

A new model of the revitalization of Bielsko-Biała - the so-called Revitalization 3.0 - Revitalization of the Bottom-Up, assumes directing more support for grass-roots initiatives of residents and involving private funds to a greater extent in revitalization activities. The document will be developed, as before in the participatory model, with the participation of a wide range of stakeholders. It will also allow project promoters to apply for funds in the new EU funding perspective for 2023-2027.

As part of the task, it is planned to carry out an analysis using the quantitative method - determining the current value of statistical indicators - adopted in the Revitalization Program for 2014-2021. The monitoring will be completed by conducting a qualitative analysis method, i.e. the public perception of the Revitalization Program for 2014-2021 will be examined using the questionnaire method, as well as monitoring changes in the physiognomy of the revitalization area. It is planned to prepare photographic documentation of the projects included in the Program. As a result of the actions taken and on the basis of the collected material, an analysis of the degree of the Revitalization Program for 2014-2021 implementation will be made, the final evaluation of its implementation will be made and recommendations for further work will be formulated on the basis of the Municipal Revitalization Program.

## CHODZIEŻ

Chodzież aspires to be a city that is friendly to live and work and fulfils the need for high-quality rest. The quality of the city's public space is being gradually improved. Chodzież has favourable natural conditions for the development of tourism, which will revive the city and the region economically. In October 2021, the technical revitalization phase was completed. The revitalization process enters the most difficult phase - social changes. Actions are taken to change the mentality of the inhabitants of the revitalization area, to activate them to pro-health activities, to social and cultural life. The final stage of the project entitled "Chodzież anew - the physical, economic, social and cultural revitalization of the city centre".

The inhabitants of the revitalization area are mainly elderly, not very active people. Until now, the integration of the local community has been deprived by the low quality of common spaces.

Attitudes reluctant to social inclusion require various forms of social communication, reaching residents with an offer of activities corresponding to their needs and possibilities. Improving social communication requires an analysis of the communication channels and practices that have been functioning so far, and the development of new solutions in this field. They will focus on several strategic social activities using the infrastructure created in the revitalization process. The following activities are planned:

- expansion of the activity of the Centre for Active Integration and Rehabilitation,



- organization of the Neighbourhood Social Garden on the estate Żeromski,
- increasing cultural activity, including in Jazz Stars Alley and the Park "Relax with Culture",
- photo exhibitions, vernissages, artistic performances, breakfast picnics, neighbourhood exchanges, estate holidays,
- launching tourist information,
- ecological activities as part of the Chodzieski Eko Ludek Program and promotion of the mobile application,
- revival of the partnership with the Chodzież rural commune in the revitalization process.

Planned project implementation date: Q4 2022. Activities will continue in the following years.

## IŁAWA

The project entitled "Jagiellońskie Housing Estate - towards the definition of the city centre" is planned to be implemented as part of the City Action Plan by the end of the second quarter of 2022.

The Jagiellońskie Estate is the first downtown housing estate built after the war (1950s) in Iława. They were built on the basis of a pre-war functional concept from the 1920s. The estate was designed as a model, with full service infrastructure (school, kindergarten, shops, restaurants, etc.). Over the years, the estate has lost most of its potential. The preserved spatial structure of the estate allows, however, to redesign the old functions and create new ones, in the conditions of participatory participation of residents. The aim of



Photo 25. Jagiellonian Housing Estate in Iława. Source: Source: City Hall in Iława

the project is to transform and design the housing estate space using the charette method. The project is to be implemented in the community planning formula with the participation of residents.

As part of the project, it is planned to involve the local community in the preparation and implementation of activities. The residents of the estate are to be the main subject of the activity and the main stakeholders, and at the same time an organized group of actors in the project, working in partnership with experts and officials. This is guaranteed by the methods of working in the formulas community planning and charette. The developed projects will be selected for implementation through social consultations.

The tasks undertaken under the project "Jagiellońskie Housing Estate - towards the definition of the city centre " will use the experience from the implementation of the micro project "Squ-



are of the Fish King" by designing and enriching the inter-block spaces of the estate with rain gardens and other small retention microforms. It is also planned to program the creation of at least one so-called "nonplayground", reduction of parking spaces with the introduction - after consultation with residents - of alternative solutions for the transport system inside the estate.

The implementation of the project assumes ensuring all types of accessibility due to the groups of residents of the estate, who represent both different age groups, as well as different resourcefulness profiles and various limitations. During the design activities, the principles of universal design will be taken into account, as well as the principles of searching for ways to break the deprivation spiral in various spheres of exclusion. Design and implementation will cover all aspects of the inhabitants' life.

## KATOWICE

The project entitled "Time for Szopienice - We are changing our cities for a better future" will be implemented in the second quarter of 2022. The activities in the project consist in the development of an integrated concept of land development located within the revitalization area of the city of Katowice, using the results of study and design workshops of multidisciplinary student teams. The participants of the workshop are students of economics and architecture, ensuring a comprehensive planning approach. The area that is the subject of students' work is located in the central part of the Szopienice-Burowiec revitalization area, i.e. in the area of Powstańców Śląskich Square in Katowice.

Due to the complexity of the approach, both in terms of analysis and planning of functional and spatial solutions. The activities in the project involve the workshop work of several "mixed" student teams, which, as part of the classes, at the University of Economics in Katowice and the Silesian University of Technology in Gliwice, carry out a detailed analysis of the indicated area, which in turn leads to the development of a comprehensive strategy for its development and the creation of variants the concept of its development. The recipients of the project are primarily the inhabitants of the Szopienice-Burowiec district, thanks to the obvious benefits of participatory design of changes in the immediate surroundings. The workshop regulations stipulate that the designed solutions should meet the needs of the local community, which is to be confirmed by the provisions of the so-called a short report involving residents in the process of developing a strategy and concept, which is an integral part of the workshop work, assessed by the workshop organizer.

The recipients of the project are also students of the above-mentioned universities who learn and gain extensive experience in the field of broadly understood urban development, revitalization, spatial planning and social participation, on the example of the existing, difficult urban tissue.

The city of Katowice is an indirect recipient of the project, which incorporates all the above benefits, in accordance with the socialized process of revitalizing degraded areas and building the potential of Katowice as an important student centre, additionally using its effects in the future activities of the City Hall.



The results of the students' work will constitute the material for the development of the Municipal Revitalization Program of the City of Katowice, which will contribute in the longer term to:

- increasing the availability of attractive public spaces enabling active spending of free time,
- increasing the amount of green areas, including biologically active areas,
- improvement of the technical condition and aesthetics of residential and service buildings in the central part of the district,
- increasing the level of local identity and identification with the district,
- changing the image of the area and the district
- improvement of the social situation in the long run.

The solutions for new land development proposed by students, developed in a participatory formula, i.e. taking into account the expectations of the local community, will constitute the basis for further activities and plans of the City in this area, including the development of the municipal revitalization program for the city of Katowice.

Local community participation is an integral part of the project. It is assumed that residents will participate at the preliminary stage (opening meeting) and through student-residents cooperation (questionnaires, walks). It is planned to involve a representative of the District Council in the work of the Evaluation Committee of the results of the workshops. At the stage of implementation

of activities, it will be possible to involve the local community under the KATOCitizen project and through the local initiative and civic budget.

An important part of the project is the future development of a quarter of tenement houses located in the City's stock, the renovation of which is planned as part of the task included in the Long-term Financial Forecast of the City of Katowice along with the demolition of utility buildings and land development. In the years 2021-2023, the task is planned to develop documentation, obtain approvals and permits.

## LESZNO

During the revitalization process, there was a need to create a comprehensive and complementary offer of three institutions: the Municipal Public Library (MPL), the Business Station and the Youth Club, in terms of including socially excluded people or people at risk of exclusion - the Residents Inclusion Program CITY SWITCH. In addition, as part of the project, it is planned to create an effective information plan entitled CITY MEGAPHONE, with the adaptation of tools in such a way that information reaches a wide group of stakeholders in revitalization. It is extremely important that the products and results developed in the project are universal and constitute a manual of good practices in the long-term perspective of the functioning of not only the above-mentioned institutions, but also other organizations and public spaces, both in Leszno and throughout Poland. The under-



taking will consist in conducting a specific revitalization audit of the functioning of the three above-mentioned institutions. The overriding goal of the project entitled "Tailor-made offer - or how to reach those we do not reach" will be to create spaces that really involve residents, especially those that are not yet activated. The following activities are planned under the project:

1. analysis of the current offer of public institutions,
2. reaching residents who do not use the offer,
3. adjusting the offer to the needs of residents of OR, using participatory and workshop techniques (design thinking, focus groups, civic cafes, development of the Program of involving residents in the activities of municipal institutions entitled CITY SWITCH,
4. creating a coherent plan of effective information on CITY MEGAPHONE about activities carried out by institutions, including assumptions for the information portal / application promoting various activities in the city,
5. development of recommendations in the form of a good practice handbook on the program and information plan among local communities, including people excluded or at risk of exclusion.

The city plans to involve the local community at each stage of the project. The revitalization committee will oversee the entire process. At the level of the Youth Club, children and young people will be involved in individual activities through various types of

workshops using the design thinking (DT) method. Another activity is prototyping as part of the Biznes Station, under which the city wants to include the residents of the Revitalization Area as well as focus groups and civic cafes. Another institution is the Municipal Public Library, which includes activities of social economy entities, institutions, residents of Revitalization Area (activities using design thinking methods, surveys in schools, face-to-face interviews).

## MIKOŁÓW

Mikolow - the garden of life, is a promotional slogan familiar to residents. The Silesian Botanical Garden is undoubtedly a showpiece of Mikolow. The city authorities appreciate this fact and want to draw on its potential. The ecological direction of Mikolov's development has been strongly marked in recent years. The city's rulers have ambitions to make Mikolow a place where environmental issues are treated at least on a par with new investments, if not more strongly.

To make this happen, cooperation between the City Hall and the Botanical Garden has been tightened. It has brought a tangible effect in the form of nearly PLN 10,000,000 raised for green-blue infrastructure investments. This is the highest funding for such a project in the country. In August 2020, Mikołów - the Garden of Life and the Silesian Botanical Garden, after months of intensive preparation, applied for funding for a wide-ranging project from the European Economic Area (so-called Norwegian Funds).



Photo 26. Poster of the "Mikolow for climate" project. Source: UM of Mikołów.



"Mikolow for climate" is a real adaptation and mitigation activity implemented by the Municipality of Mikolow. Before starting the project, an analysis of the challenges arising from the progressive climate change to which the Municipality of Mikołów is exposed was carried out. Subsequently, a number of tasks were selected that, in combination with each other and the non-project activities of the Municipality, will increase the adaptation potential of Mikolow.

The task is extensive and includes a number of sub-tasks, all of which will have a positive and ecological impact on both the city and Silesian Botanical Garden areas. Among other things, Mikolow will be enriched with:

- green bus stops - 5 bus shelters will be erected in 4 lo-

cations, and the areas around them will be covered with vegetation - this will help lower the temperature, eliminate the so-called heat islands, improving air quality and microclimate. Green shelters will also help with rainwater retention,

- a partially shaded market square - thanks to the planting of 17 trees and the necessary irrigation system,
- a bike path from Mokry along the Silesian Botanical Garden to Bujakowo,
- blue-green changes will take place in the Planty Park - the surface of the alleys will be replaced with a mineral, environmentally friendly one, the bushes around the alleys will be restored, the pond by the swimming pool will be rehabilitated, and an aerating fountain will be installed on the recently renovated pond by the Large Planty,
- Three Generations Park and Pocket Park on Bandurskiego Street will be created,
- a green parking lot next to the District Office,
- a flower meadow on Wygoda,
- a rain garden on Krawczyka St,
- flowerbeds of honey-giving plants on the promenade behind the Fire Station,
- better use will be made of solar energy - so-called green chargers and lamps using renewable energy sources will appear in the city,



There will also be a lot going on at the Silesian Botanical Garden:

- the water retention system will be renewed and strengthened, rainwater will be managed, biodiversity in the WSC space will be developed,
- the parking lot will be reconstructed - a new one with a green permeable surface will filter rainwater,
- rainwater management system will be powered by photovoltaic panels,
- a section of the Garden will be transformed into a green, off-road educational room,
- pergolas will appear over the sidewalks in the vicinity of the playground to lower the perceptible air temperature,
- the retention capacity and landscape value of the 19th-century pond in the Park in Mokrem will be restored.

All the listed tasks will be carried out in stages. They are expected to be ready before the end of 2023. Teams have been formed at both the City Hall and the Silesian Botanical Garden to work on the project.

The "Mikolow for Climate" project is a response to the climate changes the city has been experiencing recently. An ecologically minded city is a friendly city, both for its residents and the entire ecosystem.

In addition to the aforementioned project, the Municipality of Mikolow is also pursuing a sustainable urban policy especially in the field of the natural environment. The measures the municipality is taking

to improve air quality are investments in the thermal modernization of the municipal housing stock. The added value of such a project is to improve the aesthetics of urban neighborhoods and streets. In 2020, the Mikolow municipality carried out many such investments. Another measure to protect the environment was the adoption of a resolution under which property owners can apply for a subsidy for the implementation of investments involving the construction of facilities for the retention and use of rainwater and snowmelt on



Photo 27. Sample poster for the "We take care of what we have" campaign. Source: UM in Mikolow.



site. In addition, Mikolov has created a system of financial incentives for residents to help reduce emissions from the domestic and municipal sectors. In 2020, residents of Mikolov, with the help of funds from the municipal budget and the subsidy obtained, replaced a total of 186 heat sources with environmentally friendly ones, and in 2021, 550 people received subsidies for replacing heat sources. In December 2020, the municipality entered into an agreement with the Provincial Fund for Environmental Protection and Water Management, under which it accepted applications for funding in the Clean Air Program. Mikolow, together with Katowice and Siemianowice Slaskie, has been a member of the International AWAIR project since 2020, which informs residents about air quality. As of April 1, 2020, an exemption from part of the municipal waste management fee has been introduced for residents of Mikolow in connection with having a composter and composting bio-waste in it. The exemption applies to owners of properties developed with single-family residential buildings, and the condition for taking advantage of the partial exemption is the submission of a declaration by the property owner.

The educational campaign "Stop Plastic" has been carried out in Mikolov for several years, initiated in 2019 by Matthew Handel Deputy Mayor. This action is part of a larger campaign consistently implemented by the Mikołów local government called "We take care of what we have". As part of the campaign, educational campaigns are being conducted in schools, poster campaigns are being carried out, educational videos are being produced, and in addition,

municipal waste segregation garbage cans, a municipal composter in Planty Park and containers for segregation of electro-waste have appeared in the city space.

The most important and largest investment carried out by the Mykolow local government recently was the construction of a Transfer Center in 2019-2021. The name of the investment task is System of low-emission transport in the Mikołów Municipality - construction of the Transfer Center - improvement of road infrastructure. The task included the construction of a "park and ride" parking lot for 200 vehicles, covered bus stop platforms, and in the winter, heated benches powered by hybrid electricity, and even a charging point for electric cars. The aim of the investment was to increase travel comfort, improve air quality by popularizing low-emission transportation, and improve traffic in the city center. The space in this part of the center gained a more modern and aesthetically pleasing appearance.

From the scope of projects that are part of the green space of cities, the Municipality of Mikolow carried out the rehabilitation of the Big Planty pond in 2020. A brine graduation tower (Photo 44) was built on the Small Planty pond as part of the project submitted in the Civic Budget "Ciechocinek in Mikołów - brine graduation tower in the center of Mikołów".

Mikolow follows the latest trends, also in terms of urban greenery, and therefore in 2020 the first flower meadow in the city was established near the Transfer Center. Two more meadows were planted by residents in the fall of 2021 during a workshop as part of the "Metropolitan Flower Meadows" program.



In addition, a total of 2418 trees and shrubs were planted throughout the city in 2020, and as many as 4138 trees and shrubs in 2021. In selecting their locations, the city suggested, among other things, the indications of residents entered in the "Plant a Tree" application, in which Mikołów residents can submit their suggestions for locations to be planted with trees. Other applications



Photo 28. A brine graduation tower in the Little Planty. Source: Mikołów City Hall

have also been developed in Mikołów, thanks to which residents have the opportunity through their involvement to take care of order in the city. These include the "SIP Mikołów" application, the Facebook discussion group "Mikołów Report a Fault," or the Plogging Mikołów application, which was created by Sławomir Fudala, Village Head of the Mokre Village.

## OŚWIĘCIM

The project entitled "Live in Oświęcim" is a comprehensive promotional campaign aimed at increasing the number of inhabitants of the city. It runs a website with information about the local housing market offer and about the advantages of Oświęcim for settling down in this place. As part of the campaign, billboards located in the city also encourage people to settle in Oświęcim. In 2022, another edition of the campaign will be implemented.

The recipients of the project are to be people who are looking for a flat at a given moment and are considering the location where they would like to settle. The campaign is to encourage people to settle down in Oświęcim, and the website is to help them find their way around the city's real estate market. The planned date of the project implementation is the fourth quarter of 2022.

## PLESZEW

The project entitled "Model transformation of the city centre into compact Pleszew" is planned to be implemented as part of the implementation of the City Action Plan by the end of the fo-



urth quarter of 2022. The aim of the project is to increase the city's potential by creating a comprehensive concept and standards for the transformation of the Pleszew city centre in line with the idea of a sustainable city and the implementation of climate measures. The second goal of the project is to increase the knowledge and awareness of the inhabitants of the city and commune of Pleszew in the field of sustainable transformation solutions and in the field of climate by implementing an inclusive campaign.

Project activities will include solutions to reduce pollution in the city centre, noise reduction, and promote alternative means of transport and environmental activities.

The addressees of the inclusive activities will be city residents, in particular people with disabilities, parents of children up to 3 years of age, seniors, children and adolescents. The selection of addressees was aimed at ensuring high-quality activities by showing and confronting various observations (in particular as part of creating a friendly and accessible urban space).

The City and Commune of Pleszew by May 15, 2022, will obtain a study entitled Implementation of the concept of transformation of the Pleszew city centre. The scope of the study will include the following elements:

- Part I. Construction of a computational tool for forecasting and analysing traffic (traffic macromodel).
- Part II. Performing traffic forecasts for a set time horizon.
- Part III. Performing traffic simulation analysis - assessment of traffic conditions.

- Part IV. Traffic analysis for the street design concept.

The planned date of the project implementation is the fourth quarter of 2022. As part of the implementation and implementation of the project "Model transformation of the city centre into compact Pleszew", a traffic analysis will be developed for variants in the organization of car traffic on the Market Square and a program of sustainable improvement of the attractiveness of the central area, including, among others, building a model and additional traffic measurements, traffic forecast, building a simulation model, traffic analysis, recommendations for transformations in the field of climate change, accessibility and safety.

It is also planned to involve the community through such tools as diagnostic walks, mapping, public opinion polls, consultations in social media. The collected recommendations will be used to develop the concept of transformations and changes in the functions of the Marketsquare, including guidelines containing technical standards regarding architectural, information and transport accessibility in the field of adaptation to climate change. The results will be disseminated as part of an educational and information campaign on a national scale, which will include conferences, discussion panels and promotions in social media.

## **RADOMSKO**

The project entitled "The Municipal Revitalization Program for the City of Radom 2030+" consists in testing the transition from a non-statutory revitalization program to a municipal revi-



talization program. Radomsko has a Local Revitalization Program for the City until 2023, i.e. a valid document. Therefore, social communication regarding the differences between them and the areas of revitalization (non-statutory and statutory) is crucial at the stage of transition between documents. Since the beginning of work on the USAR Team, information and promotion activities regarding the planned revitalization process have been carried out on the city's website on an ongoing basis. Thanks to this, the stakeholders of the process could follow what was happening at every stage of the program development, as well as actively participate in the work being carried out - their active participation helped to better prepare the document, responding to the actual problems of the local community. The document "Municipal Revitalization Program of the City of Radomsko 2030+" was developed under the project entitled "A new model of urbanization in Poland - practical implementation of the principles of responsible urbanization and a compact city", co-financed by the National Centre for Research and Development under the Strategic Program of Scientific Research and Development Work "Social and economic development of Poland in the conditions of globalizing markets" - GOSPOSTRATEG, implemented by partners: the Institute of City and Region Development, the Ministry of Development, Labour and Technology and the Lazarski University.

The developed document contains a summary of the delimitation diagnosis carried out, a detailed diagnosis of all sub-areas

of revitalization, a description of the vision of this area after the revitalization activities carried out, as well as a description of the goals and directions of activities. In the further part of the document, a detailed description of the basic regeneration projects and admissible complementary projects as well as the assumptions of the monitoring and evaluation system are presented. According to the document, it will be possible to achieve the strategic goals of the program within ten years. After this time, a final evaluation of the timeliness and degree of implementation of the Progra will be carried out, in which the overall results of the process will be assessed.

The most important innovation, which made the project eligible for the Action Plan for Cities, due to the detailed analysis and methods of intervention planning, is the urban and architectural concept, covering all sub-areas of revitalization. The use of the operational urban planning instrument at the stage of revitalization programming made it possible to define in detail the method of implementing the revitalization process in Radomsko and to comprehensively design spatial and functional changes in the revitalization area.

In order to strengthen the process, after the adoption of the Municipal Revitalization Program of the City of Radomsko 2030+ by the City Council, it is additionally planned to establish a Special Revitalization Zone (first in the centre sub-area), thanks to which it will be possible to improve the overall technical condition of this



area. The combination of the Zone's possibilities with the content of the provisions of the concept guarantees the possibility of achieving comprehensive changes in the area of revitalization, focusing on improving the quality of life of its inhabitants and conditions for conducting economic and social activity in this area. In the "Action Plan for Cities", the procedure of adopting Municipal Revitalization Program of the City of Radomsko 2030+ will be implemented, under which the current Local Revitalization Program will be closed.

## RAWICZ

The project entitled "The City of Rawicz as a partner for sustainable development preventing the negative effects of climate change" is planned to be implemented as part of the City's Action Plan by the end of the fourth quarter of 2022.

The project consists of three separate, smaller projects:

1. design and construction of bicycle paths as part of the promotion of zero-emission means of transport,
2. building an electronic, database city management system based on the "Internet of Things" (IoT),
3. designing urban greenery (rain garden) for sustainable development and counteracting the negative effects of torrential rains.

The above activities are a model solution. The connection of the towns of Rawicz and Osiek with the bicycle path and the construction of the Park & Ride transfer centre will integrate the bicycle with other means of transport, relieve the city traffic from



Photo 29. 26th bicycle rally along the S5 route. Source: Archives of the Town Hall in Rawicz

exhaust fumes and the stream of vehicles. The direct objective of the project is to improve the level and quality of life of the Rawicz poviat community, including the Rawicz Commune and Pakosław Commune, and to reduce air pollution in the above-mentioned area through the accelerated development of clean, safe, consistent, functional and efficient forms of individual non-motorized transport. The total length of the bicycle route will be approximately 21 kilometers and will run from the Rawicz train station to Osiek through Szymanowo, Słupia Kapitulna, Chojno, Golejewko and Pakosław. Another project, concerning the S5 cycle route, uses the infrastructure of technical roads along the S5 expressway in order to connect towns in Greater Poland and Lower Silesia with the bicycle route. In partnership with the municipalities of: Bojanowo, Prusice, Rydzyna and Żmigród, the Rawicz municipality in



2021 completed the task of implementing a functional and utility program for the S5 bicycle route connecting the municipalities of: Rydzyna, Bojanowo, Rawicz, Żmigród and Prusice. The commune is implementing a project that will enable the collection and processing of socio-economic and weather data. The "Human Smart City" teleinformatic city management system will integrate data from air quality sensors, video monitoring and street lighting. The developed application for mobile devices will provide open data, will allow you to model city traffic, street lighting and control the degree of air pollution resulting from the emission of harmful gases. This system has open data and the possibility of further expansion with other elements and functions. In turn, the design of the rain garden solves the problem of flooding of urbanized areas within the centre of Rawicz and the adjacent village of Sierakowo during heavy rains and will enable the storage of rainwater. The stored water can be used for watering green areas.

Planned infrastructure projects take into account the principles of universal design. Design is based on the principle of equality more than the concept of general accessibility for people with reduced functionality. Spatial solutions provide that the basic activities will in principle meet the needs of all users and will not require special solutions. ICT solutions, in turn, are designed taking into account the principle of accessibility for people with disabilities. The project adopted the principle of social inclusion in the use of infrastructure and solutions facilitating the use of ICT applications for people aged 60+.

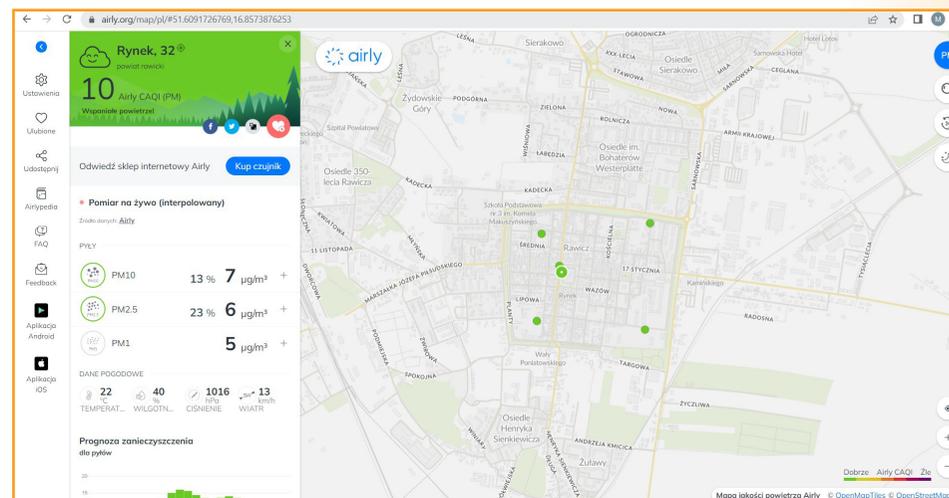


Photo 30 View of the page with the real-time air quality mapping system including air quality sensors in Rawicz. Source: <https://airly.org/map/pl/>

The participation of the local community was ensured by organizing a research bicycle rally to test the designed bicycle route. The cyclists' suggestions were taken into account when designing the route. The terms of the investment were consulted and agreed with road managers and residents.

Social participation is also planned at the stage of testing the application of the "IoT" database system by residents from various target groups, with particular emphasis on people aged 60+ and people with disabilities. As part of the project, social consultations on the implemented solutions are also planned.

The project implementation includes three activities which together are comprehensive, relating to all selected sustainable development goals:

1. Design and construction of bicycle paths in a local government partnership. Promoting the bicycle as a zero-emission means of transport between few localities in the commune and powiat.



2. Building an electronic, database city management system based on the Internet of Things (IoT), integrating data from air quality sensors, video monitoring and street lighting. The project, carried out under scientific supervision in partnership with the Warsaw University of Technology as part of the "Human Smart Cities" competition, will enable: collection and processing of socio-economic and weather data. The "Human Smart City" teleinformatic city management system will integrate data from air quality sensors, video monitoring and street lighting. The developed application for mobile devices will provide open data, will allow you to model city traffic, street lighting and control the degree of air pollution resulting from the emission of harmful gases. This system can be further expanded with other elements and functions. The project is financed by the Cohesion Fund under the Technical Assistance Operational Program.
3. Designing urban green areas for sustainable development and counteracting the negative effects of torrential rains. The partnership with the Local Action Group Association "Gościnna Wielkopolska" in Pępowo will enable the creation of a rain garden design to counteract flooding as a result of torrential rains in the strict urban development of the city. The rain garden itself will be located outside the city of Rawicz, within Sierakowo. The creation of a rain garden in the selected location will have a positive impact on preventing flooding occurring as a result of torrential rains in the urban development of the city.

The described activities may be replicated by other local governments.

## RUDA ŚLĄSKA

The aim of the project entitled "Ruda Śląska in the hands of residents - social research of public space" will be to diagnose and identify in the field with residents selected routes on which they most often move in order to get things done, and to identify obstacles that make it difficult for them to reach their chosen goals. First of all, it is about barriers that make it difficult for people from groups with special needs to deal with basic life needs and that hinder social integration. The aim is to indicate specific places with recommendations for their improvement - adaptation to all users. Specific solutions are to be feasible to implement and prepared so that they can also be implemented using the spatial prototyping method or they can be ready to be submitted by residents as projects under the civic budget. The city has extensive experience in participatory project management and document preparation. A secondary goal of the project is to strengthen and expand competences in this area. It will also be important to look for alternative ways of communicating with residents.

The intention of this activity is that the research takes place in the most natural situations possible. 'Standard' methods of public consultation, provided they are properly selected, are very effective, but have some limitations. They are mostly arranged situations. The participants must receive an invitation, it is also associated with the need to reserve time, appear at a certain place at a certain time. In other methods, it is necessary to "hit" the researchers (i.e. during a walk or a street survey). Moreover, the consultants



are somehow "outsiders" or associated with the office (this is not always a defect).

One way out of this situation is to accompany the respondents in their daily activities. Therefore, it was decided to ask for help from volunteers. The main idea of their activities will be conversations and accompanying people from the circle of relatives in their daily activities. This way, they will be able to learn about possible barriers, difficulties and inconveniences in space.

Volunteers will also be asked to design an information campaign so that its message reaches their peers as much as possible. The added value is to be a report on the activities carried out, describing the experience collected, how sensitive places or areas that create barriers are perceived. It is anticipated that the participation process will be open and may also bring other results than assumed and related to the needs of people from groups with special needs. As part of the pilot project, prototyping of selected elements of public space, such as recreational devices, street furniture, and city markings, is planned in subsequent stages.

The nature of the project and its goal is to reach the widest possible group of recipients with information, promotion, research and workshops, regardless of limitations, age, gender or various types of dysfunctions. The planned date of the project implementation is the fourth quarter of 2022.

Bearing in mind the experience of the City Hall from consultations, the city will use various forms of field research. In particular, there will be research walks, field talks / interviews, inclu-

ding with space users, local leaders, and short forms of surveys. During the research, the city will use the help of local NGOs and local community centres. People with disabilities will be asked to indicate specific barriers in the use of space and to propose the best solutions for them.

## RZESZÓW

The project entitled "The Municipality of the City of Rzeszów - social participation and good practices implementing the goals of the 2030 Agenda in the field of public transport" will be implemented by the end of 2022. The aim of the project is to build an environmentally friendly, safe, affordable and adapted to the needs of residents (including vulnerable groups: women, children, people with disabilities and the elderly) public transport system.

Due to the shortages in public transport and their cumulative negative impact (i.e. low communication speeds of public transport, poor integration of public transport types, insufficient adaptation to the needs of vulnerable groups, the need to increase passenger safety, the availability of infrastructure and information, increasing emissions of pollutants) planned is to carry out the following tasks:

1. Modern stop systems - in 2022, 55 shelters will be delivered, selected of which will be equipped with a photovoltaic installation, heating and cooling function.
2. Rzeszów Communication Centre - in 2022, work on the investment will be continued. The scope of the task includes: modernization of Dworcowy Square and public transport stops at



Bardowski street, construction of an underground car park with an underground taxi stand, connected to the underground access to the railway platforms, Kiss & Ride and Bike & Ride parking, smoothing the journey, in particular for buses, construction of the necessary pedestrian infrastructure (including people with reduced mobility) connecting the ways of transport in question. Completion of the investment is planned for 2023.

4. Purchase of a safe, quiet and ecological bus fleet - in 2022 it is planned to sign a contract for the purchase of 20 buses (vehicles powered by CNG and electricity). The buses will be a low-floor fleet of the so-called a kneeling function and wheelchair ramps in the middle door, which will make it easier for people with reduced mobility to get in and out. The buses will have a separate space for wheelchairs with the possibility of fixing them, and separate seats for disabled people accessible directly from the low floor. The voice information system inside and outside the vehicle will be a great convenience for the blind and visually impaired. The buttons for signalling the need to stop the vehicle will be described in Braille. The delivery of the rolling stock in question is scheduled for 2023.

5. E-ticket store - in 2023 it is planned to implement the function of a virtual season ticket assigned to a payment card in an online store and in mobile ticket machines. Thanks to the implementation of the task, it will be possible to assign season tickets to payment cards. It is planned to modify the user interface, update the sales application of payment sets (terminals) installed

in mobile ticket machines and modify the integration with the Central System. There will also be an online store for virtual season tickets and integration with the Fare Collection Systems (FCS). The implementation of the task will be related to, inter alia, with the functional and technical standardization of ticket machines (the implementation of the task depends on obtaining funding).

6. Social participation - public consultations aimed at improving the functioning of public transport, including: optimization of the network of public transport connections; adaptation to the needs of vulnerable groups; integration with other public transport systems; introduction of a new ticket tariff for journeys by public collective transport; other needs reported by participants of public consultations. Initial activities are scheduled for 2022, and the task is expected to continue and end in 2023). In 2022, a survey among public transport passengers is planned. The results of the survey will be presented to the public.

The investments indicated in points 1-4 are co-financed by the European Union, from the European Regional Development Fund under the Operational Program Eastern Poland 2014-2020.

The scope of the proposed tasks is a response to the defined problems and needs of the city's public transport. As a result of the project implementation, strengths and weaknesses of the implemented activities will be defined. The consequence of these activities will be the development of new solutions (good practices) aimed at building urban transport implementing the goals of the 2030 Agenda.



## SIECHNICE

The project entitled "Revitalization of the park in Radwanice, Siechnice commune" concerns the park in Radwanice. The area of the park is covered by the conservation protection zone of archaeological monuments on the basis of the Regional and Municipal Register of Monuments in accordance with the Local Spatial Development Plan of the Siechnice commune. Pursuant to the provision in the Local Development Plan, before the commencement of earthworks, archaeological research should be carried out in accordance with separate regulations

The project aims to renew the image of the park, attract residents and tourists. The detailed objectives include enriching the park's functional program, taking into account the protection of the natural and historical values of the area, improving accessibility for various age groups of users, including people with disabilities, increasing the aesthetic and decorative values of the park, including creating recreational areas appropriately for different age groups and improving the quality of the environment, including revitalization of the small retention reservoir. The implementation of the project at every stage assumes the participation of the public (including the residents of Radwanice, the Radwanice Housing Estate Council, Councillors of the City Council in Siechnice from the Radwanice district, the Revitalization Committee) in shaping the directions of the project, in the technical solutions used, in the land development and functionality of the facility.



Photo 31. Location of the park in Radwanice. Source: City Hall in Siechnice. The study prepared for the "Program of cascade training for local government employees in the design and management of greenery in cities" co-financed by the National Fund for Environmental Protection and Water Management under the priority program no. 5.5 "Ecological education"

The park is an area of natural and historical value, but requiring revitalization works: incl. replacement of small architecture elements, lighting, replacement of hardened surfaces, removal of a steel mesh fence, cleaning up green areas. There are currently about 170 trees growing in the park. There are beautiful specimens of the white poplar (*Populus alba*), English oak (*Quercus robur*), white willow (*Salix alba*), white horse chestnut (*Aesculus hippocastanum*) and two monumental trees of the common beech (*Fagus sylvatica*) located in the south-eastern part of the park. White willow (*Salix alba*) grows by the pond, on a small



peninsula. There are white chestnut trees (*Aesculus hippocastanum*) on the northern shore of the pond and a linden alley in the central part of the park. In the south-western part, at the border of the park, you can find elderberry, blackberry and wild rose bushes. There is a small retention reservoir (pond) in the park, which was cleaned and deepened in 2006, but currently requires revitalization. Squirrels and wild ducks live in the park. You can also meet pheasants here. An educational path has been marked out in the park based on the natural and scenic values.

The implementation part of the project takes place in two stages: (1) the design stage with public consultations and (2) the implementation stage - field works. The first stage was completed in 2021. In 2022, the second stage of works is scheduled to start.

In the first stage, one of the two park development concepts proposed by the project team was selected.

The project of revitalizing the park in Radwanice in terms of plant cover provides for the planting of 24 new trees, 8,622 shrubs and 4,111 perennials. In addition, a flower meadow and lawns will be built in the park. The revitalization of the park in the field of small architecture includes the construction of a park gazebo, the construction of educational paths and the installation of new benches, tables, a chess table with chairs, garbage cans, information boards, nesting boxes and bird feeders, houses for insects and dog packages. The existing lighting will be renovated and the new light points will be powered by solar energy.



Fig. 5. The concept of development of the park in Radwanowice, taken as a result of the revitalization process. Source: A study prepared for the "Program of cascade training for local government employees in the field of designing and managing greenery in cities" co-financed by the National Fund for Environmental Protection and Water Management under the priority program no. 5.5 "Ecological education"

A separate part of the project is the revitalization of the small retention reservoir located in the park. The main goal of the project is to protect water resources by increasing reservoir retention. The ecological effect will be achieved as a result of the revitalization of the existing reservoir, including the reconstruction of the reservoir's hydraulic system, renovation of hydrotechnical and drainage devices, and the development of the area directly adjacent to the reservoir, taking into account the individual character and functionality of the reservoir. In the vicinity of the park, a plot of



land has been separated for the construction of a playground for children, which is a separate project.

## TRZEBIATÓW

The investment activities of the Trzebiatów Commune planned for implementation in 2022 were included in the budget under the name of "Comprehensive reconstruction and revitalization of the market square in Trzebiatów" provide the basis for the implementation of the project included in the Local Revitalization Program for the Trzebiatów Commune for 2017-2023. The initiator of the project set the reconstruction of the city market as a goal so that the form of public space obtained in the future would constitute a basis for the development of social activity and local entrepreneurship, making its services available to both the inhabitants of the area and the increasing number of tourists visiting the city.

An impulse for local economic development would be activities consisting in the reconstruction of the previously ineffective area around the City Hall together with the surrounding street network. The aim of the project is also to reduce the inflow of cars to the centre, adapt the project to the needs of the elderly and the disabled, create two woonerf zones, new layout of the parking system and improve housing conditions along with the subsequent settlement of communal vacancies.

Another area of activities under the project is the sphere of "soft" activities, covering not only the promotion and development of entrepreneurship, but most of all active involvement of the process stakeholders in participatory activities at every stage

of the project and permanent activity of the local community, also after the completion of the "hard" investment stage of implementation project. These activities will include, among others neighborhood activity programs, a joint plan for the renovation of tenement houses around the market square, cyclical animation activities based on the historical conditions of the city, as well as an offer addressed to individual groups of residents - disabled people, lonely people, seniors and young people. The expected duration of the project is 2022.

According to the authorities' intention, the project would create an area with recreated historical values, offering both accessible public infrastructure and supporting productive and effective transformation, enabling the development of economic initiatives and pro-social activities taking place in the heart of the city.

The starting point for the initiation of the project is the active participation of local entrepreneurship in activities aimed at sustainable development of the city and the commune. Local authorities respond to the needs of residents expressed in various forms and, taking into account them, develop proposals for solutions. The city, in addition to taking into account the applications submitted during social consultations when creating the Local Revitalization Program, will develop the methods of inclusion that are best suited to the nature of the local community. In addition to standard tools, such as interviews, panels or surveys, the voice of non-governmental organizations and informal groups (e.g. neighbors, entrepreneurs) who are close to issues related to the area of revitalization will be important.

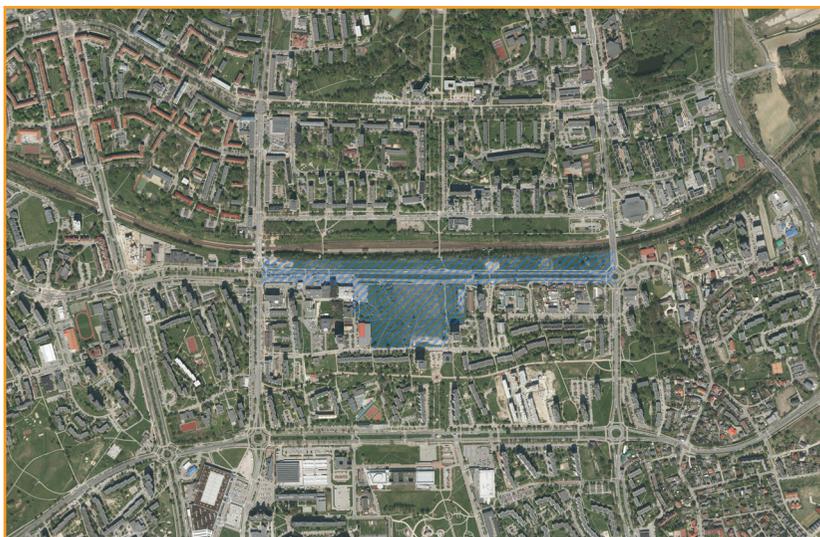


## TYCHY

The aim of the project entitled "Masterplan for the new centre of the city of Tychy - a model of strategic action for the sustainable development of the city" is the development of a masterplan for an area in the central part of Tychy with an area of approx. 15 ha, on the basis of which a sustainable process of implementation of a new city centre, which is to be multifunctional, diverse, full of greenery and for everyone.

The masterplan is to take into account urban, infrastructural, economic, social and environmental assumptions. The creation of this tool will allow a multifaceted and planned manner to carry out various activities that will not only be interconnected in space, but above all will interact with each other on the basis of synergy. An interdisciplinary approach to this process is necessary for a reliable and sustainable operation in line with current trends and the latest knowledge in the field of urban development.

Photo 32. Area covered by the masterplan development . Source: Tychy City Hall



The masterplan in terms of urban planning will allow to determine the elements crystallizing the spatial structure of the area along with the delineation of the system of public spaces and greenery (related to the surroundings and integrating the city and residents), functions and parameters of new buildings (multifunctional, compact, frontage, with a human scale), as well as rules for the development of public spaces (with priority for pedestrian and bicycle traffic, without barriers to access). In economic terms, the masterplan is to constitute the basis for the preparation of an investment offer that will generate not only financial benefits for the city's budget and investors, but most of all long-term economic and social benefits of a city-wide and supra-local range. In terms of infrastructure and environment, the assumptions of the master plan are to provide for the method of equipping the area with technical infrastructure (in the form of a communication system assuming sustainable mobility, technological tunnel or trolleybus traction) supplemented by blue-green infrastructure in the form of rain gardens, basins and retention reservoirs, greening the facade and other pro-climate activities.

The process of creating a master plan is to be transparent and socialized. The expected duration of the project is the fourth quarter of 2022. As part of the process, activities will be coordinated and all interested parties will be involved - local government, property owners, investors and residents. Residents are kept informed and involved in the process from the very beginning, currently through a survey involving over 1,600 people. The survey made it possible to determine the level of involvement and awareness of residents,



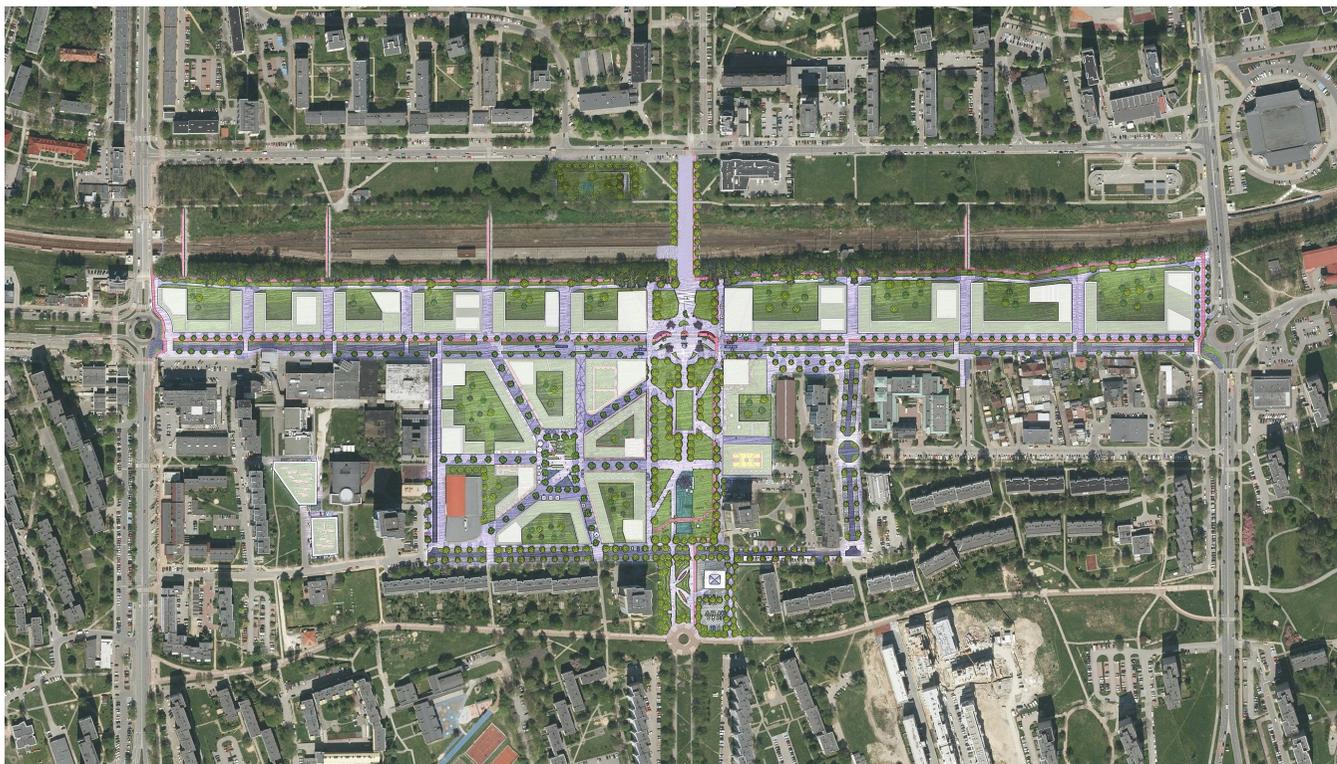


Photo 33. Masterplan design for the new Tychy city centre with a positive opinion from the Municipal Urban and Architectural Commission.  
Author: Michał Lorbiecki

in order to verify the adopted assumptions and adjust them to the investment realities.

The public presentation of the masterplan taking into account the conclusions of the public consultations is planned in May 2022.

The author of the master plan is the urban planner Michał Lorbiecki who acts as the mayor's plenipotentiary for the coordination and monitoring of projects in the field of development of the area of the new centre of the city of Tychy.

obtain information on the needs and preferences of future land development, which will then be woven into the masterplan, realizing the assumption that the centre should be for everyone. This will allow you to create a vision of development that residents will identify with.

During the project implementation, open meetings (also possible online) will be organized, during which there will be a detailed presentation of the status and effects of work, including ongoing evaluation and building awareness of residents.

Parallel to social consultations as well as analytical and design works, meetings with local, national and foreign investors are held

## WAŁCZ

As part of the project entitled "Limiting the emission of harmful substances as part of the low-emission economy for the Municipality of Wałcz and elements of sustainable urban mobility", it is planned to implement the task "Purchase of 5 low-emission diesel buses meeting EURO 6 standards".

Strengthening the system of public collective transport is to encourage residents to leave their car at home and travel to work by public transport. A very important factor that is to contribute



to the increase in the number of transported passengers is its close connection by rail and the introduction of an integrated tariff. At the same time, optimization of the route should be carried out, which should contribute to the most effective use of the means of transport by introducing a timed timetable and shortening the travel time to the main traffic generators. However, the expansion of the network and the increase in transport performance will require an increase in the number of used rolling stock. The activity consisting in the purchase of low-emission city transport rolling stock is a response to the constantly increasing car traffic index of Wałcz inhabitants, and the modernization of the city rolling stock is an incentive to travel around the city by public transport. Considerable and disruptive local traffic is mainly caused by the commuting of residents to work and shopping centres.

The Town Commune of Wałcz undertakes activities aimed at encouraging these people to change their attitude and choose a different means of transport. For this purpose, it is necessary to replace the public transport fleet with a newer, ecological one that meets EU standards and increases the comfort of movement.

Implementation of the project will allow for:

- a. limiting the decrease in the number of people traveling by public transport, and even its increase by approx. 3% - 4%,
- b) reduction in the number of people using private transport and thus a decrease in the number of cars using the network,
- c) reducing congestion and noise,

- d) decreasing in the average age of a bus by 6 years,
- e) increasing the comfort of travel,
- f) promoting pro-ecological behaviour among residents,
- g) reducing the emission of harmful substances by the buses themselves.

## WĄGROWIEC

"Green Reading Room", a project for the city of Wągrowiec, started with an idea, then there were talks, and then the works began, which transformed the unremarkable green square located between blocks at Adam Mickiewicza Street into a recreational area pleasing to the eye and pleasant for users. The project entitled "Green Reading Room" indirectly refers to the patron of the street located in the revitalized green area - Adam Mickiewicz.

On the initiative of the residents of one of the apartment blocks located on the estate at Adam Mickiewicza Street, thanks to the cooperation with the employees of the Municipal Office and the Municipal Water and Sewerage Company in Wągrowiec, the square, which previously did not encourage relaxation, turned into a quiet green corner to relax, in which warm days, you will be able to devote yourself to reading books.

According to the presented project, a path has been led through the square, next to which there are benches or deckchairs, as well as two perennial flower beds - one is made of shade-loving plants, and the other one is made of honey plants. Hotels for insects were built next to the flower beds, and nesting boxes for



birds were hung on the nearby trees. In the centre of the space designed in this way, there is a book shelf, which works on the principle of bookcrossing.

The first works on "Green Reading Room" began in autumn 2021, and the entire project was completed in April 2022.

Works on the square at Mickiewicza Street began on April 1, 2022. The initial works consisted in preparing the site, removing the top layer of earth and cutting trees and shrubs. Then the skeleton of the flower beds was set up. In the following days of work, the beds were supplemented with plant substrate and soil. The third step was planting plants and arranging elements of small architecture. The last step is to complete the whole with a bookcrossing rack and insect houses.

The reading room was realized in a month, but it will shine in full splendour at the height of the growing season, when most of the plants bloom.

## ZIELONA GÓRA

For several years, Zielona Góra has been implementing activities aimed at creating low-emission public transport, linking it with care for the comfort and safety of residents and with efforts to reduce smog in the city. The project entitled "Low-emission public transport in Zielona Góra" assumes the improvement of the quality of passenger service and the smoothing of vehicle traffic on the most heavily loaded routes. In 2020, one

of the ground-breaking public transport projects was completed. The Project provides for a number of tasks aimed at:

- elimination of harmful emissions from public transport,
- reduction of CO<sub>2</sub> emissions,
- noise reduction,
- reduction of bus operating costs,
- improve safety and facilitate the use of public transport.

For its implementation, the local government obtained funding from the EU Cohesion Fund under the Operational Program Infrastructure and Environment 2014-2020. As part of the project, the following were implemented:

- purchase of 43 electric buses powered by energy produced in the CHP Plant in Zielona Góra from cogeneration of burnt gas from local sources,
- assembly of charging stations on bus loops and at the depot,
- expansion of the passenger information system,
- construction and reconstruction of loops and stop platforms with accompanying infrastructure,
- purchase of 17 articulated buses with diesel engines, but meeting the most stringent exhaust gas purity standards,
- construction of a the Transfer Centre,
- roofing of the station platforms in order to enable comfortable pedestrian transport from the railway station to the Transfer Centre.





# 12 RESPONSIBLE CONSUMPTION AND PRODUCTION



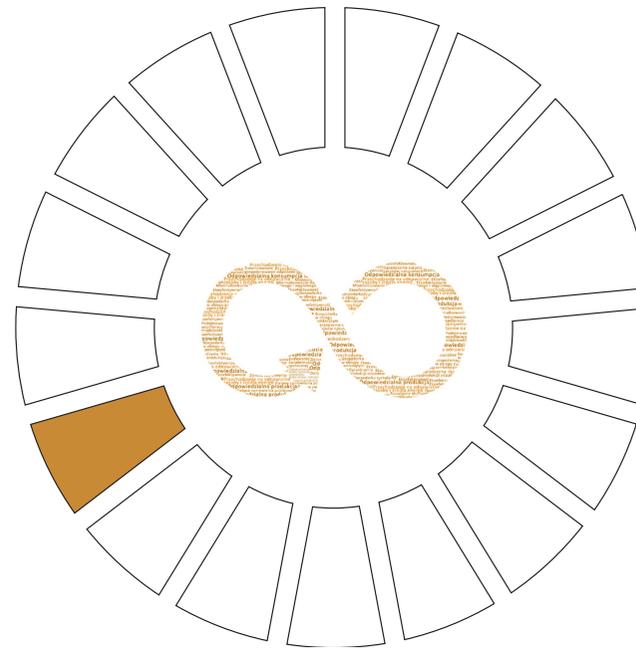
## 12. RESPONSIBLE CONSUMPTION AND PRODUCTION

Implementing sustainable consumption and production programs for all the SDG 12 countries includes ensuring the sustainable management and efficient use of natural resources, and halving global per capita food wastage in retail and consumption, and the sustainable and ecological management of chemicals and all waste throughout their entire cycle. living in line with international agreements and reducing the level of waste generation through prevention, reduction, recycling and reuse. Enterprises, in particular large and multinationals, should be encouraged to implement and include information on sustainable development practices in their regular reports, and develop and implement tools to monitor sustainable tourism that creates jobs and promotes local culture and products. It is extremely important to ensure access to relevant information and raise awareness of all people around the world about sustainable development and a lifestyle in harmony with nature. The required directions of development include, first of all, the transition to renewable resources and energy sources, reducing the consumption of natural resources, optimizing the use of raw materials, materials and energy, minimizing the environmental and carbon footprint, sustainable waste management and developing the sharing economy.

## CEGLÓW

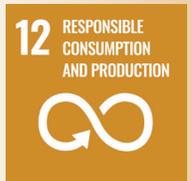
Project entitled "Expansion of the Selective Collection of Municipal Waste to improve the efficiency of the circular economy in the City and Commune of Ceglów" will contribute to reducing the negative impact of waste management, the overall effects of resource use and improving the efficiency of such use. The following tasks are included in the project:

- Collecting and storing items intended for reuse and transferring collected waste in the first place for reuse, recovery (including recycling). Both the Community and national regulations indicate the need to prevent waste generation. In order to meet this requirement, the Selective Collection of Municipal Waste plans to collect items that can be reused, and in the case of items (bulky waste) requiring minor repairs, they will be prepared for re-use by giving them functional properties. In the re-use room, items provided by residents will be collected and stored, which can be reused by other people. This will minimize the amount of waste generated.
- Limiting the process of creating the so-called "Wild landfills", reducing the amount of biodegradable waste going to landfill and increasing the level of recovery and recycling of municipal waste.
- Improving separate collection of waste at source and creating a network of modern municipal waste treatment installations that will ensure management of the most problematic municipi-



pal waste in accordance with the waste hierarchy and that it is possible to achieve the required levels of limitation of landfilling of biodegradable municipal waste, as well as the levels of preparation for recycling use, recycling and recovery of some fractions of municipal waste by other methods.

- The expansion of home composters and composting for the Selective Collection of Municipal Waste will reduce the amount of biodegradable waste stored in landfills by increasing the mass of waste subject to reuse and recovery. Ultimately, this will result in lower emissions of greenhouse gases to the



atmosphere, in particular methane produced from anaerobic decomposition of organic matter in a landfill.

- Construction of a photovoltaic installation that will power the Selective Collection of Municipal Waste facilities and devices, which will make the facility "energy self-sufficient". Photovoltaic installations are among the most nature-friendly, clean sources of electricity. They do not produce pollution, noise, carbon dioxide and do not have a negative impact on the natural environment. They can also be recycled after being technically worn out.
- Construction of an educational room and educational paths to increase the awareness and personal responsibility of each person for the protection of the natural environment and its resources through rational resource management and climate protection.

The project is expected to have a positive impact on climate change, in particular through its indirect impact on reducing greenhouse gas emissions. The waste collected in the Selective Collection of Municipal Waste will first be prepared for re-use, i.e. a process eliminating the need for further management of this waste in other installations, and thus also its transport and further processing causing emissions. Collecting non-reusable waste into larger containers and transporting it once to a treatment facility is also a solution to minimize the greenhouse gas emissions associated with transport.

The project implementation will be combined with information and promotion activities. The main focus of the activities will be:

- preventing the generation of municipal waste,
- separate collection of municipal waste, including biodegradable municipal waste, green waste,
- handing over municipal waste to the Selective Collection of Municipal Waste.

An educational room will be built on the premises of the expanded Selective Collection of Municipal Waste, where lectures and talks (mainly with children and school youth) will be conducted on the subject of:

- principles of operation of the Selective Collection of Municipal Waste and the entire municipal waste management system, principles of selective municipal waste collection and further methods of municipal waste management,
- waste management hierarchy,
- waste prevention, including e.g. a collection point for items for re-use, presenting examples of waste recycling, composting waste in home composters.

## **ELBLĄG**

The project entitled "Elbląg towards a circular economy" is carried out on behalf of the city by Waste Utilization Company. The main activity is "Modernization of the MBP installation in order to conduct organic recycling and preparation of the waste



stream collected selectively for further processes", under OP Infrastructure and Environment 2014-2020 measure 2.2. Municipal waste management.



Photo 34. Biodegma Waste Utilization Company Elbląg Composting Plant. Source: Archives of the Waste Utilization Company Elbląg

As part of the MBP modernization project, a waste composting plant will be built with a capacity of 6000 Mg / year for waste selectively collected in the form of closed bioreactors, the construction of yards and a biofilter, the transfer of the existing Biodegma composting plant and the reconstruction of a part of the biological waste treatment installation with a size > 80 mm is also planned. The aim of the project is to increase the levels of recovery and reduce the amount of landfilling. In the process of composting the waste, a soil improver will be obtained or the generated waste will be managed in other processes.

The second of the notified activities is the Selective Collection of Municipal Waste construction plan with a separate zone for collecting segregated waste and a zone for storing used things intended for re-use, renovation or repair.

Elbląg has a Selective Collection of Municipal Waste on the premises of the Plant, which is used by residents to hand over waste selectively collected in the household. In the near future, Elbląg plans to build a second Selective Collection of Municipal Waste with a separate zone for collecting segregated waste and a zone for storing used things intended for re-use, renovation or repair. The new Selective Collection of Municipal Waste is to have a location convenient for residents in a different part of the city. In the new one location, the resident of Elbląg will be able to deal with two matters at the same time and take advantage of the educational offer of the point.



Photo 35. Existing Selective Collection of Municipal Waste at the Waste Disposal Plant in Elbląg. Source: Archives of the Waste Utilization Company Elbląg



Raising the awareness of residents is no less important than hard investments. Involving the local community by the Waste Utilization Company Elbląg to participate in projects in the field of circular economy includes, inter alia, on:

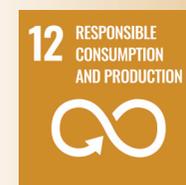
- conducting educational classes on, above all, the rules of segregating waste connected with a trip on the premises of the Plant;
- organization of the year-round "Competition for the selective collection of waste in educational institutions" (Elbląg and municipalities: Tolkmicko, Markusy, Milejewo, Gronowo Elbląskie). In the school year 2021/2022, the XXVI edition of the competition is taking place, which consists in the selective collection of waste and the implementation of a project in the ecological education category;
- inviting educational institutions from the Elbląg installation area to participate in the Ecological Online Festival EKOfeston in order to celebrate the Earth Day on April 22, the Waste Disposal Plant was a partner of the campaign in 2021 and 2022;
- "GOZFESTIVAL do not waste, repair, replace" is a one-day outdoor event of an educational nature for the inhabitants of Elbląg and the surrounding area (June 11, 2022). In return for the sorted waste they bring, the residents will receive prizes: trees, flowers, and gadgets. They will also be able to bring items used to share on the so-called POP

(Item Circulation) during the event. An educational program will be carried out during the festival: theatre with scenes showing model behaviour in line with the idea of circular economy, recycling workshops, educational games and activities.

## KRAKÓW

As part of the "Action Plan for Cities" program, Krakow submitted a project entitled "Implementation of educational activities related to responsible consumption and production". The project is part of the "Integrated city, managing in a creative and innovative way" included in the "Circular Krakow Strategy", concerning the flow of information and education in the field of circular economy, and its main task is to promote these activities. It consists in reaching the widest possible group of recipients with the knowledge about responsible consumption and production. This knowledge is based on new technologies related to the circular economy. Educational activities are aimed at employees of municipalities, universities, non-governmental organizations (e.g. the Polish Zero Waste Association), as well as entrepreneurs, scientists and, above all, residents. The project will be implemented in 2023.

In practice, the project includes a series of educational activities aimed at deepening the knowledge of all groups mentioned above about the circular economy and using the innovative po-



tential of cross-sector cooperation. The basic planned educational activities are:

- 1) circular economy training for city officials to assimilate the main principles and standardize knowledge between departments so that employees are focused on actively implementing the principles of circular economy;
- 2) building a network of "masters" of circular economy initiating cooperation between sectors;
- 3) building a platform for the exchange of knowledge about high-value synergies between industries.

Implementation projects - Krakow food processing centre and the Zero Waste Tourism Agreement - are of no lesser educational importance, but they remain outside the city's area of activity.

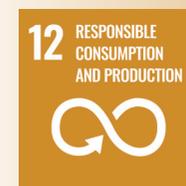
Thanks to the exchange of experiences, training and cooperation, new solutions are to be created, taking advantage of the synergy of activities of various environments. Solutions based on responsible consumption and production fit into the concept of the so-called industrial symbiosis, the idea of which is to use or recover products derived from unprocessed or unused materials and raw materials. Thanks to this, it is possible not only to reduce the amount of waste, but also significantly reduce the costs of obtaining raw materials.

A separate group of recipients are tourists, for whom measures are taken to promote the shift towards more sustainable tourism, such as the elimination of disposable cutlery and plates. The necessity to take this type of action is due to the fact that,

with the population of Krakow amounting to 779,100 in 2019, the number of tourists visiting Krakow was 14,000,000. Of these, 10,750,000 were domestic tourists, and 3,000,000 were foreign tourists. Due to the 2020-2022 pandemic, and then the war in Ukraine, the number of tourists has decreased, but Krakow is still the most attractive Polish city for tourist traffic. Creating responsible habits among tourists is therefore an important element of managing the consumption of the entire city.

"Circular Economy Training for City Officials" will be conducted to assimilate the main principles and unify knowledge between departments. The expected result will be a faster transformation of officials' ideas into an action strategy. One of the universities in Krakow or an external consulting company will support this training.

"Building a network of circular management masters initiating cross-sector cooperation" aims to stimulate cooperation between universities, schools, NGOs and the municipality, such as the creation of an Environmental Education Centre. An example is also the cooperation between graduates of local universities and graduates of creative industries, resulting in raising awareness and stimulating cooperation between participants regarding activities related to circular economy. In addition, the action is aimed at, inter alia, introducing a system of incentives for City units implementing circular economy as well as developing a map of repair and service points for residents. Beginning stakeholders, later "masters", may be universities, non-governmental organizations,



classes in individual schools, municipal self-government, private companies. Meetings can be held at city events and platforms where participants can meet, exchange and collaborate.

"Knowledge about high-value synergies between industries" allows you to collect information about possible industrial synergies used, inter alia, through Krakow industrial parks (e.g. Nowa Huta). Education for entrepreneurs in the field of circular economy can help their industry in identifying opportunities for the exchange of resources and the joint use of infrastructure. It can also strengthen cooperation with scientists leading to improved effectiveness of activities.

In addition to the three key educational projects mentioned, the city will undertake activities related to the promotion of two other projects aimed at restaurateurs and the tourism industry aimed at reducing waste and building awareness of unused food and creating value from it.

The "Krakow Food Processing Centre" is a project-place where local restaurants and entrepreneurs can transform unused food into valuable products such as sauces, soups or pickles. This place may also have an educational dimension, especially for the young generation, where it will be possible to exchange ideas of residents with existing social organizations and owners of small food companies.

The "zero waste tourism agreement" applies to almost all major entities in the tourism industry (gastronomy and hotel

industry, travel agencies, museums). As part of the project, these entities sign a commitment to gradually reduce the amount of waste generated by tourists. An educational campaign will be conducted among these entities. Obligations include a ban on the use of non-recyclable cutlery or food packaging, as well as the dissemination of zero waste awareness when exploring the city.

## **MSZCZONÓW**

The project entitled "Selective collection of municipal waste" at the source "in the Mszczonów Commune will consist in the design and construction of a Municipal Waste Selective Collection Point, where municipal waste, supplied by the residents of the Mszczonów Commune, will be collected and stored.

Municipal Waste Selective Collection Point will be a fenced area with a hardened yard and a storage shed, as well as a storage room and a social and office room, around which an educational path will be constructed. Planting decorative and insulating greenery is planned around the paved square and along the path. The project includes supervision, construction works, purchase of Municipal Waste Selective Collection Point equipment, promotional and information activities related to the project. As part of the collection point equipment, it is planned to purchase, among others containers and bins for segregating individual types of waste, wheel loader with accessories (sweeper, pallet lifter, bucket, crocodile), overrun car scales with assembly and software (40 t), two light car



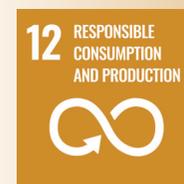
trailers, wood chipper, power generator, information boards and educational facilities, benches by the educational path, workshop equipment, equipment for the social and office container.

The construction of the Municipal Waste Selective Collection Point aims to create conditions for the inhabitants of the commune to conduct comprehensive, selective collection of municipal waste. The inhabitants of the commune will select the waste they produce "at source" in order to separate appropriate fractions from them, which they will deliver to the appropriate containers, bins and rooms constituting the equipment of the Municipal Waste Selective Collection Point. The construction and subsequent operation of the selection point will aim to improve the condition of the natural environment. Through the implementation of the investment, the public awareness of the need to segregate waste, the recovery of secondary raw materials, and the lack of the possibility of landfilling biodegradable waste will increase. The infrastructure necessary to carry out selective waste collection will be provided, residents will be allowed to transfer municipal waste to Municipal Waste Selective Collection Point free of charge, the amount of selectively collected waste will increase, the pro-ecological attitude of residents will be developed, the mixing of selectively collected waste will be prevented and the formation of "illegal landfills". The Municipal Waste Selective Collection Point provides for the creation of a collection point and preparation for re-use of used items and waste, in order to re-use waste and prevent its formation..

## OPOLE

The purpose of the activities undertaken under the project entitled "Closed loop in the management of plastic waste, including the issuing of administrative decisions" will be the analysis of available solutions for the recovery and recycling of waste plastics, regulating the solutions used in the aspect of waste processing and developing a scheme of administrative proceedings to assist entrepreneurs in this regard / companies. The problem is to manage this type of waste so that as little as possible of this type of waste goes to neutralization and to achieve an appropriate level of treatment of this type of waste through recycling.

Participation in the project is dictated by the huge scale of production of waste plastics and the potential impact of this type of waste (without proper management) on all components of the environment and on human life and health. Waste plastics are collected selectively through the selective collection system and it is regulated in the applicable regulations. In the case of the processing / recovery of waste plastics, and especially waste recycling, there are currently no unambiguous legal and process solutions for this type of waste. Attention should also be paid to the level of processing of waste plastics. The project activities will help to answer the following questions: when can the waste plastics treatment process qualify as recycling; what technical and legal conditions in terms of environmental protection must be met by the installation for processing plastic waste; what parameters must the product / raw



material for processing plastics have and whether the final use of the product / raw material will not pose an environmental risk.

A detailed analysis of the answers to the above-mentioned issues will allow for the development of a uniform scheme of administrative decisions issued (i.e. decisions, permits, permits) and will be helpful for entrepreneurs dealing with plastic waste management.

## PIŁA

The project entitled "Closing the bio-waste circulation within the city" is carried out on the basis of a consortium agreement between the Company Piła GWDA and the Academy of Applied Sciences in Piła and the Chamber of Commerce of Northern Greater Poland in Piła.

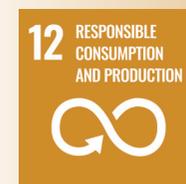
In April 2022, the RES Centre commenced the first scientific research in the field of compressed air and its use for energy storage. Although this technology has been known for several decades, today it is gaining more and more importance due to the growing popularity of renewable energy sources that operate with very variable efficiency (in particular wind farms). Compressed air energy storage installations have a chance to play a significant role in power systems with an increasing share of generation from renewable sources. The infrastructure and equipment of the Centre is the most modern solution in the field of research on new materials and technologies in the renewable energy sector ([oze.gwda.pl](http://oze.gwda.pl)).

## POZNAŃ

Project entitled "Implementing the idea of sustainable development of the city of Poznań by improving the energy efficiency of public buildings and expanding the network of municipal selective collection points for municipal waste" consists of two activities.

The first is to reduce electricity and heat consumption by increasing the energy efficiency of buildings. To achieve this, the City plans to develop and perform energy audits including energy consumption analysis, determination of the technical condition of facilities and assessment of economic profitability and possible energy savings through further action, e.g. thermomodernisation. By carrying out the above process, it will be possible, among others, to optimize energy consumption in public utility buildings. A parallel effect will be a positive impact on the protection of the natural environment.

The aim of the next action under the project, i.e. the expansion of the municipal network of the Municipal Selective Waste Collection Points (PSZOK), is to increase the amount of municipal waste that will be reused, recycled or recovered by other methods. In addition, PSZOKs planned in subsequent locations are intended to help the residents of particular regions and districts of the city get rid of problem waste, in accordance with the waste management hierarchy. Waste transferred to PSZOK by the inhabitants of Poznań will be managed in an environmentally safe manner. Thanks to the construction of new PSZOKs, the local government



will effectively increase the levels of recovery and recycling required to achieve in the near future, indicated in strategic and planning documents at the national and regional level.

## **RAWA MAZOWIECKA**

Rawa Mazowiecka is implementing a project entitled "Rawa Mazowiecka in a closed circuit - practical aspects of implementing a circular economy in selected areas of urban policy". It is very important to plan and implement activities in the field of environmental education at the local level aimed at shaping the awareness of residents manifested in their specific activities related to the care for the surrounding environment. Therefore, educational activities, which so far in Rawa Mazowiecka have been directed mainly to children and adolescents, should also include adult residents, because they have the greatest impact on the current state of the environment. The conducted educational activities focus, among others, on the correct handling of waste.

Waste Electrical and Electronic Equipment - "e-waste" for short - includes a wide range of products that are discarded after a certain period of use. Most often, large-scale household appliances, such as washing machines and electric stoves, which account for over half of all e-waste collected, are collected. The next places in this classification are IT and telecommunications devices (laptops, printers), consumer devices and photovoltaic panels (video cameras, fluorescent lamps) and small household appliances (vacuum

cleaners, toasters). All other categories, such as electric tools and medical devices, together account for only 8.4% of e-waste collected. In the EU, less than 40% of all e-waste is recycled, the rest remains unsorted.

In March 2020, the European Commission unveiled a new Circular Economy Action Plan with e-waste reduction as one of the key priorities. The proposal sets out concrete goals for now, such as "right to right" and general improvement of reusability, introducing a universal charger and setting up a reward system to encourage recycling of electronics.

End-of-life electrical and electronic devices are a source of many raw materials, such as gold, silver, copper and aluminum, which can be reused. For this to happen, however, they must first go to an electrowaste collection point, and then to a treatment facility, where they are disassembled and the raw materials recovered. The recovery of raw materials and their use in the production of new devices significantly reduces the use of natural resources and contributes to lower technological costs. That is why it is so important that used electrical and electronic equipment does not end up in mixed waste, but at appropriate points such as PSZOK, or the Municipal Electro-Waste Point in Rawa Mazowiecka, created for the collection of small electrical equipment. The key thing is to collect them and transfer them to the appropriate place of their development. As a result, it will be possible to recover raw materials, and this is the next step to achieving the objectives of the circular economy.





Photo 36. Municipal Electrical Waste Point. Source: Arch. ZGO AQUARIUM Ltd.

The municipal company ZGO Aquarium Ltd. established the Municipal Electrical Waste Point in Rawa Mazowiecka.

It is a device that allows you to collect small electronics and hazardous waste. The Municipal Electrical Waste Point is a response to the challenge of educating the public on the segregation of hazardous waste.

The device combines several functions:

- informative - signals the problem of electro waste, the need for its separate segregation;
- collecting sorted electro-waste - 7 tubes with a capacity of 33 litres each are containers where you can throw waste such as: light bulbs, batteries, telephones, chargers, CDs, toners.

Additionally, it has an educational function in the field of segregation. Thanks to this, residents will not have to carry small electro-waste to the Municipal Selective Waste Collection Points to Pukinin. It will certainly improve the segregation of waste in Rawa Mazowiecka.

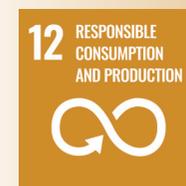
## RYBNIK

Aimed at achieving SDG 12. Responsible production and consumption project entitled "The Rybnik model of action for sustainable consumption and production" is planned to be implemented as part of the City Action Plan by the end of the fourth quarter of 2022.

As part of the StratKIT project, the Sustainable Public Meal Toolkit and the Principles of Sustainable Public Meal were developed, co-authored by Rybnik. Eight principles, designed for institutions and enterprises operating in the public procurement and catering services sector, taking into account on the one hand - agricultural production and on the other - customers, aim to support the broader sustainable development goals (<https://interreg-baltic.eu/project/stratkit/>).

The aim of the project is to create an action model taking into account the conduct of tenders / inquiries, taking into account social and environmental aspects, and the implementation of a reusable packaging system. In the Rybnik model, the principles of a balanced meal will be developed, covering aspects from public procurement to involving stakeholders in meal planning or reducing food waste, in particular purchased from public funds, and reducing the consumption of disposable packaging.

Raising stakeholder awareness is key to highlighting the broad spectrum of opportunities that public meals offer to promote sustainable consumption. Stakeholders to whom the project is



addressed should be made aware of the possibilities at their disposal and be able to consult at every stage. The model assumes the inclusion of officials, authorizing officers and kitchen staff, entrepreneurs, decision makers, consumers and parents in the project implementation process.



Fig. 6. All stakeholders should be involved in the issue of sustainable public meals. Source: excerpt from the video on sustainable public meals, <https://www.sustainable-public-meal.eu/pl/>, developed as part of the StratKIT project by agathaer and avidere

Another effective tool for the implementation of the SDG 12 is counteracting food waste, reducing the amount of food waste and disposable tableware, through the implementation and promotion of reusable packaging reimbursement systems. Environmental and social considerations can be incorporated into procurement activities. Food choices can be shaped to moderate the climate

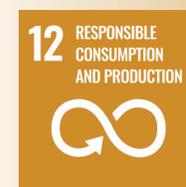
impact of production and trade. It is also worth implementing circular or resource efficiency procedures and activities related to social aspects in public procurement.

Activities for residents (including those with special needs) will be carried out in accordance with accessibility standards, in terms of architectural, information, communication and digital accessibility, which will be supervised by the accessibility coordinator. Documents will be created in accordance with the WCAG International Accessibility Standards and in accordance with the principles of visibility, functionality and comprehensibility.

As part of the project, the city of Rybnik plans to implement six main activities:

1) Continuation of Rybnik's participation in the City Interest Group activities, coordinated by ICLEI and including other Polish cities (for which the food policy is important), as well as extending the discussion area to other mass catering places. In addition, Rybnik will take part in the Procura + competition organized by ICLEI, which awards innovative activities in the field of public procurement, consistent with the principle of sustainable development, based on the circular economy.

2) Establishing contacts with other cities in which the process of transforming the food system has already been initiated (e.g. Warsaw or Izabelin) and transferring good practices to the Rybnik area.



3) Developing the scope of tasks and locating in the city structure a coordinator of balanced meals / specialist for sustainable nutrition / city dietitian, using good practices of other Polish cities (e.g. Leżajsk, Izabelin).

4) Reactivation after the COVID-19 pandemic of the Rybnik city capped reusable cup and extension of its operation to commercial catering entities. Rybnik wants to base on good practices, among others Gdańsk and Gdynia.

5) Introduction of a municipal system of reusable, depositable take-out dishes in Rybnik's commercial entities (along with the creation of a network of gastronomic entrepreneurs who do not use disposable dishes).

6) Including food and catering services in public procurement, implemented by Rybnik units, environmental and social criteria (green and ethical public procurement).

## SOSNOWIEC

In 2022, Municipal Waste Management Enterprise in Sosnowiec plans to expand educational activities by:

- inviting residents to participate in the conference "Sosnowiec for the climate - the climate for Sosnowiec" - organization of workshops on sewing reusable bags for vegetables and fruit and ecological animations.

- introduction of the EkoApp, mobile application for the inhabitants of Sosnowiec. The application will be a tool supporting



Photo 37. EkoApp for the inhabitants of Sosnowiec. Source: Municipal Waste Management Enterprise in Sosnowiec

city residents in their daily waste segregation. There will be a "Waste Dictionary" in the Eco-Cap, in which we will find answers on how to segregate problematic rubbish and on all kinds of eco-dilemmas of everyday life. The application includes tips on, among others: how to reduce waste production, how to be more "eco" at home, as well as instructional videos, thanks to which we will be able to sew vegetable bags or eco-bag on our own. The application will be available for download from the Play Store and the AppStore at the end of May 2022.

## WARSZAWA

The project entitled "ECOcapital - let's not waste food!" is the first project in Poland that comprehensively approaches the issue of food waste. It uses the experience from pilots, which will



ensure high efficiency and effectiveness of activities carried out on a larger scale in Warsaw. The main goal of the project is to reduce the scale of food waste and bio-waste. It is expected that as a result of the project implementation the knowledge and awareness of the inhabitants about food losses will increase and that the access to fruit and vegetables for people in need will increase.

The project consists of four components: food collection at marketplaces, promotional activities, quantitative and qualitative research on shopping habits, food waste and food circulation, as well as summaries and recommendations. The project is planned to be im-

plemented by the end of 2022.



Photo 38. Educational meeting with buyers and residents. Source: Warsaw City Hall

The project has several audiences. The first group are marketplace managers and those selling food at Warsaw marketplaces. The project will also involve non-governmental

organizations - the second group of recipients. Food collection at marketplaces as part of a public task order will be carried out by the Food Bank selected in an open competition in Warsaw. Non-governmental organizations and institutions operating in Warsaw

will also be involved in the redistribution of food collected during collections. The other recipients of the project are the local community: residents and volunteers in the project.

The project was agreed with the Social Dialogue Committee for supporting organizations. The participation of the community in the project was ensured, including activation activities aimed at involving merchants, residents and non-governmental organizations in its implementation. Before the food collection, information and educational meetings with market managers and buyers are planned. The city will promote the effects of activities and attitudes through its websites and social media. Activities will also be carried out to raise the awareness of the problem among the local community, from which, inter alia, volunteers will be recruited.

This year, there are plans to organize collections at 6 marketplaces. The collection will take place from spring to late autumn, at least once a week on each of them. Collection days will be scheduled in advance so that merchants know about them in advance and to build and strengthen the habit of putting away food for donation. Information about the start of the campaign itself and the collection days will be posted at each market that will be covered by it.

Photo 39. Salvaged products used for cooking during the educational meeting. Source: Warsaw City Hall



Each marketplace will have an assigned coordinator. The coordinator will be responsible for establishing cooperation with market managers, establishing relationships with buyers and their education, but above all for organizing the collection. Collection coordinators will also be responsible for recruiting volunteers to assist with collection. The work of collection coordinators and volunteers will be supervised by the project coordinator.



Photo 40. Project coordinator during an educational conversation with buyers. Source: Warsaw City Hall

An important aspect of organizing food collections at marketplaces is to provide a place for storing and transporting equipment necessary to conduct collections. If it is possible, for this purpose, free space at marketplaces will be used. If it fails, it will be necessary to rent rooms at or near marketplaces for a fee. The collected food will be accepted into the warehouse system of the Food Bank, which will be confirmed by a receipt document.

Another important stage of fundraising is the proper redistribution of products. The collected food will be donated to lo-

cal non-governmental organizations or institutions acting for the benefit of people in need. Collection of the food will take place in accordance with the collection schedule. In the process of collecting food, there is a problem related to the need to dispose of some of the harvested products that turn out to be unfit for consumption. This was confirmed by the experience from the project pilot. Therefore, collection coordinators will be properly prepared not to accept spoiled products from buyers or donate to organizations. This will minimize the problem. In the event that spoiled products appear in the collected food, the Food Bank in Warsaw will ask the recipient organizations to dispose of these products on their own. If the organization agrees, part of the refuse collection costs will be reimbursed.

Volunteers will be involved in the project implementation. The project coordinator and fundraising coordinators are responsible for their recruitment. In cooperation with volunteers, cooperation standards will be developed, developed in the project "Warsaw volunteers". An agreement will be signed with each volunteer. Volunteers will also be provided with accident insurance. Bearing in mind the experience of piloting the project (fundraising is hard, high-intensity physical work, working outside, sometimes in unfavourable weather conditions) and the awareness that maintaining constant cooperation with volunteers throughout the duration of the project will be very difficult, we treat the work of volunteers as an activity desirable but at the same time additional, not obligatory.

Educational activities on not wasting food and helping people in need, addressed to managers and buyers, are of key importance in the implementation of the project. They will be carried out throughout the duration of the project and will take various forms. First of all, these will be informational and educational materials, both in printed (posters, paper newsletter) and electronic (graphics, tips, recipes, curiosities). The materials will be distributed at marketplaces and available in social media: on the profiles of marketplaces and local groups on Facebook, on the website of the City Hall and district offices. It is also planned to set up an event or project group on Facebook and a dedicated tab on the website of the Food Bank. The City considers direct talks and meetings with managers and buyers to be the most important in educational and information activities. Meetings (including cooking together with unsold products) will be held most intensively at the beginning of the project, but such events will be held throughout the duration of the project.

Promotional activities are an important component for the comprehensiveness of the project. Within their framework, two complementary elements are planned for implementation. The first will be the promo-



Photo 41. Soup cooked from collected vegetables. Source: Warsaw City Hall

tion of food collections and the involvement of managers and buyers in their implementation. Promotional activities related to activities at marketplaces will be carried out on a continuous and systematic basis using social media, including local groups, marketplace profiles and specially created groups on Facebook. Printed materials (posters, stickers for buyers) will also be created for its needs. The second promotional element will be a campaign promoting resource saving and not wasting food. In its assumptions, the campaign may, but does not have to, refer to activities carried out at marketplaces. It will be addressed to the residents of Warsaw, and its main goal will be to build correct attitudes among the local community and encourage rational use of resources and reduce the volume of waste. The campaign is planned to be carried out twice a year, incl. through spots in public transport or social media, in pre-holiday periods (Easter and Christmas), which are conducive to wasting food.

In the second half of the year, the city plans to carry out quantitative and qualitative research that will allow it to collect information and data on food waste in Warsaw. The research results are to provide the city with information on how it can prevent food waste (not only at marketplaces) and help in designing future activities and projects so that they respond to the most important problems in this area. The research will also help to collect data on the scale of food waste and identify the main causes of food waste in the local community (at the Warsaw level).





Photo 42. Refreshment with soup cooked from collected vegetables. Source: Warsaw City Hall

## WOŁOMIN

The project entitled "Clean Wołomin" consists of several elements. Mobile Selective Waste Collection Point is a special device built on the basis of a container, adapted to selectively collect several selected types of problem waste produced by residents at the same time. Mobile Selective Waste Collection Point will accept waste in various places within the commune. Considering its breadth, this method of operation will be more accessible to all residents of the Wołomin commune.

Mobile Selective Waste Collection Point accepts only: hazardous waste, paints, varnishes, mercury thermometers, fluorescent lamps, energy-saving lamps, waste batteries and accumulators, small-sized waste electrical and electronic equipment (e.g. dryers,

kettles, lamps, headphones, etc.), expired medicines and chemicals, waste not qualifying as medical waste generated in households as a result of taking medicinal products in the form of injections and monitoring the level of substances in the blood (in particular needles and syringes).

There is a Re-shift function in the area of the Municipal Office. It is a point of exchange for unnecessary things that can get a second life by changing owners. The point is located in the building of the Municipal Office in Wołomin. Residents bring all kinds of clothes, outerwear, toys, books for children.

A garage sale has been organized in the Wołomin commune since 2019. It is an initiative for anyone who keeps lingering, extraordinary things in the depths of the nooks and crannies that they want to get rid of or everyday objects that gain a second life thanks to such actions. Recently, the action was carried out on May 15, 2022.

Educational activities carried out in the Wołomin commune include: a series of 11 meetings on the correct segregation of waste. Meetings were conducted by an expert from the Coalition of 5 factions, and were held at the garbage cans. On the occasion of the No Litter Day, we announced a family film competition. The film was supposed to present any aspect of waste segregation and promote this form of caring for the environment. Additionally, stickers were affixed to the steps at the Municipal Office with information on which container the waste should go to. The most



problematic waste among the inhabitants of the commune was selected. In cooperation with a coalition of 5 factions, pads were placed on the desks of employees, suggesting where typical office waste should go. In 2021, the Wołomin commune was awarded in the "Recycling Cup" competition in the "Green Battery" category. The Recycling Cup competition is the only project in Poland that comprehensively assesses selective waste collection and educational activities in this area.

A spring collection of waste paper and plastics will be organized in educational institutions in the Wołomin commune. The planned action aims to make children and adolescents aware of the dependence of man on nature, and above all, responsibility for its condition. Environmental education is a long-term task, the effort put now into shaping children and youth will result in the future in appropriate behaviours aimed at improving the quality of the natural environment.

## ZŁOTORYJA

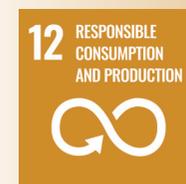
Selective Waste Collection Point, which will be built as part of the project entitled "Model Construction of a Municipal Selective Waste Collection Point in Złotoryja" is a supplement to the selective municipal waste collection. Residents of the city in PSZOK-u will be able to return waste, the so-called "Problematic" that cannot be disposed of in mixed municipal waste containers. The waste in question is: large-size (various types of furniture), waste electrical

and electronic equipment, waste batteries and accumulators, expired drugs, various types of chemicals, construction waste.

In addition, a hall will be built in the Municipal Selective Waste Collection Point, where it will be possible to return items that can be reused by other residents. Such action affects the cost of waste management borne by the commune. An educational hall will also be erected, where educational classes on correct segregation for children, adolescents and seniors will be conducted. Photovoltaic panels will be installed in the Municipal Selective Waste Collection Point, thanks to which the cost of energy purchase necessary for the operation of the point will be minimized.

For greater use of the above-mentioned point, it is planned to purchase an electric car, which will be used to collect and transport waste from residents who do not have their own means of transport.

The services provided in the facility will not emit noise, air and ground pollution. The use of innovative devices, such as ROLL PACKER JUMBO - 1 pc., Baler - 1 pc. , will reduce the volume of waste and reduce exhaust gas emissions due to the reduction in the number of shipments. In addition, the collection of such hazardous waste as chemicals, batteries, accumulators and used electrical and electronic equipment in the Municipal Selective Waste Collection Point will reduce pollution with heavy metals that are hazardous to the environment and human health.





## 13. CLIMATE ACTION

The main objective of the SDG 13 is to strengthen adaptation capacity and resilience to climate threats and natural disasters in all countries, as well as integrate actions to combat climate change into national policies, strategies and plans. The level of education and human and institutional capacity should be increased, as well as awareness of climate change mitigation, adaptation and the effects of climate change as well as early warning systems for threats. It is of utmost importance to honour the commitment of developed countries party to the United Nations Framework Convention on Climate Change and to promote mechanisms that increase the capacity of effective climate change planning and management in LDCs and Small Island States, including by focusing on the needs of women and small island states. youth and local and marginalized social groups. Actions taken in the field of climate must be divided into two groups: the first covers projects aimed at limiting the observed climate change, and the second concerns the adaptation of both human settlements and some branches of the economy to the inevitable effects of climate change.

## CHOJNA

The project entitled "Five from the City" for tasks related to the replacement of coal heating with pro-ecological is the introduction of subsidies for natural persons in Chojna for investments related to the replacement of coal heating with pro-ecological. The subsidy is a reimbursement of costs incurred by the Beneficiary. Beneficiary - a natural person may obtain a subsidy of up to 50% of eligible costs, but no more than PLN 5,000, hence the title of the project, i.e. "Five from the City" for tasks related to the replacement of coal heating with pro-ecological.

The inhabitants of the commune are informed about the possibility of obtaining a subsidy. The inhabitants are encouraged by the fact that the commune participates in the costs of their investments. The resident, taking into account his / her abilities, decides for himself what heat source he wants to install on his farm. The condition for receiving the subsidy is the elimination of the old "soot" and the installation of a new environmentally friendly heat source. The employees of the Office will provide detailed information on the implementation of the program, i.e. from the development of a resolution specifying the rules for granting subsidies from the budget of the Chojna Commune to the settlement of subsidy agreements concluded with the Program Beneficiaries.

The material effect of the activities carried out by the Chojna Commune will be the number of pro-ecological heat sources installed in 2022. The project implementation will contribute to increasing the environmental awareness of the Program Beneficiaries and to



improving air quality in the Chojna Commune. The ecological effect will be the reduction of pollutant emissions resulting from the combustion of poor quality fuel in home furnaces.

## GŁOGÓW

The proposed project entitled "Improving air quality in Głogów by reducing pollution from linear (communication) emissions" includes the purchase of 12 electric buses, which will result in the expansion of the network of connections. This will contribute to a change in the habits of residents (resignation from individual transport in favor of collective transport) as well as to liquefy and



increase traffic safety (improve the quality and functionality of public space in the city). An additional benefit of the introduced solutions will be the improvement of the condition of the city infrastructure and the improvement of air quality.

The purchase of buses is planned for the end of 2023. The introduction of these buses to public transport will be linked to a campaign promoting city transport (posters in display cases on bus stop posts, information on screens in buses and billboards in the city). The campaign will be directed primarily to the inhabitants of Głogów, who rarely use public transport and those who do not use public transport, but take this mode of transport into account. The campaign will be implemented together with the Głogów City Transport. The aim of the campaign is to encourage the inhabitants of Głogów to use public transport on a daily basis.

## GNIEZNO

The project entitled "Green roundabout - development of the roundabout of The Polish Red Cross" was made to meet the collective needs of the community of the City of Gniezno. The project was carried out in the first quarter of 2022 and was aimed at the implementation of tasks in the field of blue and green infrastructure designed to mitigate climate change in cities and favour environmental education.

An important part of the project was the participation of the public at various stages of work on the project. The residents were informed about the various stages of the project. In the initial de-



Photo 43. Green roundabout in 2022. Source: City Hall in Gniezno

sign phase, the selected project team conducted interviews with representatives of the NGOs in question in order to take into account the needs of residents during the design process. At meetings with residents and non-governmental organizations, the principles of designing greenery in roundabouts and trends in larger cities were presented. The opinion of the public on the development of the roundabout was read. The inhabitants were interested in the selection of vegetation in the indicated area, they also proposed a larger variety of vegetation than was the case in the previous area. They paid attention to the use of a wider range of colors and plants that are responsible for air purification. On the basis of the interviews, 4 concepts were prepared, which differed in terms of

development and species selection. After consulting and selecting the concept, minor changes were made to it.

After making the calculation by Zakład Zieleni Miejskiej in Gniezno, the project was approved. The following shrubs were selected for planting: Sabinian juniper 'Glauca', jasmine 'Erectus' and mountain pine var. Pumilio, perennials of the species geranium 'Roosemoor', sedum plant 'Brilliant' and brilliant rudbeckia 'Goldstrum', ornamental grasses of the species blue fescue 'Elijah Blue', reed edgewater 'Pony Tails' and Japanese decaying plant 'Moudry', as well as plants onion type decorative garlic 'Gladiator', decorative garlic 'Maxima', decorative garlic 'Ambassador' and cyclamen dafodil 'Tete-a-tete'. The assumptions that were presented at the initial meetings resulted in the development of the roundabout island with plants which, apart from decorative values, such as a variety of colors and variability of texture and habit, are characterized by high resistance to unfavorable conditions in road lanes, and also have an impact on air purification and increasing biodiversity.

Technical solutions for keeping water in circulation were consulted with external companies and provided on an ongoing basis to residents and representatives of non-governmental organizations, who observed the progress of works, despite the prevailing changing weather conditions.

The project was received with great enthusiasm by the inhabitants of Gniezno. Such a valuable initiative for the environment has been approved by non-governmental organizations, including

representatives of the Polish Ecological Club, Greater Poland Circle Circle in Gniezno and the Old Town Housing Council in Gniezno.

## JAWORZNO

The task of the project entitled "Green urban policies and spatial development concepts in the city - GREENEOSIS Jaworzno" is to increase the area of green areas and retention areas in the city of Jaworzno. The first goal of the project is to increase the accessibility of green areas for each resident, taking into account people at risk of social exclusion (e.g. the disabled). Greenery and a high level of biodiversity improve the well-being of all social groups, in particular the disadvantaged. The project will be implemented taking into account the rules of social participation.

The second goal is to increase the diversity of ecosystems and mitigate the effects of climate change. In this regard, the activities carried out will contribute to the protection of residents against heat waves and torrential rains, strengthen biodiversity and protect land against damage.

As part of the project, educational campaigns aimed at the general public are also planned. They will present the benefits of greening the city: the use of creepers, the use of green roofs and the planting of trees in urban areas. An educational campaign is also planned for farmers regarding the benefits of in-field trees and shrubs and the protection of balks. Experiences in this matter will be disseminated through the media and study visits also to other cities.



"Green urban policies and concepts for spatial development in the city - GREENEOSIS Jaworzno" is to be a document developed in a socialized procedure and adopted by the City Council for implementation over a period of several years in terms of investments in greenery and a dozen in terms of green maintenance. The expected duration of the project is the third quarter of 2022.

The project assumes its full social participation. The process will run in two ways. On the one hand, members will be recruited for the project team on behalf of the public. This is to ensure the transparency of the team's activities and the promotion of work results. On the other hand, the entire urban community of Jaworzno is to be included in the project. For this purpose, the city will conduct a call for proposals and ideas for the planned green areas addressed to residents.

The project will be implemented by several municipal institutions - the Municipal Road and Bridge Authority in the field of projects implemented in road lanes and public spaces managed, the Municipal Property Management Board in the field of other municipal areas and parks, but the investor will be the Municipal Investments Department of the Municipal Office, which is specialized executor of project tasks. The commune will provide, in the Multiannual Investment Program, funds for the implementation of tasks specified in the Plan, and own contributions in the case of projects implemented with the support of domestic and foreign subsidy funds.

Among the applications submitted to the project, there was

a postulate that the dispersed management of greenery should be concentrated and that a newly established budgetary unit - the City Greenery Management Board - dealt with it. Decisions on this matter will be taken in the future, but the postulate of conducting a coherent green policy by one institution operating in all areas managed by various units of the commune seems to be right.

The commune assumes that for the design of parks, squares and plantings, competition procedures will be used, and in the case of individual plantings under "urban acupuncture" soil tests will be carried out and appropriate species selected

## **JELENIA GÓRA**

The project entitled "Change your world from an early age - ensure a clean, healthy and safe future" consists of three main activities: (1) implementation of the SEPOSS smog system, (2) reduction of low stack emissions, (3) environmental education of the inhabitants (mainly children and adolescents) implemented by the City of Jelenia Góra and in cooperation with the Karkonosze National Park.

As part of the project, a pilot implementation of the "SEPOSS smog reduction system" is planned as a tool supporting the decision-making process in reducing air protection costs. The project is implemented by the company ATMOTERM S.A. from Opole in consortium with the Institute for Chemical Processing of Coal from Zabrze. The city of Jelenia Góra was invited to participate in the project as a pilot city in which the system will be implemented.



The participation of Jelenia Góra consists in providing data from the inventory of heating systems and in the ongoing consultation of the system being developed in the field of available tools and their optimization.

This system will be used by public administration to consciously manage the optimization of investment costs affecting air quality and will support the decision-making process, taking into account the effects of reducing low emissions in relation to the costs. Based on the implemented calculation algorithms in conjunction with mathematical modeling techniques for the spread of pollution, the system will be able to indicate the most effective spending of funds in terms of the environmental effect and reducing the exposure of the population to the negative effects of the so-called low emissions. It will be possible to analyze various variants of the liquidation of solid fuel boilers in favor of more effective solutions (system heat, gas, electricity, RES) in connection with the investment and operating costs of planned heating systems.

The task involving the reduction of low stack emissions is to maintain a subsidy program for the residents of Jelenia Góra to permanently eliminate heating with solid fuel. On January 10, 2022, the call for applications from residents planning to change heating to less emissive in 2022 was opened. Recruitment is conducted on a continuous basis. In the budget of the City of Jelenia Góra funds in the amount of PLN 1.5 million have been reserved for this purpose, under which it is planned to conclude

300 contracts and liquidate at least 300 solid fuel boilers. The assumed environmental effect will reduce the PM10 dust emission by approx. 20 Mg / year.

Environmental education of the society is conducted comprehensively and continuously. As part of the project, it is planned to continue information activities encouraging residents to replace ineffective heat sources with more ecological ones, educational meetings in schools and kindergartens, as well as competitions and workshops for residents conducted by the Karkonosze National Park. Environmental education combines elements of proper waste management with care for environmental protection, taking into account the protection of atmospheric air. Particular emphasis is placed on learning the correct segregation of waste, reducing waste generation by using reusable packaging and bags, as well as reusing unnecessary items in accordance with the principle of "rework or repair - do not throw away". Through education, the public is also made aware of the prohibition of waste incineration and the harmfulness of the resulting smog.

The project "Change your world from an early age - ensure your future is clean, healthy and safe" will be carried out by the end of 2022. Its impact will include educational institutions in Jelenia Góra, as well as residents who will take part in open-access workshops, meetings and events. Project activities will have a positive impact on improving the lives of all city residents. The increase in environmental awareness and improvement in air quality, resulting from the replacement of stoves, will be felt by all social





Photo 44. Panorama of Jelenia Góra - old downtown buildings, buildings often heated with coal. Source: Jelenia Góra City Hall

groups. Assistance will also be offered to residents in obtaining funding for the replacement of stoves. Environmental education will be conducted in such a way that children can use the acquired knowledge in their households with little support from their parents in order to make them aware of the need to care for the environment and prevent its degradation.

The implementation of the SEPOSS system is planned in June 2022. Currently, data on the current address database and inven-

tory of heating systems are being migrated to the system. For the needs reported by the City of Jelenia Góra, it is planned to separate municipal buildings and the area of the Cieplice Health Resort. The designed system tools were consulted, which will include the types of heating available in Jelenia Góra, boiler classes, prices of individual heating media, assumed costs of modernization of heating systems, methods of calculating emissions in the air and types of pollutants. The system will be used in the current work

of the City Hall of Jelenia Góra for the purpose of rational and effective planning of funds intended for the elimination of solid combustible heat sources, with particular emphasis on the replacement of tiled stoves in the municipal resource.

## KIELCE

As part of the project "Kielce for the climate and better quality of life", activities will be implemented mainly resulting from the Plan for Adaptation to Climate Change of the City of Kielce until 2030, with a focus on improving the functioning of the city's ecosystems by expanding the blue-green infrastructure, including increasing the area of green areas and reconstructing "concreted" fragments of the city, with particular emphasis on the areas of city streets and squares, such as the Market Square. At this stage, it will be particularly important to focus on strengthening the processes of rainwater retention and building a knowledge base and catalogue of good practices for residents or property managers. At the same time, in 2022, one of the elements of the mobile transport system, i.e. the network of city bike stations, will be developed, and the issues related to the future arrangement of streets will be sorted out.

The addressee and the main beneficiary of the proposed measures are primarily the inhabitants of Kielce, but also all its stakeholders, including organizations, communities, institutions or other entities using the city and its values.

The implementation of the project "Kielce for the climate and better quality of life" is planned to be completed by the end of 2022, with the assumption that it may be continued in the following years.

As part of the Project, in 2022, by the end of the fourth quarter, activities aimed at the inhabitants of the city of Kielce will be implemented in the form of subsidies for the purchase and installation or construction of various types of solutions for the retention of rainwater, including tanks for retaining and using rainwater and meltwater, construction of absorption wells, construction of rain gardens or the so-called ponds.

A Catalogue of Good Practices will be created - a collection of advice and activities in the field of building blue-green infrastructure (BZI). The catalogue will contain information on the legitimacy of limiting areas with a sealed surface, the need to establish green areas, and ways to counteract the effects of drought. It will also enable the design and construction of blue-green devices for the retention and retention of rainwater and snowmelt at the place where they are generated. Once prepared, the catalogue will be made available to residents, investors, housing communities, housing cooperatives and other decision-makers.

The implementation of the so-called green projects, incl.:

- planting over 750 trees, including approx. 60% trees in road lanes, approx. 20% trees in municipal public institutions and approx. 20% trees in green areas, e.g. parks, squares, woodless green areas, wastelands,



- introducing greenery at bus stops in the city
- developing green areas after removing paving slabs - disassembling a fragment of the square in front of the hall at Żytnia street,
- creating shady places to rest with the help of greenery,
- design of plantings in road lanes, incl. with the use of plants with phytoremediation abilities, the so-called parklets,
- leaving native meadow communities in designated places in road lanes.

Additional activities include:

1. Green Patronage of Kielce - creating new green areas in the city's public space, arranged in cooperation with local entrepreneurs;
2. Kielce city bike - creating a bike rental with infrastructure, planned number of bikes - 250, with a 10% share of bikes with electric assistance.
3. Promotion of the Sustainable Development Goals among local companies - an information campaign addressed to local companies to disseminate knowledge about the 2030 Agenda, encouraging the implementation of the Sustainable Development Goals in business models and CSR practices, and inspiring partnerships with the local business and scientific community for the implementation selected goals.
4. Further development of the Talent Office project - an element of professional talent management in urban areas. An initiative addressed to local companies and inspiration to create partnerships with the local business and scientific community.

5. The "We improve Kielce" application - residents' reporting of problems / improvements in the city's public space. Notifications of the location of facilities of favourable / damaged equipment, essential for residents in order to better develop / repair the facilities.
6. The competition for young people "TARGET trees in Kielce" concerning the indication of the location and description of tree types using the "We improve Kielce" application. The aim of the competition is to educate people in learning about trees and their role in shaping a healthy city climate.
7. Development of urban street standards - a document indicating solutions to be used in the preparation of projects for new streets and the reconstruction of existing ones, both in the spatial, functional and aesthetic scope.

Financial resources for the implementation of the above-mentioned tasks have been secured in the city budget for 2022. Financing is based on own funds as well as various types of subsidies and special purpose funds. Many of the above-mentioned activities are a continuation of activities already carried out in 2020 and 2021.

## ŁOMIANKI

The project entitled "Educational and information campaign on the Revitalization of Struga Dziekanowska in the Commune of Łomianki in order to increase the commune's adaptability to climate change" will be implemented in the fourth quarter of 2022.



The recipients of the project will be residents of the commune from all social groups, with an emphasis on schoolchildren, representatives of entrepreneurs, ngos and the employees of the Municipal Office in Łomianki (to discuss the situation of Struga Dziekanowska: social and planning conditions, phenomena related to the circulation of water in the urbanized catchment, blue and green infrastructure and the expected impact of climate change on the area).

Public consultations and the educational cycle will allow to precisely define the needs of the inhabitants of Łomianki regarding this issue and to sensitize them to the advantages of Struga Dziekanowska. These activities will allow to define the desired directions of activities in the field of revitalization of Struga Dziekanowska and will constitute the necessary basis for the preparation of specific investment projects in this area.

As part of the activities for the revitalization of Struga Dziekanowska, it is planned in the first stage to develop a Communication Strategy with the residents and an action plan for the "blue-green product" - Struga Dziekanowska. It is a 12 km long section of the Vistula oxbow lake, which runs through practically the entire area of the commune and connects several larger lakes, including one nature reserve. This topic is very controversial due to the strong opposition of the inhabitants of Struga areas to any investment activities and the strong support of the remaining inhabitants for the activities aimed at revitalizing the Struga. All conflicts arise

from a lack of knowledge and poor communication between the Office and residents. Therefore, in the first step, in parallel to the investment action plan in the Struga area, we want to develop a Communication Strategy along with an educational campaign on the Struga and its retention possibilities among residents. We want to use an authority in this field - an association or an academic unit.

### **STALOWA WOLA**

Activities aimed at improving the air quality and living comfort of residents by reducing air pollution, including CO2 and reducing final energy consumption in all sectors include the analysis of the situation in the city in terms of climate change and setting the directions of proposed changes, therefore the notified project includes the implementation of energy audits for four public buildings owned by the Stalowa Wola Commune, on which photovoltaic panels will be installed. The installation of such panels will contribute to the reduction of greenhouse gas emissions and will allow to save public funds (reducing the maintenance costs of these buildings), which will be allocated to further investments supporting environmental protection. It complements the pro-ecological activities of the commune, which has already carried out thermal modernization of most of its public facilities and constantly strives to introduce environmentally friendly solutions. The above action is part of the project launched last year: "Model solutions for difficult challenges - Program for Local and Institutional De-



velopment of Stalowa Wola". The implementation of the project in question is fully thought out and responds to the problem of progressing climate change, therefore, a complementary element of the project are educational and information activities planned for implementation, dedicated to all residents and other stakeholders, regardless of their age. A website will be created together with the Digital Participation Platform for cooperation with the project's stakeholders. Together with the residents, the places for erecting houses for hedgehogs and 4 recycling machines will be arranged. Residents will be involved in the care of hedgehog houses. Pro-ecological activities will be introduced, such as cleaning the world or waste bulbs. The above-mentioned activities will help to increase the ecological awareness of the society in terms of environmental, social and economic consequences resulting from the progressing climate change and its effects. Shaping appropriate attitudes in the field of environmental protection among the local community will translate into an improvement in its condition.

The main target group of the project is the local community of the commune. The remaining groups also include residents of other regions and media recipients - radio, internet and social media.

The scope of planned works includes construction and assembly works in the scope of projects related to the production of energy from renewable sources based on solar energy. The action consists in the installation of photovoltaic panels on four buildings

of the City, preceded by energy audits, which will determine the possibilities of improving the state of energy use in given facilities. Then, technical designs and installation of photovoltaic panels will be carried out on four selected buildings owned by the Stalowa Wola Commune. For the above task, a tender will be announced to select a contractor for construction works.

The expected duration of the project is Q3-Q4 2022.

As part of the project entitled: "Model solutions for difficult challenges - Program for Local and Institutional Development of Stalowa Wola", the community will be involved in various activities, also in order to inform about the activities that are implemented by the Commune, what they are used for, how emission of air pollutants through effective and rational use of energy and how these activities allow the city to adapt and mitigate the progressing climate change. The residents will be involved not only in the care of hedgehog houses, but also the environment of people with disabilities as part of the Occupational Therapy Workshops, they will be involved in the production of hedgehog houses.

The above activities will be implemented under the project: "Model solutions for difficult challenges - Local and Institutional Development Plan of Stalowa Wola" worth PLN 15,328,498.86, implemented under the Local Development Program and financed by the Norwegian Financial Mechanism 2014-2021 and from the State Budget. The entire project will be implemented in the period from 01/11/2021 to 30/04/2024.



Employees of the City Hall in Stalowa Wola with appropriate competences will be responsible for its proper implementation.

In the subsequent stages of the above project, among climate activities are such activities as:

- creation of one pocket park,
- creating of four community gardens,
- purchase of four recycling machines,
- installation of over 30 air quality monitoring sensors,
- launching the Unmanned Aerial Vehicle Operator Training Centre for drones, also for the purpose of environmental monitoring.

## ŚREM

The project entitled "Planting perennial plants at Ks. J. Popiełuszki street and at A. Mickiewicza street in Śrem" is based on a new method of developing green areas located on four plots located in the conservation protection zone of the historic urban layout of the city. The space covered by the project is neglected and requires revalorization. The main assumption of the project is to create an attractive and functional urban space in line with the existing urban layout of the city.

The project is currently under implementation. There are plans for individual plots:

1. The first area is located on the right bank of the city and so far has been covered with grass. It includes a fragment with a southern

exhibition, 33 m long and 1 m to 3 m wide. At its wider end, it is adjacent to a transformer station. There is a bench and a concrete street basket on the site. The location of the underground power line forced the abandonment of planting high greenery. The project provides for the planting of flowering shrubs, dominated by three columnar junipers. The whole structure will be covered with a garden mat and lined with pine bark.

2. The area in the left-bank part of the city has so far covered lawns with a northern layout, located between the district road and two multi-family buildings. The buildings do not have separate access roads to the property, therefore the project includes two communication parts, which also take into account the possibility of parking vehicles - as it is currently functioning. The communication parts were separated from the green areas by concrete resistors (12 cm / 25 cm, set on a concrete bench with resistance). The earlier dying green has been removed and one large wild pear tree will be integrated into the designed greenery. The space under the planted plants will be lined with a garden mat and lined with pine bark, and the rest of the lawn will be reclaimed (spraying on weeds, scarifying, adding grass and fertilizing).
3. The area in the left-bank part of the city has so far included a lawn with a northern exhibition. It is located between the poviat road and a multi-family building. Due to the limited space and the vicinity of a large tree, only deciduous shrubs will be planted on the adjacent property. The space under the planted plants

will be lined with a garden mat and lined with pine bark, and the rest of the lawn will be reclaimed.

4. The area in the left-bank part of the city has so far included a lawn with a northern exhibition. It is located between the poviat road and a multi-family building. The location in the area of the power box and the underground power line limits the possibility of planting tall greenery, hence the planned planting of one tree and several deciduous shrubs. The space under the planted plants will be lined with a garden mat and lined with pine bark, and the rest of the lawn will be reclaimed.



Photo 45. Ulica Mickiewicza 32 - state before the project implementation. Source: Town Hall in Śrem



Photo 46. Ulica Mickiewicza 34 - state before the project implementation. Source: Town Hall in Śrem

## ŚWIDNIK

As part of the "Action Plan for Cities" program, Świdnik chose a task in the field of blue-green infrastructure entitled "Shadow zone with a picnic area", in the area of the closed landfill. The area is located on a hill, apart from a few self-seeded robinia, did not contain any trees, making it an unfriendly "hot island" in summer. In principle, the project will contribute to counteracting the local consequences of climate change and will also be a place for integration of residents and breathe life into this area.

The recipients of the project were city residents, in particular those living in multi-family housing, belonging to different age groups, both young people, the elderly and families with children. The idea of creating an attractive place for recreation for residents with a picnic area resulted from the needs reported by the inhabitants of Świdnik. On the other hand, the need to create a shadow zone was the conclusion of a careful observation of the conditions of the area, facing the consequences of climate change and human activities leading to the creation of an area not friendly to people and nature. Consultations with the experts on the concept of land development were the basis for modifying the assumptions in terms of functionality. During the following sessions, a detailed selection of plant species was made, which allowed to arrange the space and create a shadow zone around the picnic area.

The entire assumption is based on two interiors inscribed in touching circles (Fig. 7). The informal walls of the districts



were lined with trees and flower beds. Among the species used, there was black pine, useful birch 'Doorenbos' and red maple. The plantings were enriched with grasses and perennials adapted to a sunny and dry position. All the designed plants were adapted to changing climatic conditions. The whole was complemented by the designed street furniture, which allowed to functionally complement the space of the "Shadow zones with picnic areas".

The task implementation can be divided into two stages - design and executive. The first stage lasted the longest, required a good analysis of the terrain conditions, design assumptions and the selection of vegetation. The work in the field took several days, it consisted of preparing the site, planting plants and finishing works - mulching, staking, etc. The task was completed in the second half of April 2022. The final effect will be visible after the delivery of small architecture elements, but will be most fully visible after several growing seasons, when the young plants will grow and the trees will actually create a shadow zone.



Photo 47. Development of the "shade zone with picnic areas". Source: Swidnik City Hall

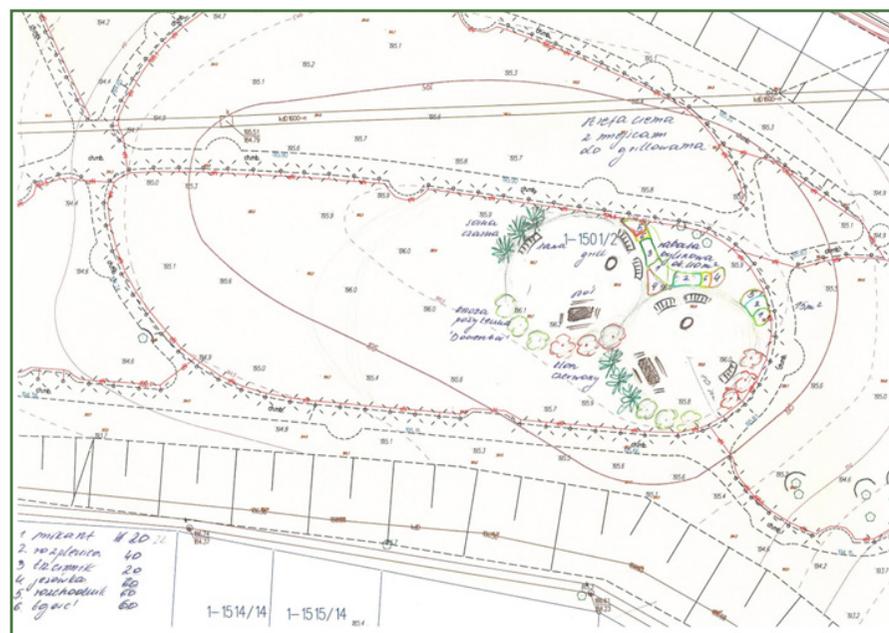


Fig. 7. The concept of "Shadow zones with picnic areas" development. Source: Świdnik City Hall

## WROCLAW

Program entitled "Gray to Green" aims to transform gray, concreted school and kindergarten areas into green areas, friendly to students. Gray, i.e. concrete areas around the outlets are turned into green areas. The program is part of the measures to adapt to climate change through the use of blue and green infrastructure elements in land development projects, i.e. solutions promoting local management of rainwater and increasing biodiversity. Schools are encouraged not only to "unseal" concrete yards, but also to enrich development projects with elements of blue and green infrastructure.



Photo 48. Yards at educational institutions in Wrocław. Source: Wrocław City Hall

These can be rain gardens, flower meadows, creepers on fences that create natural green walls or barrels for rainwater, which can then be used to water the garden with the help of children, or pollinator houses. Schools are also encouraged to establish vegetable gar-

dens, flower meadows, creepers on fences that create natural green walls or barrels for rainwater, which can then be used to water the garden with the help of children, or pollinator houses. Schools are also encouraged to establish vegetable gar-



Photo 49. Yards at educational institutions in Wrocław. Source: Wrocław City Hall



Photo 50. Yards at educational institutions in Wrocław. Source: Wrocław City Hall

dens, which can constitute an educational element in the field of healthy eating.

The city's goal is to develop a model procedure for the implementation of the "Gray to Green" program. The following project implementation procedure is foreseen:

1. Submission of applications for co-financing along with the development concept in accordance with the guidelines for the program and the cost estimate - At the beginning of the year, educational institutions submit applications to the City Hall for co-financing for the development of the areas around the institutions with the use of blue-green infrastructure under the "Gray on green" program. Applications are verified on an ongoing basis. Concepts of land development, prepared by educational institutions together with the cost estimate, constitute attachments to the application.

2. Assessment of applications, in particular the concept - Technical persons in the City Hall assess applications in terms of the proposed development and costs. They check whether complex concepts have elements of blue-green infrastructure, increase biodiversity, and use natural elements of development - in accordance with the guidelines for the program.

4. Corrections of the concept in terms of the program guidelines - In case of doubts, talks with the school and the designer are conducted, combined with field visits. Solutions that have proven successful in other institutions are proposed.

5. Implementation of the concept - After the final approval of the concept and cost estimate, the school receives money

for implementation. In case of questions or doubts regarding the implementation, the school can always obtain the support of a professional person from the City Hall.

6. Collection and inspection - After completion, the collection takes place, also attended by representatives of the city. An acceptance report is drawn up. Any deviations from the design are corrected. After completion of the implementation, the facility is under the care of professional persons from the City Hall, who appear regularly and check whether the proposed solutions work or require correction.

7. Catalogue of good practices - It is planned to create a catalogue of good practices of the "Gray to Green" program, which will be a guide for other schools.



Photo 51. Yards at educational institutions in Wrocław. Source: Wrocław City Hall





## 14. LIFE BELOW WATER

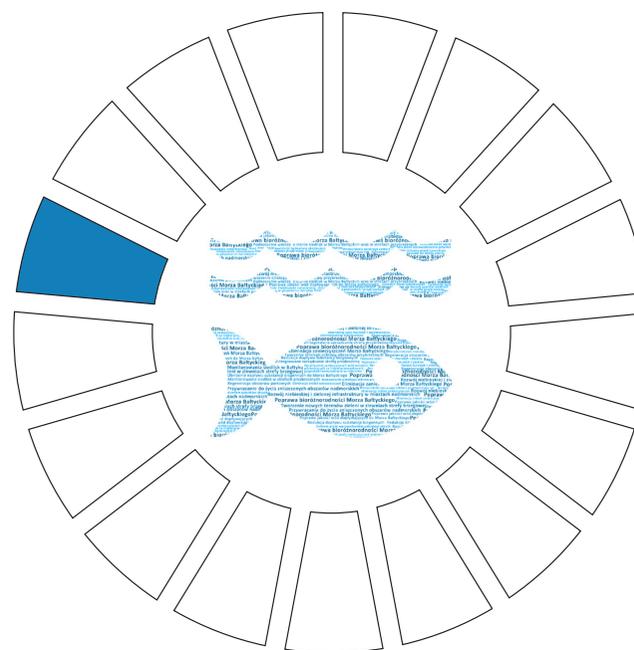
The SDG 14 tasks are primarily the prevention and significant reduction of all types of marine pollution, in particular those resulting from land-based activities, including litter and food waste discharged into water. Marine and coastal ecosystems should be protected in a sustainable manner to avoid significant adverse effects, including by enhancing their resilience and restoration efforts, and ensuring the health and productivity of the oceans and minimizing the effects of ocean acidification, including through enhanced scientific cooperation in all levels. A very important aspect is effectively regulated seafood sourcing and the elimination of overfishing, illegal, unregistered and unregulated fishing and destructive fishing practices, with scientifically based management plans. At least 10% of coasts and marine areas must be protected in accordance with national and international law, using the best sources of scientific information. It is extremely important to broaden scientific knowledge, develop research potential and transfer marine technologies, taking into account the Criteria and Guidelines of the Intergovernmental Oceanographic Commission on Maritime Technology Transfer. The directions of activities on a local scale are the improvement of the biodiversity of the Baltic Sea; development of blue and green infrastructure in coastal cities; creating new green areas in the catchment areas of the coastal zone; activities to reduce the inflow of nutrients to the Baltic Sea and monitoring the condition of habitats in the Baltic and coastal zones.

## USTKA

The project entitled "Ustka - the new opportunities flow from the waters of the Baltic Sea" aims to emphasize the importance of sea waters as a natural common good that has so far been insufficiently used. Thanks to Ustka's location by the sea, tourism is developing rapidly, but it is not enough for the recreational and spa potential of the city. The seaside location of Ustka offers many unused opportunities related to the development of the port, local fisheries and the related promotion of fish obtained from sustainable sources. The emphasis on the new goal of Ustka related to local fisheries is connected with the necessity to adjust the activities to the provisions of Polish and EU law, especially with regard to observance of fish conservation periods and catch limits.

In addition to the economic use of marine waters, it is necessary to remember about the protection of coastal waters against pollution and the protection of their biodiversity, which is directly related to the quality and species diversity of fish. The issue of the quality of sea waters is the result of the international activities of the states lying in the Baltic Sea basin. Ustka's development opportunities should be seen in establishing intercity and international cooperation with other spa centres and in strengthening joint activities to protect sea waters against pollution, especially through the implementation of scientifically based management plans in the shortest possible time.

Education of children and youth in schools and the collection of waste from the coast should be a permanent element in the implementation of the SDG14.



The envisaged activities of the Ustka City commune, aimed at the protection of the Baltic Sea and marine resources and their sustainable use, are as follows:

- 1) Retrofitting and improving the infrastructure of the sea fishing port in Ustka.

Currently, the fishing port in Ustka is fully prepared to handle cutters. The newly built fishing pool, where 35 cutters are stationed, is equipped with utilities (water, electricity, collection of sewage and oily water from units). There is a warehouse for fishing equipment. There are sanitary facilities for fishermen (showers, washrooms and laundry). Since 2018, the Fish Market has been operating, where fi-



shermen can sell fish from their catches directly. Fishing equipment and nets are disposed of in appropriate containers. Ustka was one of the first fishing ports in Poland to introduce separate containers for damaged fishing nets and lines.

- 2) Establishing an ecological site: "Czarna River Mouth to the Sea" - adopting a relevant resolution of the Ustka City Council.
- 3) Permanent information and education campaigns for locals and tourists.
- 4) Constant collection of waste, especially in the high season and after the tourist season.
- 5) Promotion of fish as food, which is part of activities aimed at ensuring access to markets and marine resources for local small-scale fishermen.
- 6) Closer cooperation between twin towns in order to exchange good practices.

The sea fishing port in Ustka, in order to be able to meet the contemporary market needs, requires retrofitting with specialized devices and their partial replacement. In order to protect water against pollution, it is necessary to purchase a system for removing and preventing water contamination with petroleum substances, which will consist of the following elements: a slow-moving farm tractor with a self-loading trailer (self-loading platform), with a snow plow and a sand spreader for transporting the oil dam, boats for the removal of pollution and snow removal and maintenance of port areas; electric inspection vehicle for the transport of a small oily water tank and a power generator; portable power generator; specialized work boat with HDS for setting up the

oil dam components and for removing contaminants from the water surface with the necessary equipment; portable reservoir for oily water; mobile oil dam for on-vehicle and boat monitoring; floating skimmer for collecting surface contamination of water. The port also requires the provision of fishing storage containers necessary for the storage of fishing tools (fishing nets, buoys and floats, elements of cutter equipment). It is planned to purchase a launching and launching system for fishing boats to facilitate their movement and transport. This system consists of a mobile gantry crane and a system of supports that facilitate the positioning of the unit on land. Thanks to this solution, you can easily pull the unit out of the water and place it in a place prepared for its renovation. In the port, there is a need to extend the monitoring with video surveillance to the eastern side of the Port of Ustka. For this purpose, video surveillance cameras together with an access control system and network infrastructure are needed.

Another important task for the commune of the City of Ustka is to take measures to strengthen the protection of sea waters and coasts, especially against the consequences of expansive and uncontrolled tourist traffic. Attention should be paid to their sustainable management in order to avoid significant adverse effects on their condition. The protected areas Natura 2000 "Dolina Słupi" PLH220052 and "Przybrzeżne Woda Bałtyku" PLB 990002 are of great importance in the protection of coastal habitats. Care should be taken to implement these protection plans in a diligent manner. The protected area "Przybrzeżne Woda Bałtyku" does not have a protection plan, while for the "Dolina Słupi" area, the



protection plan is under preparation. Its publication should take place in 2022. In cooperation with research units, an action plan should be undertaken to strengthen the resilience of coastal ecosystems and work towards their restoration, as well as ensuring the good condition and productivity of the Baltic Sea.

The Ustka City Commune is planning to establish an ecological site called "Black River Mouth to the Sea" by adopting a relevant resolution of the City Council on this matter. The use will be aimed at the protection of the diversity of coastal ecosystems and the flora and fauna occurring in its area. Establishing a new ecological use is in line with the measures of the SDG 14, which postulates to protect at least 10% of coasts and sea areas, in accordance with national and international law, using the best available scientific information. The project will be implemented by constructing a new descent with a fence or barriers - this will channel tourist traffic at the descent near the mouth of the Czarna River.

Local fisheries should be promoted through information and educational campaigns and the organization of a cyclical event in the summer season, entitled "Fish Harvest Festival" to emphasize the sea character of Ustka and refer to the city's traditions related to fishing and to promote the fish market with a mobile application that allows you to buy fresh fish directly from a local fisherman.

The fish market in the Ustka seaport is open all year round. The sale takes place when fishermen decide to sell some of their catch at retail rather than wholesale. The activity is most often carried out in the summer season, when the interest in fresh fish is greatest. The demand

for this type of trade is very high. According to the data for 2021, a total of about 5 tons of fish were sold at the market. Fish are sold that can be caught by fishermen at any given time. There are inspections of the Sea Fisheries Inspectorate concerning caught fish. The HACCP system is introduced at the market and is regularly checked by SANEPID.

In schools, the city plans to conduct an educational campaign on "if you eat fish and other marine products, make sure you source them from sustainable sources."

The protection of coastal areas against littering will include the installation of signs at the entrances to the beach, the purchase of new sets of waste containers or a set of containers enabling selective waste collection in the area of the promenade and the seaside beach. In addition, before and after the holiday season, the city plans to collect municipal waste by residents from the zone adjacent to the sea shore (including the beach and coastal dunes zones), ending with a bonfire at the canoe harbor. The collection under the name of "Eco Rafting" has been organized for 4 years by the Alpha Team association in Ustka. The project is co-financed by the City of Ustka from the civic budget. Every year, a one-day action is organized during which residents and guests relaxing in Ustka clean the area of Ustka and the Słupia River in the form of physical activity. The action is accompanied by a festival. In 2021, over a ton of waste was collected.

In addition, the city is planning educational campaigns for tourists and residents on the benefits of segregating waste. Actions on minimizing the consumption of plastic in the context of informing about the threats



to the marine ecosystem caused by garbage lying on the bottom of the Baltic Sea will become a separate topic.

Catches of fishermen are strictly connected with EU law and the annual decision of the European Commission, which sets catch limits for each EU country. From 2020, there is a ban on cod fishing in the entire eastern Baltic Sea (the by-catch of this fish as part of catching other fish in 2022 is only 120 kg per year). From 2022, there is also a ban on salmon fishing. The improvement of fishing conditions for fishermen can therefore only take place through decisions of the European Commission concerning the implementation of sustainable fishing, saving

endangered species of fish and intensifying controls on illegal fishing. Currently, the European Commission is trying to protect endangered species (cod, herring, salmon) through a temporary ban on fishing. Fishermen receive compensation for the temporary suspension of fishing. A permanent cessation program will also appear in 2023 to limit the number of fishing vessels. It is estimated that about 30 to 50 units will use it in Ustka itself.





## 15. LIFE ON LAND

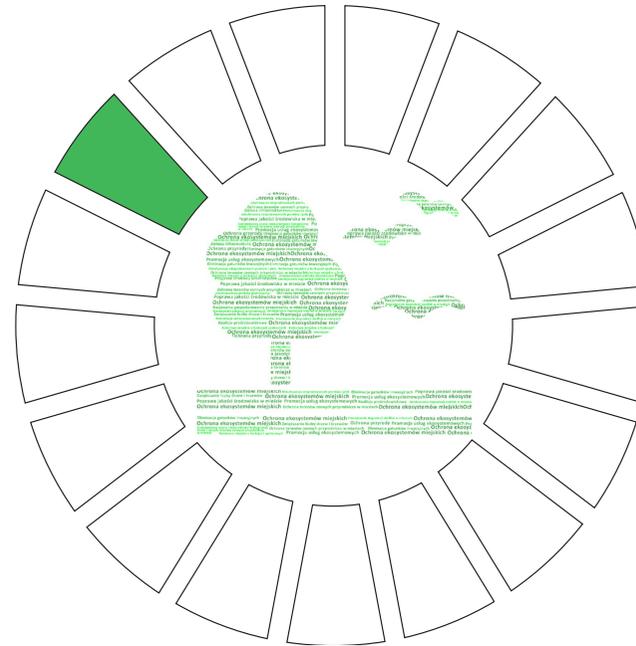
The improvement of life on land is to be achieved by providing protection, restoring and the sustainable use of terrestrial and inland freshwater ecosystems and other ecosystems, in particular forests, wetlands, drylands and mountains, in line with international obligations. Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests, significantly increase global afforestation and reforestation and combat desertification, restore degraded areas and soils, including areas affected by desertification, droughts and floods, work to build the world, in which the process of land degradation will not occur. Activities ensuring the protection of mountain ecosystems, reducing the degradation of natural habitats and ending poaching and trade in protected animal and plants species are extremely important. Biodiversity and ecosystems must be integrated into national and local plans and reporting, poverty reduction strategies and development processes to mobilize and significantly increase financial resources from various sources for the conservation and sustainable use of biodiversity and ecosystems. It is necessary to improve the quality of the environment in the city, increase nature protection areas and the effectiveness of the protection of environmentally valuable areas in cities.

## BUSKO-ZDRÓJ

As part of the Program "Action Plan for Cities. Model locality" the city of Busko-Zdrój chose for implementation a task called "Project of plantings in the form of a flower meadow at the German Pond in Busko-Zdrój". The German Pond is located in the green areas between Kościuszkó Estate and Pulaski Estate, commonly known as Skatepark. The entire area of the Skatepark is conventionally divided into three functional zones: the entrance zone - representative zone, the sports zone - the active recreation and sports zone, and the so-called The German Pond - passive rest zone.

"The project of plantings in the form of a flower meadow at the German Pond in Busko-Zdrój" is located in a recreational and sports area, between housing estates, in the vicinity of the German Pond. It is a place frequently visited by residents and tourists, mainly by young people. Until now, the area where the meadow is planned has been overgrown with a lawn, with two paths passing through it. By creating a meadow in this place, the city wants to make this part of the skatepark more attractive. The close vicinity of the kindergarten initiated the idea of small architecture elements with a didactic function.

The project will be enriched with elements of small architecture, i.e. houses for insects, an educational game - useful insects, information boards - a flower meadow. This will create a small biodiversity education trail.



Students from the Complex of Technical and General Schools in Busko-Zdrój, from the landscape architecture class, have already prepared the land for sowing as part of their apprenticeship. The planned solemn sowing of the meadow took place on April 22, 2022 - Earth Day and was made by children from kindergartens in Busko.

## KARPACZ

The project entitled "The development of green areas in the Karpacz Commune by creating and renewing green areas in order to improve the quality of the environment" assumed the improvement of the quality of the environment and the development of



green areas in the Karpacz Commune. The starting point was the implementation of the program and spatial concept of selected areas of the Karpacz Commune. On its basis, it was possible to determine the appropriate directions for further shaping and development of the area, with particular emphasis on increasing the area covered by greenery.

The program and spatial concept includes several parts. The first part, a diagnostic one, concerns the identification of the characteristic features of the landscape and environment of the Karpacz Commune. The second part concerns the assessment of the area's development in terms of: topography, greenery, equipment with elements of small architecture and a communication system. The next part describes the function of a given object in the spatial and compositional structure of the city as well as the determination of the potential of the object and the possibility of using it in terms of increasing the natural value of the city with the possibility of using the area for recreational purposes. A separate part of the studies is the identification of basic problems related to the operation and maintenance of the facility.

At the stage of project implementation, in the areas / objects selected in the "Program and spatial concept", the use of technical solutions favorably affecting the environment or minimizing the negative impact was adopted, e.g. preventing excessive salinity of squares in winter by additional fencing off plant beds with a low fence in the form of uniform plates or covering with branches flower beds coniferous for the winter.

Pro-ecological solutions were implemented in relation to the topography, type of surface and lighting. The development concept includes elements of small architecture, such as trellises and platforms, in order to increase the attractiveness of the facilities. As a result of the Karpacz project, squares with annual plants, squares or slopes with perennial plants and shrubs.

In the designed greenery, native species were mainly used. For objects of particular strategic importance for the city, the criteria related to the restoration of the facilities and maintaining the nature of greenery were taken into account. In justified cases,



Photo 52. Fragment of the Garden of aquatic and marsh plants - the use of gabion walls and grassy paths. Source: Karpacz City Hall



species of foreign origin were used, but with the exception of invasive species. An important part of the study were the principles of planting greenery in the planned documentation. As part of it, guidelines were developed on, inter alia, establishing or renovating

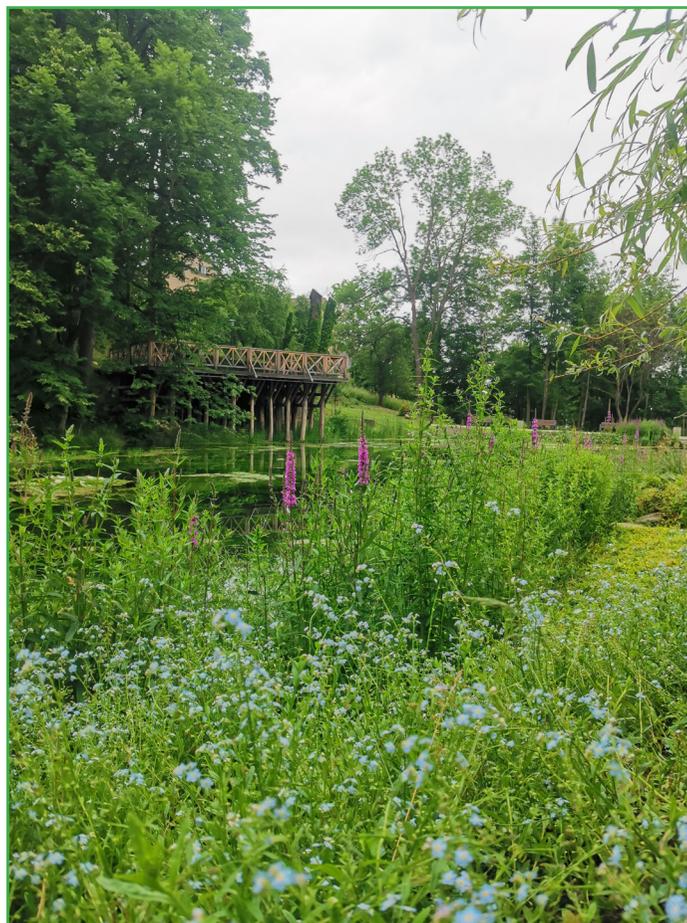


Photo 53. Vegetation of the garden of aquatic and marsh plants with visible platforms over the pond. Source: Karpacz City Hall

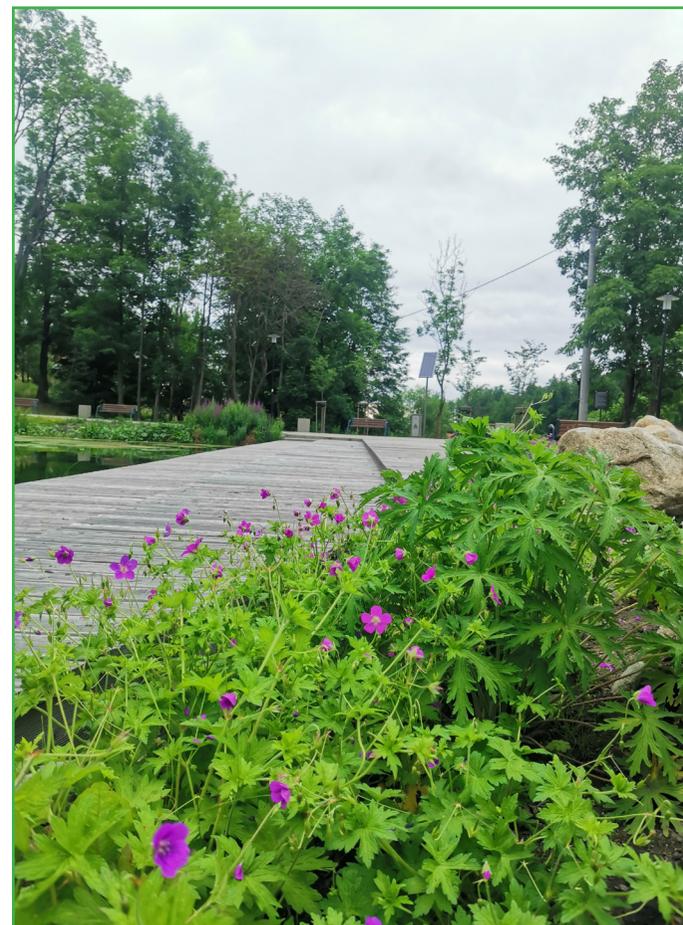


Photo 54. Vegetation of the garden of aquatic and marsh plants with visible platforms over the pond. Source: Karpacz City Hall

existing lawns or strengthening slopes with vegetation or using gabion walls. Permeable gravel or grass surfaces were used to a large extent as part of measures aimed at increasing the retention capacity of the areas.



Photo 55. Effects of the project implementation Development of green areas in the Karpacz Commune by creating and renewing green areas in order to improve the quality of the environment. Source: Karpacz City Hall

Photo 56. Effects of the project implementation Development of green areas in the Karpacz Commune by creating and renewing green areas in order to improve the quality of the environment. Source: Karpacz City Hall

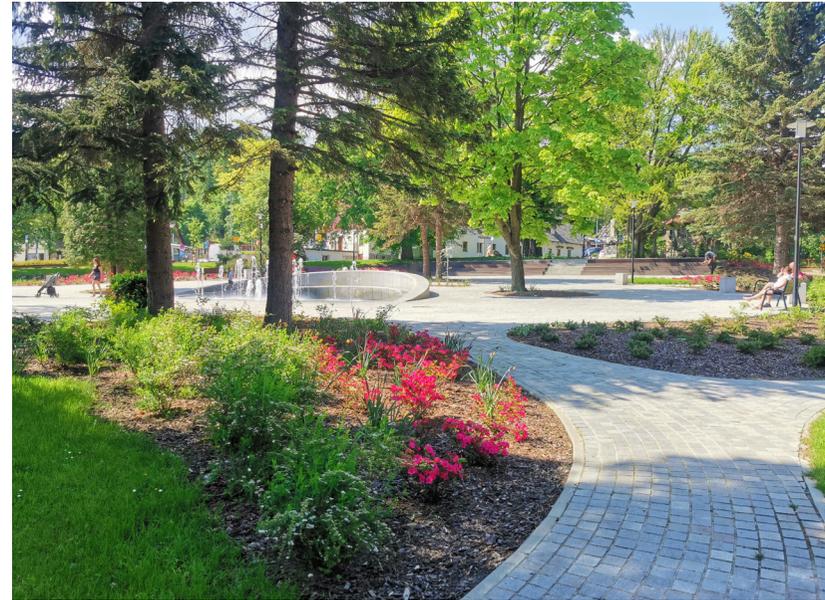


Photo 57. Effects of the project implementation Development of green areas in the Karpacz Commune by creating and renewing green areas in order to improve the quality of the environment. Source: Karpacz City Hall

The next stage of work on the project was the preparation of construction designs and obtaining a building permit for facilities that required such a permit according to the Construction Law. The construction project covered 4 parks, where works related to the construction of stairs, paths, wooden footbridges, platforms and gazebos, gabion walls, the foundation of small architecture or the construction of new park lighting were carried out.





Photo. 58 i 59. Effects of the project implementation Development of green areas in the Karpacz Commune by creating and renewing green areas in order to improve the quality of the environment. Source: Karpacz City Hall

## ŁOSICE

The action consists in developing a fiche regarding the strategic project entitled "Pro-ecological, green partnership" as part of the strategic goal: "Together for green development - cooperation of local governments and communities of the Partnership area, also involving external entities for sustainable, non-destructive environment, development of the area", included in the territorial strategy of Partnership Together for development - Łosice are the leader of the Partnership. Advisory support, implemented in the project, will help us select the best technological solutions and maintain a balanced approach to solving problems related to environmental protection (including the atmosphere, water and soil).

The Applicant and Partners, in cooperation with advisers, will determine the scope of the fiche, whether it will cover all tasks or selected - the strategic project is multitasking, including issues related to water and sewage management, renewable energy, energy clusters, air protection, shaping green and blue infrastructure, including diversity biological, thermal modernization, replacement of lighting, waste management, etc. These projects respond to the needs and problems diagnosed in the strategy (e.g. increasing the greening of the commune, the need to reduce the emission of pollutants, including CO<sub>2</sub>; the possibility of using waste for the production of heat and electricity; insufficient sewage system in the Partnership area, posing a risk of contamination of surface waters and underground; rising energy prices and the cost of waste collection, the need to educate the community of the area in the field of environmental and climate protection). The advice received will be a continuation of the support we had in the CWD pilot. The fiche and the solutions it contains will be disseminated among partners and external entities. The development of the fiche will be a preparatory stage for the future implementation of a project that is in line with the selected sustainable development goals. The planned date for the implementation of the project / activity is the fourth quarter of 2022.

The strategy from which the project to develop the fiche results was widely consulted and promoted (including several questionnaires, debates, participation of residents in working groups, individual meetings with residents and entrepreneurs, information



on the Internet and local media). Apart from commune heads, the Partnership Council (decision-making body) includes the President of the Local Action Group, representatives of NGOs, entrepreneurs and residents. In total, several hundred people participate in consultations. Similar forms of participation will be continued.

## MIELEC

The project entitled "Establishing a flower meadow and lawns - Implementation of a small investment in blue and green infrastructure" in the Mielec consists in the establishment of a flower meadow on an area of approx. 300 m<sup>2</sup> and lawns on the area of approx. 685 m<sup>2</sup>. The area of the meadow is located near a housing estate and at two streets, communication routes. The project was a social initiative from previous years, inspired by the idea of city councillors to establish a flower meadow. The area intended for a flower meadow and lawns is located on the plot in Mielec at the intersection of Jagiellończyk and Kusocińskiego streets near the residential blocks of the Kusociński housing estate and sports facilities. The city of Mielec is implementing this project with the involvement of the city's community.

Agreement for the implementation of the task "Establishment of a flower meadow and lawns as part of the implementation of a small investment in blue and green infrastructure in the Program of cascading training for local government employees in the field of designing and managing greenery in cities" co-financed



Fig. 8. Conceptual sketch for the implementation of a flower meadow at Jagiellończyk and Kusociński streets in Mielec. Source: Town Hall in Mielec

by the National Fund for Environmental Protection and Water Management under the program priority no. 5.5 "Environmental education" included the following activities:

1. mechanical removal of turf under a flower meadow and lawns to a depth of 7 cm,
2. preparation of the ground for the establishment of a flower



meadow and lawns - cultivation with a rotary tiller at the depth of 15 cm, removing roots, weed rhizomes, construction debris and their utilization, levelling the surface,

3. delivery of soil and unplugging at a height of 7 cm, less than 5 cm from the curbs, levelling the surface,

4. leveling and micro levelling of the surface, profiling of slopes in connection with the outflow of surface waters of lawns,

5. sowing seeds of a mixture of perennial and annual plants

of a flower meadow on previously prepared ground, hacking, rolling. You can take 2-2.5 g of the mixture on the surface of a flower meadow, 300.00 m<sup>2</sup>,

6. establishment of sowing lawns on previously prepared ground, sowing, hacking, rolling on the surface of lawns - 685.00 m<sup>2</sup>,

7. care of a flower meadow (watering for the first month, removing weed seedlings and undesirable plants),



Photo 60. A flower meadow after emergence in a flat area. Flowering in the month of May. Clear presence of undesirable plants - invasive species (Canadian goldenrod). Source: own resources, author: Beata Rządźka, June 2021.

Photo 61. The sowing stage on March 21, 2022 of the meadow mixture with the participation of young people in class VI of Primary School No. 6 in Mielec. Source: Town Hall in Mielec



8. lawn care works (watering after sowing for the first month, the first mowing with the removal of cut grass) on an area of 685.00 m<sup>2</sup>,

9. installation of an information board on the meaning of flower meadows with a description of the established meadow.

As part of the project, the ground for sowing seeds was prepared by December 20, 2021. Until March 21, 2022, a meadow and lawn mixture was sown with the participation of the community during the organized workshops on the establishment and care of flower meadows with adjacent lawns. Information boards were built in for the implementation of the project undertaken as a result of the educational program.



## OSTRÓW MAZOWIECKA

Municipal Economy Enterprise conducts educational activities among the inhabitants of Ostrów Mazowiecka in the field of shaping pro-ecological attitudes and building an ecological image of Ostrów Mazowiecka. The city's permanent task is to improve the quality of trees and shrubs and to increase the amount of green areas. For example, in 2020, a new recreational space was created at Winnie the Pooh street and a flower meadow in front of the town hall. 27 new oak, rowan and ginkgo trees were planted at Kosciuszko street. The construction of pedestrian and bicycle routes sometimes requires cutting down trees. Therefore, the city of Ostrów Mazowiecka was obliged to plant, which in 2020 were carried out as part of this investment in various parts of the city.

The project entitled "Butterfly corner" falls within the scope of the City's activities in the field of blue and green infrastructure. It involves planting honey-bearing trees and perennials and installing insect houses on a part of plot no. 1722 surrounding the Town Hall. The project will be implemented in the second quarter of 2022.

The assumption of the project is to increase the awareness of residents about the benefits of creating blue-green infrastructure that will play an environmental role. The project aims to draw the attention of residents to the role of urban greenery as a good source of food and a shelter for pollinating insects throughout the growing season. On the awareness of human dependence on the natural environment. For the need to maintain the diversity of life forms on Earth that provide food, energy, raw materials, air and water, i.e.

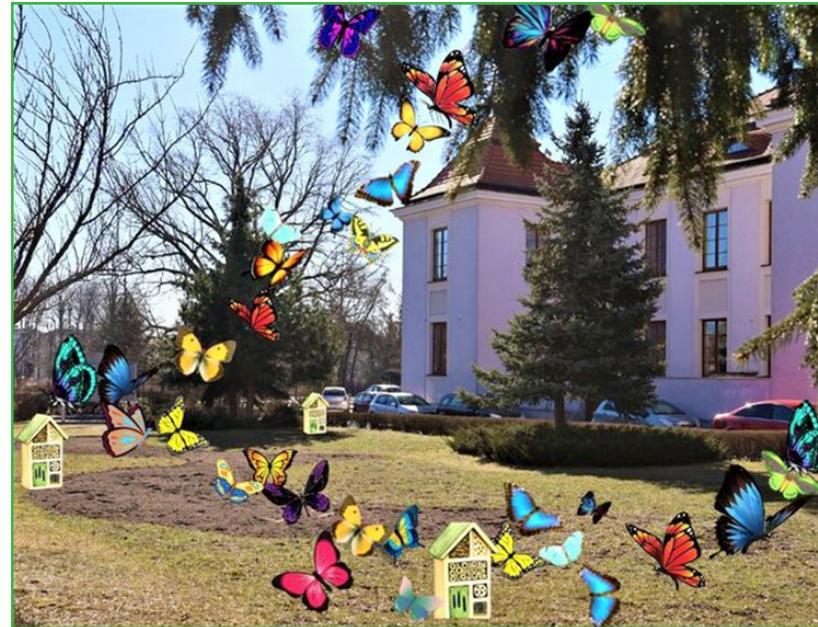


Photo 62. "Butterfly corner" before planting. Source: Ostrów Mazowiecka Town Hall

the elements that enable existence in the form we know and fuel the economy.

The scope of work under the "Butterfly Kącik" included the following activities:

- purchase and planting 110 narrow-leaved lavender seedlings,
- 333 Faassen catnip seedlings purchased and planted,
- purchase and planting of 228 mossy sage seedlings,
- purchase and planting of 3 cherry trees,
- purchase and bark for mulching,
- purchase and installation of insect houses.

The project was carried out by the Ostrowska Social Association with the participation of the local community.





Photo 63. "Butterfly corner" in progress. Source: Ostrów Mazowiecka Town Hall



Photo 64. "Butterfly corner" in progress. Source: Ostrów Mazowiecka Town Hall

## OZORKÓW

As part of the "Action Plan for Cities" Program, Ozorków is implementing a project in the field of blue-green infrastructure. It concerns the development of a green area called "Greenery arrangement at the intersection of Zgierska and Sienkiewicza streets in Ozorków". The area covered by the study is located along one of the main roads leading to the city centre.

The area of the green area is approx. 2,500 m<sup>2</sup>. There is a fenced playground for children in the area covered by the study. Next to the playground, there is an outdoor gym and small architecture in the form of chess tables, benches and litter bins. The area is surrounded by numerous trees and a hedge. Until now, it was entirely covered with grass, in places with foreposts. There were no paved, separated paths in this area. The stand was dominated mainly by the Norway maple 'Globosum' and small-leaved lime.

The project aims to put in order, renew greenery and improve biodiversity by introducing flowerbeds of flowering shrubs and perennials, filling gaps in greenery with new plantings and removing trees in poor health. When designing the green area, we took into account the species that were proven and resistant in urban conditions and recommended by the Polish Nurserymen Association, enriching the greenery with species that benefit pollinating insects, and at the same time resistant to short-term drought and pests. Mainly native species were used for planting: trees - Norway maple 'Globosum', small-leaved lime and shrubs: vermicelli', cotoneaster', cotoneaster, shrubby cinquefoil, mossy sage, acorn reed.





Photo 65. The condition of land development prior to the project implementation. Source: Ozorków Town Hall

The arranged green area is a meeting and leisure place not only for the local community, but also for all city residents due to its location on one of the main roads leading to the city centre and the road leading to the City Lagoon.

Due to the difficulty in the availability of selected planting material in the fall and a significant increase in the prices of plants and services, the task implementation process was divided into two stages. The first stage was implemented from April to the end of May 2022. The second stage will probably be completed next spring.

Stage I included making a rebate of shrubs and perennials in the western part of the square as a continuation of plantings in the city centre, making a rebate covering a concrete wall running from the eastern border of the green area, and the purchase and

assembly of small architecture.

The second stage will cover the maintenance of the existing tree stand (the existing, valuable trees of considerable size will be preserved), planting shrubs in the form of a hedge, which will protect the square from a busy street, and making further beds of shrubs and perennials, creating favorable conditions for insects, birds and small mammals.

A group of pre-schoolers from the city kindergarten No. 3 adjacent to the greenery were involved in the implementation of stage I.

Thanks to the activities carried out in the green area, an asylum will be created, where everyone will be able to take a break from the hustle and bustle, noise and crowds of the city centre.



Photo 66. Implementation of the project entitled "Greenery arrangement at the intersection of Zgierska and Sienkiewicza streets in Ozorków". Source: Ozorków Town Hall

The implementation will contribute to the improvement of the aesthetic value of the green area and the revival of green areas in the city. The renewed greenery together with blooming discounts will create a new embodiment for the existing relaxation zone (outdoor playground and wrestling, chess tables and small architecture in the form of benches).



Photo 67. Preschoolers during the implementation of the project. Source: Ozorków Town Hall



# 16 PEACE, JUSTICE AND STRONG INSTITUTIONS



## 16. PEASE, JUSTICE AND STRONG INSTITUTIONS

Significantly reducing the level of all forms of violence and the associated death rate worldwide is a priority for the SDG 16. This entails the eradication of abuse, exploitation and trafficking in human beings, and all forms of violence and torture against children. In this aspect, it is very important to promote the rule of law at the national and international level as well as to ensure equal access to justice for all. There is a need to significantly reduce the level of corruption in all its forms, develop effective, accountable and transparent institutions at all levels, ensure flexible, inclusive, participatory and representative decision-making at all levels, and expand and strengthen the participation of developing countries in the global institutions of the international legal order. It is extremely important to ensure legal identity for all, universal access to information and protection of fundamental freedom, in accordance with national legislation and international agreements. To achieve the objectives of the SDG 16, transparent, inclusive and fair public institutions are needed, increase the effectiveness of local government activities aimed at social and economic inclusion, development of a tolerant democratic society, improvement of the quality of local and local law and strengthening the strategic management system of development processes, which will contribute to the creation of (in the social, cultural and economic dimension) an environment that ensures that people respect human rights.

## DOBIEGNIIEW

As part of the project entitled "Reconstruction and expansion of the Woldenberg Museum for the development of cross-border tourist cooperation", the modernization and expansion of the Woldenberg Museum is planned with a new conference and cinema room, an archive and an educational space, as well as social facilities, new equipment for exhibitions, technical and multimedia equipment. The area around the museum will also be rebuilt. There will be a model of the camp and a watchtower there, and the camp cemetery will be renovated. Parking lots, the main access alley and internal streets will be rebuilt (there will be lighting, monitoring, small infrastructure and a meeting place).

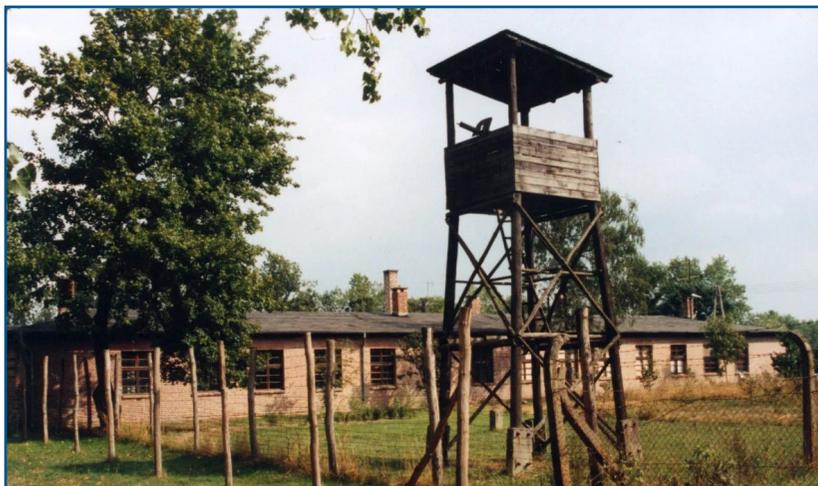
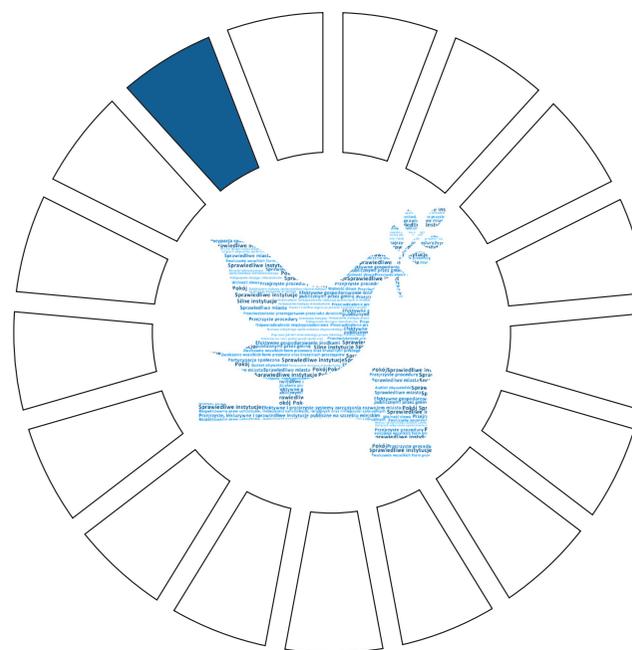


Photo 68. Buildings and Museum of the Oflag II C Woldenberg Camp. Source: <http://dobiegniew.pl/dla-turysty/zabytki/> - accessed February 21, 2022



"Soft" activities are also planned, consisting in the organization of a popular science conference, youth exchanges from Poland and Germany, a camp poetry and art and photography competition, museum lessons, historical debates, the Congress of the Woldenberg Families, temporary exhibitions and a rally along the camp evacuation route. There will also be a promotional film about the cross-border tourist product, publications and promotional materials, as well as a mobile application.

As part of the common cross-border tourist product, historical and cultural facilities in Germany will also be used, and its offer will be presented in several languages. The project aims to

increase the attractiveness of the cultural and historical offer in the combined Polish-German support area and contribute to the development of sustainable tourism.

The planned date for the implementation of this project is the third quarter of 2022. It is co-financed under the INTERREG VA Brandenburg-Poland Cooperation Program 2014-2020 under the ERDF.

During the project implementation, the Woldenberg Museum and the surrounding area will be modernized and extended. A mobile application will be created presenting a joint Polish-German offer, as well as various promotional materials and publications, including a promotional film. During the project, many educational, historical and cultural events will be organized, such as 2 popular science conferences, 4 international youth exchanges from Poland and Germany, 2 camp poetry competitions, 2 art and photo competitions, 10 museum lessons, 2 historical debates, 2 exhibitions time, 3 rallies along the evacuation route of the camp and the Reunion of the Woldenberg Families.

The Woldenberg Museum as a tourist product is one of the priorities included in the local strategic documents, in the preparation and implementation of which the local community participated. Debates, workshops and research meetings were organized, stakeholders had constant insight into the progress of works and influence on their content. The fruit of the participatory activities was the activation and networking of local leaders of various groups.

## **KALISZ**

The aim of the project entitled "Transparent information about the property tax rate in the revitalization area" will increase the knowledge and awareness of property owners located in the areas covered by the project, which will be subject to the increased property tax rate. The expected duration of the project is the first three quarters of 2022.

Trust in local government as the guarantor of the process is a key aspect of revitalization, and actions such as unjustified raising the property tax may disturb this trust. That is why it is so important to provide transparent and fairly complete information on the reasons for introducing an increased property tax rate and to present possible ways of proceeding with the owners of individual properties.

The project will be preceded by an analysis of the actual state, which will be based on the analysis of the applicable local plans and land in the context of charging their owners with an increased tax rate. The Revitalization Office in the Department of Strategy and Development will be responsible for preparing the analysis. This analysis will also be consulted with other departments of the City Hall. An information booklet will then be produced detailing the rules and options for further action by property owners.

The brochure will be distributed to all property owners located in the area covered by the project, and also published on the city's information channels.

Activities that will be undertaken under the project will be aimed at providing residents with information on changes in taxation. As part of the campaign, it is planned to organize an open meeting at which residents will be able to join the project, mainly thanks to obtaining complete information on property tax. They will also be able to work out the best way to proceed together with the office employees. At the meeting, conclusions from the analysis will be presented as well as options for further action by landowners.

## SKAWINA

The project entitled "Plans for the development of localities / Plans for the development of housing estates" is aimed at identifying reserves and challenges in individual neighbourhood units of the commune. Together with the residents, potentials and specific development priorities for village councils and housing estates will be identified by means of various participatory methods. They will be related to the Local Renewal Plans, the Municipal Revitalization Program, the Mobility Plan and the new Municipal Development Strategy.

Approximately 50 field meetings will be held. On the basis of research walks, mapping, and structured brainstorming, documents will be created that will describe the advantages and reserves of individual localities and indicate key actions that should be taken in the short and long term. The work will result in concrete action plans for the next 8-9 years (by 2030), based on the needs identified on the spot and described by the residents. The planned date of the



Photo 69. Workshop on constructing a rain garden in Radziszów. . Source: Krzysztof Skrzybalski

project implementation is the first quarter of 2022.

The role of the local community is crucial for the implementation of this project. It is the inhabitants who are experts on the surrounding space and depositors of knowledge about the neighborhoods closest to them. They will be involved in the process at each stage - from participating in research walks, through group mapping of ideas and what was observed during the walks, brainstorming with the use of post-it notes, discussions, to evaluation of proposed solutions and their prioritization.

## ZABRZE

The project entitled "The Accessibility Program of the City of Zabrze" meets the needs of the residents and aims to actively involve all social groups, especially people with disabilities in shaping a modern city and consolidating active social attitudes.

As part of the project activities, it is planned to develop a document entitled "Zabrze City Accessibility Program", which is a set of recommendations and conditions necessary to meet when undertaking and implementing projects for the city of Zabrze, taking into account the perspective of people with special needs, in order to ensure lasting and sustainable development in this area, social, economic and spatial cohesion, such as also increasing the city's competitiveness as part of its development policy. The perspective of people with special needs will be one of the key requirements to be met in the planned projects for both the commune and the local government.

The document is aimed at the broadly understood initiators of planned activities and implemented in Zabrze, both from the point of view of institutions and private entrepreneurs, city residents, who in their activities will take into account people with special needs, ensuring them full access to organized events, independent use of recreational facilities or comfortable and to deal with basic civil rights on your own.

The project is to be implemented by the end of 2022 along with further project evaluation in the following years. It is planned to implement the document both in the local area as well as at the national level, exceeding the framework of local government, being an inspiration for other industries, other activities, other institutions, as well as taking actions in cities and communes to improve the quality of life of people with disabilities and their environment.

The starting point for the development of the document will be the results of the city's accessibility analysis carried out by the Partner - the Silesian University of Technology. Based on own analyses of the City Hall, applicable strategic documents, implemented programs and projects, as well as through participation in consultations with individuals a document entitled "Zabrze City Accessibility Program" will be edited. The document will also be based on the applicable legal requirements in this regard, inter alia, the Act of 19 July 2019 on ensuring accessibility to people with special needs, the Act of 4 April 2019 on digital accessibility of websites and mobile applications of public entities, the Accessibility Plus program, as well as European good practices and recommendations in this area.



Photo 70. Available space of Freedom Square. Source: Zabrze City Hall

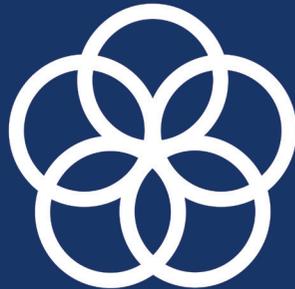
As part of the implementation of the Program, after the introduction of the document, dissemination and promotion activities will be undertaken, the overarching goal of which will be the broadest possible implementation of the document in question. It will be disseminated among the group including the office, municipal units, educational units, cultural institutions, economic and social organizations acting for the benefit of people with special needs, city residents, regardless of age, using broadly understood social media, traditional media (local and regional), as well as municipal promotional campaign.

In terms of exchanging experiences and good practices, learning from each other, the developed provisions will be promoted

among other local government units, as well as among industries and specializations from another sector.

In addition, information materials will be prepared in accordance with the accessibility requirements, which will be distributed by municipal units, municipal companies, cultural institutions, educational units and other social organizations as well as people involved in social activation of people with special needs. Educational campaigns will be undertaken addressed to a wide audience, including in kindergartens, schools, district councils. Inhabitants will be introduced to the issue of disability and at the same time full participation of these people during mass events, e.g. festivals, conferences, sensitizing them to taking actions to ensure the independent functioning of people with disabilities.

# 17 PARTNERSHIPS FOR THE GOALS



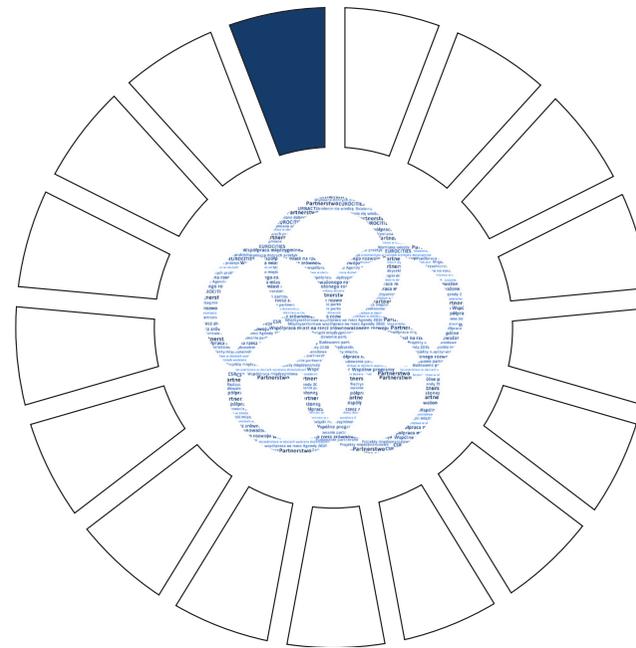
## 17. PARTNERSHIP FOR THE GOALS

The SDG 17 tasks are broken down into five categories: finance, technology, capacity building, trade, and systems issues. The first is the mobilization of domestic resources to developing countries, and the implementation of developed countries' commitments to provide official development assistance to help them achieve long-term debt-repayment capacity. In turn, technology is primarily about strengthening North-South and South-South cooperation as well as tripartite, regional and international cooperation in the field of access to science, technology and innovation. Equally important is the promotion, transfer, dissemination and diffusion of environmentally friendly technologies and optimization of the technology bank. Increase international support for effective implementation and targeted capacity building, is to support national plans to achieve all the Sustainable Development Goals. Trade-related tasks should promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system within the World Trade Organization and significantly increase the exports of developing countries. System assumptions should ensure political and institutional coherence, multilateral partnerships and data, together with their monitoring and a sense of responsibility. The main directions of development are: cooperation between cities for sustainable development, building partnerships, sharing knowledge and policy in science, technology and innovation, and mobilizing investors, companies and public interest groups to accelerate the adoption of sustainable business practices.

## BYTOM

The project entitled "Youth for Sustainable Development" was developed with reference to the diagnosis of the Municipal Revitalization Program. Bytom 2020+. It is a response to the city's needs to make matters dynamic and to look at them more broadly in the field of sustainable development. The project will be implemented at the national level and in cooperation with the partner city of Recklinghausen. As part of the latter, it is planned to establish cooperation between the Youth City Council in Bytom and its German counterpart in Recklinghausen. The planned cooperation is aimed at exchanging experiences, joint action in the face of challenges related to the consequences of current problematic issues, such as climate change or the need to abandon coal-based energy and the resulting need for social, economic and environmental transformation.

The city of Recklinghausen has been shaped by immigration for over 100 years. Today, around 120,000 people live in Recklinghausen. About 29,000 of these people have an international family history. Many people in Recklinghausen and its vicinity come from former German territories in today's Poland. German-Polish history is over 1000 years of neighborhood history, history of political, social and cultural relations. It is made up of both tragic events and long periods of peaceful coexistence. Since Willy Brandt fell to his knees in 1970 and the fall of the Iron Curtain in 1989, relations between the two countries have improved. Some Eastern European countries, such as Poland,



are now part of the European Union. Today, both neighbors, Germany and Poland, are closely related and, despite certain differences, they work well together in many social, political and economic areas. The main theme of the project, in addition to the political participation of young people, will be to familiarize young people with the common history of both countries. The aim is to learn a lesson for the present and the future from our shared history and to engage in the idea of maintaining peace as a "European" by talking to young people from a neighboring country, carrying out joint activities, overcoming prejudices and establishing common ground.

In particular, representatives of the youth parliaments of both cities should take part in the youth meeting, as they know the worlds of young people best and can present them particularly well in the context of youth meetings. These young people are considered multipliers who can bring their experiences and knowledge from the project to their schools, families and peer groups. Youth representatives should be able to exchange ideas about political and social contributions in the commune. Participants will also meet with political representatives from Recklinghausen. In line with the slogan of the European Year 2022 "Fighting Social Inequalities - Strengthening Participation", the project should also include young people from disadvantaged groups who would otherwise not be able to participate in such a project for various reasons. These young people are also important transmitters in their own social groups.

The meeting of youth from Recklinghausen with Polish youth from Bytom is to take place in Germany in the second half of 2022. The central theme of the youth meeting will be the social and political participation of young people in their own community and in the country, as well as a joint analysis of the history of Poland and Germany. In particular, young people from both countries should be able to learn about and compare both political systems in the project. A special attraction is the visit to the German Bundestag, followed by a discussion / exchange with a Bundestag member from Recklinghausen in Berlin. Here, too, the possibilities for youth participation in political life at federal level should be discussed.

Similarities and differences in the participation of children and young people in parliamentary work should be worked out and best practice examples should be transferred to another municipality.

In addition to representatives of local children's and youth parliaments, meetings in Recklinghausen and Bytom will be attended by other young people from different parts of the city and disadvantaged youth (young people from families with financial difficulties and / or from families with international family history). 2022 is the European Year of Youth under the slogan "Fight against social inequalities - strengthen participation". This is the slogan of the project, the involvement of socially disadvantaged youth, introducing them to talks with children and young people of MPs from Recklinghausen and Bytom, and motivating them to participate in future social, social and political events.

About 30-40 young people from Poland and about 30 young people from Recklinghausen should participate in the project. The youth meeting is to be held in Recklinghausen and Berlin, although due to capacity, only around 20 young people from Recklinghausen will participate in the program in Berlin.

The young people will deal with the topics of the project in Recklinghausen in advance. Experiences and contact points between young people and relevant other countries are to be identified and highlighted and recreated through face-to-face project meetings. In Germany, participants have the opportunity to present their cultures and stories to each other and to find specific features and similarities. The framework for this can be, for example,

a "colorful evening of cultures" with presentations, exhibitions, food, music, etc. Young people will approach the project topic through trips, workshops, visits to museums, discussions with experts, meetings with political representatives (e.g. in the German Bundestag in Berlin).

Possible points on the agenda are a visit to the House of History in Bonn, a visit and talks with political representatives in the Recklinghausen town hall, a commemorative work in the Recklinghausen city memorial book, a visit to the Recklinghausen synagogue and a visit to the Upper Silesian Museum in Ratingen. The program points for Berlin would be visits to the German Bundestag, the Monument to the Murdered Jews of Europe, the Monument to the Murdered Sinti and Roma of Europe and visits to other historically important places in the city.

Thanks to the wide range of possibilities, young people can work in smaller groups on different project topics according to their interests and present their results to each other. In terms of methodology, a combination of strictly structured activities in large groups or small groups (e.g. city tours, museums, workshops, etc.) and open forms of work (independent research, interviews, preparation of presentations, etc.) are envisaged. Personal initiative is particularly welcome in the selection of topics, discussions and presentations, and self-reliance should be encouraged. In this way, all young people can contribute to their opportunities and interests, and there is enough diversity. In the evenings, relaxing 'excursions' can be arranged which allow young people to talk to

each other according to their interests. This way, you avoid long evenings with presentations that can strain your concentration. Project results and thoughts will be blogged along with photos and field reports. Whenever possible, the resulting material should be exhibited at different institutions in the participating countries.

At the local level, the implementation of goal 17 will be implemented through the education of young people from the Youth City Council in Bytom on sustainable development and the benefits of social involvement.

## ŁÓDŹ

The project entitled "EcoPact" is a comprehensive program that summarizes the planned activities related to the conduct of a coordinated and effective pro-ecological policy covering all aspects of life in which the City can have an impact on improving the natural environment. Business pays more and more importance to the concept of CSR (Corporate Social Responsibility). According to it, companies, apart from achieving profit-oriented goals, also invest in human resources and environmental protection. Thanks to this, by making their surroundings more friendly, they increase efficiency. Łódź is a city created by entrepreneurs who have created its space for centuries. Thanks to the CSR concept, we have opened a new chapter in relations with business. As the city is the environment for Lodz companies and their employees, together we can take care of its condition. We are open to wide cooperation for the sake of the natural environment, because its better

quality means the health and comfort of life of the inhabitants. For this purpose, Łódź created the EcoPact concept as a form of cooperation, allowing to support the City's efforts to build a more environmentally friendly environment.

For its implementation, the City invited all stakeholders, including entrepreneurs, city residents, schools and universities, religious associations and cultural institutions. Actions taken are aimed at cooperation with stakeholders to achieve a jointly set goal, which may be, e.g. planting trees, adopting trees, building a facade garden, arranging a green wall, building a rain garden, planting a flower bed, planting shrubs, sowing a flower meadow, creating a flowerbed of bulbous plants, creating a visual identity of the park, erecting a bench, arranging a pollinator habitat with an educational board. We are also open to solving current problems and responding to current needs and ideas, such as the organization of drinking water distributors in educational institutions or street water spas, the purchase and installation of ecological bus shelters, organizing an incentive waste management system or the broadly understood arrangement of urban green areas. Many companies are also involved in cleaning the world on the occasion of the International Earth Day.

Thanks to the program, the City also associates many entities with each other, e.g. it connects business with a cultural institution to organize a small city apiary, or as a third entity, apart from a non-governmental organization and business, participates in a project not carried out on its own initiative, e.g. a bicycle.

The main goal of the EcoPact is to build a sense of shared responsibility for the environment and to raise environmental awareness among the inhabitants, with particular emphasis on children.

EkoPakt is based on two principles:

- circularity - striving to build an economic system, the assumption of which is to reduce (and ultimately eliminate) the amount of unused waste and wasteland generated in the economy. The goal here is to "engage" them in the economic cycle in an effective way, not necessarily in the same role, and to build social, economic and natural capital - 5R: Refuse, Reduce, Reuse, Repurpose, Recycle. destination, Recycle (Recycle);

- sustainable development - means striving to improve the quality of life of inhabitants, sustainable development of the economy and responsible use of resources, taking into account the environmental, social and economic effects for present and future generations.

In order to inform about actions taken with business (but not only), a website was created: [EkoPortal](#). On this website you can find a lot of news about environmental protection and development of Łódź as a green city. Inhabited information on the EcoPact is an additional form of promotion of companies and other institutions cooperating with the city, and a space for building environmental awareness and co-responsibility in broadly understood enterprises.

## Planned effects of the submitted projects

Sustainable Development Goal	Products	Results
<b>1. NO POVERTY</b>	<ul style="list-style-type: none"> <li>• an offer of several dozen rental apartments;</li> <li>• a housing resource optimization platform in a commune housing resource management company - a tool leading to better use of the existing housing resource and increasing its quality along with the environment;</li> <li>• a platform for social professional activation in a company managing the commune's housing stock with a range of possibilities for a permanent reduction of rent debts and for increasing the prognosis for maintaining solvency in the future;</li> <li>• the Socially Useful Work program for the homeless;</li> <li>• activities supporting taking up employment conducted at the Social Integration Centre for the homeless.</li> </ul>	<ul style="list-style-type: none"> <li>• inclusion of residents in pro-social activities of the property manager as part of the corporate social responsibility strategy;</li> <li>• acceptance of social innovations by the inhabitants;</li> <li>• increasing the availability of housing for people who cannot afford to buy or rent them on the commercial market;</li> <li>• reducing the overcrowding of current housing;</li> <li>• increased effectiveness of activities activating people in the homelessness crisis.</li> </ul>
<b>3. GOOD HEALTH AND WELL-BEING</b>	<ul style="list-style-type: none"> <li>• a rehabilitation program for seniors as a supplement to guaranteed health treatments;</li> <li>• program and spatial concept of a network of bicycle paths connecting recreational areas of the city, together with a formal and legal analysis as well as an analysis of technical feasibility of planned investment assumptions, including those related to the "interference" of infrastructure with protected areas;</li> <li>• assumptions of a green, sustainable housing estate integrated with the surroundings, ensuring a high standard of public space in the design of the local spatial development plan.</li> </ul>	<ul style="list-style-type: none"> <li>• raising awareness of the importance of an active lifestyle, increasing the activity, commitment and satisfaction of older residents,</li> <li>• improving the accessibility of attractive green areas for both the inhabitants of the commune and tourists, including the promotion of municipal orchards,</li> <li>• protection of nature against tourist pressure, while enabling the use of its wealth in designated, aesthetically designed places,</li> </ul>
<b>4. QUALITY EDUCATION</b>	<ul style="list-style-type: none"> <li>• thermomodernization of public utility buildings;</li> <li>• creating specialized language and computer rooms in schools and adapting public buildings to the needs of accessibility for people with disabilities;</li> <li>• analysis of development needs for individual age groups and a profiled cultural offer;</li> <li>• literary and ecological squares, public spaces;</li> <li>• modern educational and sports facilities;</li> <li>• a mobile application that allows to track the air condition, street cleanliness and the offer of crafts and repair services.</li> </ul>	<ul style="list-style-type: none"> <li>• development of ecological system education and increase of ecological awareness among children, youth and inhabitants of the city;</li> <li>• equal opportunities for children and youth in access to high-quality education and social infrastructure;</li> <li>• improvement of competences, skills and attitudes useful on the labour market for children and youth;</li> <li>• equal access to an appropriate level of education and sports offer for people with disabilities;</li> <li>• inclusion of external and local experts and all local stakeholders in the process of designing changes in the local education system;</li> <li>• creating conditions for active recreation combined with educational elements;</li> <li>• increase in the number of municipal library users;</li> <li>• image change of all communication and educational initiatives implemented by the city.</li> </ul>

<b>5. GENDER EQUALITY</b>	<ul style="list-style-type: none"> <li>• equality certificates awarded by city authorities, which will at the same time encourage positive changes in the area of equality by other entities;</li> <li>• constant analysis of the available statistics on the region and supporting the areas in need of intervention;</li> <li>• development and implementation of the Equality Action Plan, which will cover various areas in terms of creating equality policy in the city;</li> <li>• Women's Council Forum;</li> <li>• debates and conferences on social inequalities;</li> <li>• an educational trail dedicated to outstanding women associated with the city;</li> </ul>	<ul style="list-style-type: none"> <li>• introducing the obligation of persons managing units, institutions and municipal branches in the implementation of the basic assumptions of the program, such as taking into account gender equality in all decision-making activities concerning human resources and infrastructure;</li> <li>• elimination of forms of discrimination in the area of professional and social life;</li> </ul>
<b>6. CLEAN WATER AND SANITATION</b>	<ul style="list-style-type: none"> <li>• systems of intelligent, wireless water meters with a remote reading system;</li> <li>• new and modernized treatment plants with increased capacity;</li> <li>• cogeneration units with heating systems;</li> <li>• supplementing the water supply network;</li> <li>• modernization of the water treatment plant;</li> <li>• eplacement of hydrants and net gate valves</li> </ul>	<ul style="list-style-type: none"> <li>• increasing the operational reliability of the sedimentation node, stabilizing the quality of treated wastewater and securing water quality, better stabilization of sediments and reducing the odour nuisance of the sedimentation node;</li> <li>• improvement of water quality;</li> <li>• elimination of problems in the supply of water to real estate located at the end sections of the network;</li> <li>• facilitating possible rescue and firefighting actions, increasing the safety of residents</li> <li>• reducing the importance of the human factor in operating water meters and reducing personnel costs.</li> </ul>
<b>7. AFFORDABLE AND CLEAN ENERGY</b>	<ul style="list-style-type: none"> <li>• renewable energy source using the power of water (small hydro-power plant), which will be able to produce about 635 MWh of electricity per year (water pumping station located in the immediate vicinity of the water reservoir);</li> <li>• geothermal and biomass heating plant combined with the implementation of a cogeneration module</li> <li>• buildings modernized in terms of energy;</li> <li>• brine graduation tower</li> </ul>	<ul style="list-style-type: none"> <li>• improvement of air quality by limiting the emission of pollutants particularly harmful to the quality of life;</li> <li>• introduction of modern, effective and economical energy solutions for the currently operating heating system;</li> <li>• unblocking the existing damming barrage - greater volume of water available to aquatic organisms, improving the chemical condition of water, reducing the emission of dust and gas pollutants;</li> <li>• improving the energy efficiency of residential buildings;</li> <li>• increased involvement of the local community, non-governmental organizations and entrepreneurs in the city's energy transformation process.</li> </ul>

<b>8. DECENT WORK AND ECONOMIC GROWTH</b>	<ul style="list-style-type: none"> <li>• IT platform integrating micro-entrepreneurs;</li> <li>• a set of guidelines for building a climate-neutral education system, a certificate template with a carbon footprint in education for students;</li> <li>• free online training in the field of operating information systems using AI for marketing automation;</li> <li>• program of activities for students in the field of digital education, script and teacher training, educational materials, course programs, educational materials, video from inspirational meetings.</li> </ul>	<ul style="list-style-type: none"> <li>• improving the professional activity of residents and involvement in the affairs of the local community;</li> <li>• developing the creativity of the young generation focused on the new labour market requiring the ability to use technologies and innovative solutions;</li> <li>• improving the efficiency of managing their businesses by residents;</li> <li>• optimization of processes and costs in the company, allowing to increase competitiveness;</li> <li>• increasing the competences of residents increasing the possibility of employment in e-commerce.</li> </ul>
<b>9. INDUSTRY, INNOVATION AND INFRASTRUCTURE</b>	<ul style="list-style-type: none"> <li>• replacement of all road lighting points throughout the commune and of lighting points in the city park;</li> <li>• a prototype of an electric car for tourists from Bieszczady with the "Stay Wizard" application installed on a tablet built into the vehicle, which, thanks to a pre-programmed algorithm, will propose a vacation plan to the tourist taking into account the variables;</li> <li>• creating a network of parking lots with charging stations for electric vehicles;</li> <li>• modernized roads;</li> <li>• applications using AI for the needs of city dwellers;</li> <li>• newly constructed and renovated roads in the commune, together with a new car park;</li> <li>• underground containers for waste segregation, the so-called nests in downtown buildings with the prospect of future recycling of construction and demolition waste as well as recycling and upcycling of items intended for reuse;</li> <li>• establishment of an ecological education centre in a renovated historic building of over 100 years old wood factory</li> </ul>	<ul style="list-style-type: none"> <li>• savings in electricity costs;</li> <li>• improvement of the city's waste collection system;</li> <li>• proposing a means of communication that is more environmentally friendly than currently used by tourists, using the travel time between tourist points to obtain knowledge about the history, culture and nature of the Bieszczady Mountains (optimization of tourism);</li> <li>• reducing the importance of the human factor in servicing tourist traffic and independence from growing personnel costs in tourism.</li> </ul>

<p><b>10. REDUCED INEQUALITIES</b></p>	<ul style="list-style-type: none"> <li>• new urban space in a post-industrial pedestrian-friendly facility, without barriers for the elderly and people with disabilities, easily accessible for cyclists;</li> <li>• a program of supporting grassroots initiatives through mini grants, competitions for non-governmental organizations;</li> <li>• REparacje contact base for people dealing with various types of repairs, as well as the creation of REusers - a point of exchange of used items;</li> <li>• identity activities in the backyards (inventing the name of the yard together with the residents, developing social rules of order, appointing a yard caretaker, developing neighborly rules in the yard, planning a common calendar of events, creating an element identifying the yard, e.g. a painting, painting, mural);</li> <li>• leadership workshops shaping entrepreneurial attitudes and activity of residents, responsibility for the environment with the participation of a tutor, and supporting grassroots and neighborhood initiatives;</li> <li>• trainings for local government employees on taking up revitalization activities for green areas;</li> <li>• floristic workshops for the Municipal Council of Seniors - workshops on setting up and using plants in rain gardens.</li> </ul>	<ul style="list-style-type: none"> <li>• comprehensive support for families with multidimensional problems;</li> <li>• reaching out to families who, for various reasons, do not show the need to improve their own situation;</li> <li>• shaping acceptable norms by showing families alternative ways of spending time actively, using the municipal infrastructure: sports, cultural and recreational;</li> <li>• activating professional and civic potentials and strengthening community integration and cohesion;</li> <li>• friendly and healthy shaping of public space;</li> <li>• building local communities;</li> <li>• creating new and strengthening the existing business, administrative and cultural functions within the very city centre.</li> </ul>
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<p><b>11. SUSTAINABLE CITIES AND COMMUNITIES</b></p>	<ul style="list-style-type: none"> <li>• comprehensive reconstruction of the city centre;</li> <li>• construction of a new bus terminus at a new, developing multi-family housing estate and at the planned agglomeration railway stop;</li> <li>• a modern communication centre for the entire city;</li> <li>• road infrastructure for zero-emission vehicles connecting bicycle paths with a network;</li> <li>• modern stop systems: installation of new shelters equipped with a photovoltaic installation, heating and cooling function;</li> <li>• renovated, modernized and green public spaces;</li> <li>• revalorization of the park;</li> <li>• development of the tenement house yard;</li> <li>• projects of new images of housing estates along with catalogues of projects adjusting the functions of inter-block spaces to the needs of residents;</li> <li>• concepts for the development of the area together with programs for its further development;</li> <li>• a program of involving residents in the operation of municipal institutions;</li> <li>• an electronic, comprehensive city management database system based on the "Internet of Things" (IoT), which enables the minimization of energy consumption and the reduction of harmful gas emissions into the atmosphere;</li> <li>• e-ticket - a function of a virtual season ticket assigned to a payment card in an online store and in mobile ticket machines;</li> <li>• cyclical advertising campaign and website promoting investments implemented in the city, the offer of the secondary market and the city's advantages.</li> </ul>	<ul style="list-style-type: none"> <li>• stopping the negative trend of the decreasing number of the city's inhabitants and attracting people looking for a place to live in the city;</li> <li>• getting to know the current situation of the inhabitants of the revitalization area;</li> <li>• increasing tourist traffic in the city;</li> <li>• creating new functions and creating an attractive space in the central district;</li> <li>• the inclusion of people who are excluded or at risk of exclusion;</li> <li>• improvement of rainwater retention and their use for watering plants;</li> <li>• prevent water consumption from municipal water supply, generating ecological and economic benefits;</li> <li>• increasing the biologically active surface and reducing surface runoff of rainwater along with the increase in biodiversity;</li> <li>• encouraging social gatherings and outdoor activities for residents, increasing the positive impact on the well-being of space users;</li> <li>• facilitating the collection of information about cities, housing offers and assistance in contact with real estate agents and development companies;</li> <li>• modelling of city traffic, street lighting and control of air pollution level resulting from the emission of harmful gases;</li> <li>• counteracting flooding as a result of torrential rains in the strict urban development of the city;</li> <li>• improvement of pedestrian infrastructure and accessibility of municipal facilities;</li> <li>• improvement of road traffic safety;</li> <li>• improvement of the functioning quality and accessibility of public transport;</li> <li>• increase in the area of green areas close to natural;</li> <li>• securing slopes against landslides thanks to appropriate vegetation and preventing excessive accumulation of surface water thanks to the use of plants that tolerate excess water;</li> <li>• improving access to safe and inclusive green spaces, especially for women, children, the elderly and people with disabilities;</li> <li>• improvement of the quality of life by initiating investment activities (e.g. a joint program of renovation of tenement houses and other buildings within the area), as well as soft activities targeted at specific groups of stakeholders;</li> <li>• adapting the space of the city centre to the needs of the elderly and the disabled.</li> </ul>
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<b>12. RESPONSIBLE CONSUMPTION AND PRODUCTION</b>	<ul style="list-style-type: none"> <li>• waste composting plant for separately collected waste;</li> <li>• reconstruction of the existing waste segregation installation with a module for the crushing of individual fractions, the collection of metal waste, heavy and light fraction with infrastructure;</li> <li>• construction of the Municipal Selective Waste Collection Point;</li> <li>• Mobile Selective Municipal Waste Collection Point;</li> <li>• reusable packaging system for take-away meals and drinks;</li> <li>• collection of unsold but edible food at marketplaces;</li> <li>• a system for redistributing products obtained during food collection;</li> <li>• GOZ FESTIVAL "Don't waste, repair, replace".</li> </ul>	<ul style="list-style-type: none"> <li>• reducing the harmful effects of waste on the natural environment;</li> <li>• improving the quality of waste disposal, increasing recovery rates and reducing the amount of waste landfilling;</li> <li>• obtaining a fertilising product / agent supporting the cultivation of plants or generation of waste that can be used in other processing processes in a way that does not endanger the environment;</li> <li>• increasing the role of sustainable development in the area of meals, financed both from public and private funds;</li> <li>• reliable information on additional ways that the city can take to prevent food waste (not only at marketplaces);</li> <li>• ad hoc assistance to residents in providing a wholesome meal;</li> <li>• widespread use of green public procurement</li> </ul>
<b>13. CLIMATE ACTION</b>	<ul style="list-style-type: none"> <li>• purchase and introduction of new electric buses to the public transport fleet;</li> <li>• development of the rondo island with plants,</li> <li>• designs of parks, squares and plantings;</li> <li>• elimination of solid fuel stoves as part of the reduction of low stack emission;</li> <li>• implementation of a smog system;</li> <li>• subsidies for the purchase and assembly or construction of various types of rainwater retention solutions;</li> <li>• construction of ecological infrastructure, such as hedgehog houses, recycling machines.</li> </ul>	<ul style="list-style-type: none"> <li>• reducing the emission of pollutants from the transport sector;</li> <li>• increasing the resilience of space to climate change thanks to the introduction of blue and green infrastructure;</li> <li>• modernization of the fleet of public transport buses;</li> <li>• ensuring accessibility to public transport for disabled people, adjusted to their needs to a greater extent than required by law;</li> <li>• increasing the number of people using public transport and reducing traffic congestion;</li> <li>• improving the integration of transport modes by adapting to the transport of bicycles;</li> <li>• reducing the spread of pollutants through the bushes in the road lanes;</li> <li>• improving the adaptability of the part of the city covered by the project towards the effects of drought and heat,</li> <li>• counteracting the effects of climate change by planting drought-resistant plants (including flower meadows),</li> <li>• mitigating the effects of climate change (heatwaves) by creating shady rest areas;</li> <li>• reduction of noise pollution thanks to trees and shrubs;</li> <li>• reduction of greenhouse gas emissions;</li> <li>• improving the quality of green areas in educational institutions;</li> <li>• creating new educational opportunities to support outdoor activities;</li> <li>• increase of the biologically active surface;</li> <li>• increase in rainwater storage due to its retention by plants and their root system, reduction of surface runoff;</li> <li>• increase in biodiversity of plant and animal species, especially insects, including pollinators;</li> <li>• improvement of the local microclimate;</li> <li>• reduction of the urban heat island effect;</li> <li>• improvement of air quality and comfort of life for residents.</li> </ul>

<b>14. LIFE BELOW WATER</b>	<ul style="list-style-type: none"> <li>• a system for removing and preventing water contamination with petroleum substances;</li> <li>• fishing storage containers;</li> <li>• a system of launching and launching fishing boats;</li> <li>• video monitoring of the port;</li> <li>• a mobile application that allows you to buy fresh fish directly from a local fisherman;</li> </ul>	<ul style="list-style-type: none"> <li>• improvement of water protection against pollution;</li> <li>• facilitate the movement and transportation of boats;</li> <li>• promotion of local fisheries;</li> <li>• extension of port monitoring improving security;</li> <li>• enhancing the resilience of coastal ecosystems;</li> <li>• ensuring the good condition and productivity of the Baltic Sea.</li> </ul>
<b>15. LIFE ON LAND</b>	<ul style="list-style-type: none"> <li>• new parks and squares; revitalization of parks and squares;</li> <li>• construction of buffer and insulation greenery in road lanes;</li> <li>• flower meadows.</li> </ul>	<ul style="list-style-type: none"> <li>• increasing the biologically active surface;</li> <li>• increase in species biodiversity of plants and animals, especially insects, including pollinators;</li> <li>• improvement of the city's landscape values; increasing the decorative value and aesthetic value of urban spaces;</li> <li>• soil protection;</li> <li>• air purification;</li> <li>• water retention in soil, improvement of water retention;</li> <li>• preventing wind and water erosion (by securing earth slopes and flat areas by using cover vegetation or lawns and creating green screens);</li> <li>• lowering the temperature and improving the urban microclimate.</li> </ul>
<b>16. PEACE, JUSTICE AND STRONG INSTITUTIONS</b>	<ul style="list-style-type: none"> <li>• modernization and expansion of a museum of national importance;</li> <li>• information campaign carried out in connection with changes in taxation in the areas covered by the project.</li> </ul>	<ul style="list-style-type: none"> <li>• promotion of a peaceful and inclusive society;</li> <li>• social inclusion and development of cross-border cooperation;</li> <li>• protection of historical heritage;</li> <li>• creating innovative solutions for the development of sustainable cross-border tourism, using the heritage of history;</li> <li>• increase in the involvement of residents in local matters;</li> <li>• greater social inclusion, building a civil society and strengthening trust and partnership between residents and the municipal office;</li> <li>• facilitating the use of services offered in the city and active participation in social life of people with disabilities.</li> </ul>
<b>17. PARTNERSHIPS FOR GOALS</b>	<ul style="list-style-type: none"> <li>• Polish-German youth exchange program.</li> </ul>	<ul style="list-style-type: none"> <li>• involving young people in various forms of partnership that pursue a common vision and common goals;</li> <li>• increasing the social involvement of young people;</li> <li>• increase in social integration;</li> <li>• openness to cooperation with local authorities</li> </ul>



## Legacy of the 11th Session of the World Urban Forum in the Action Plan for Cities

As part of the Action Plan for Cities, cities had the opportunity to increase their contribution by preparing information on the declaration of direction for further activities under the WUF11 Legacy (WUF11 Legacy) in 2023-2024 and recommendations regarding soft guidelines and tips that could be adapted to local conditions and from which other cities with similar characteristics will be able to benefit. An additional study prepared by cities is to present a vision of the development of sustainable cities in the near future.

Depending on the submitted project or activities in line with the United Nations Sustainable Development Goals, cities have declared very different directions for further activities within the WUF11 Legacy.

Planned actions by cities regarding changes in the urban space and shaping the area development program have been reported by several cities:

- Variant development strategies as well as urban and architectural concepts of land development for areas requiring support developed by student teams are expected to be included in further works aimed at developing the Municipal Revitalization Program for the City of Katowice. Detailed planning and implementation of the plans resulting from the USAR team will be based on participatory mechanisms, including, in particular at the stage of task implementation, participatory and green budget mechanisms (where possible). The city-university cross-sector cooperation scheme will be promoted among other urban centres, and the

City of Katowice will also implement it in works on other areas requiring intervention. (KATOWICE)

- As a continuation of activities, the Tychy masterplan for the new city centre will require periodic assessment of its topicality, both in terms of local (social, political), infrastructural (technical, innovation) and substantive conditions (state of knowledge), therefore it is important to conduct this assessment with external partners. Under the banner of WUF11 heritage, further works on the master plan, local spatial development plans and cooperation with the local community and investors may be carried out. (TYCHY)

- In the coming years, Pleszew is planning popularization and educational activities dedicated to cities of similar size and needs, covering the scope of the model transformation of sustainable urban mobility of a compact city and changes in the city centre at each stage of implementation. (PLESZEW)

Activities aimed at environmental protection, implementation of ecological solutions and development of urban green areas will also be implemented:

- The city's environmental policy will be consistently implemented in Starachowice. Further activities of the city will be focused on the further development of the ECO concept in the area of the operation of preschool institutions (ECO kindergartens), recreational facilities at school facilities (including ECO playgrounds at school ECO). As part of the education system,

an innovative ecological education program will be developed with components of ecological entrepreneurship. In the future, it is also planned to create an ecological library "EKOTEKA", which will be complementary to the solutions in the field of ECO school in Starachowice. (STARACHOWICE)

- The project implemented by Ustrzyki Dolne is complex, multifaceted and requires large financial outlays. At the end of participation in the program, the city will have a diagnosis of users' needs and conducted technical consultations for innovative IT solutions. The next step will be to redefine the assumptions, specify the plan, schedule and individual stages of the multidimensional project. Due to the attractive location of the city, the fact that it is a "service centre" of the Bieszczady Mountains, a dynamically developing tourist centre and links with the East, the local self-government tries to initiate projects that will be equal to mountain and tourist communes throughout Europe and the world. In the following years, the project "New model of tourist transfer in the Bieszczady Mountains" will continue to be implemented as the heritage of WUF11, and its scope will increase from year to year. In the years 2023-2024, the technical documentation will be created along with the entire investment concept, the main facility will be built, which will be the main car park integrating traditional and electric communication in Ustrzyki Dolne, and an innovative application - the Stay Wizard will be implemented. In the following years, investments in transport infrastructure will be continued

as part of the Bieszczady Transport Union, so as to use energy more efficiently and care for the environment. Each subsequent project carried out in the commune should use new information and communication technologies to best support the society.

In order to stop and reverse the processes of soil degradation and loss of biodiversity, activities will be continued such as, for example, "pro-ecological education", "green leader", "green Ustrzyki Dolne", "green office", "municipal apiary", "social cleaning campaigns", "greenery in the city", "new energy self-sufficient village on the Solina Lagoon", "energy self-sufficient city", "construction of home sewage treatment plants in protected areas", "thermo-modernization investments", "renewable energy installations", "zero-emission municipal transport" and others.

In order to support the development of partnership, in the years 2023-2024 a supra-local strategy based on the principles of sustainable partnership will be developed, in line with the new instruments of integrated development planning. New partnerships will be built for the sectors of sustainable energy, infrastructure, transport as well as the ICT sector. (USTRZYKI DOLNE)

- In the years 2023-2024, Świdnica will implement the goals of sustainable development by implementing various projects and including them in new and updated strategic documents. The planned activities include the investment and energy concept "Świdnica on the way to energy independence", under which the document "Transformation of the Public Sector", the Świdnica



Renewable Energy Cluster Development Strategy for 2022-2030 and the Development Strategy of the City of Świdnica for 2023-2030 will be created. New studies or updates of documents will be in line with the 7th, 11th and 13th SDGs. Świdnica will join the Świdnica Renewable Energy Cluster, will run a consultation and information point for the nationwide Clean Air program, will create a system for co-financing modernization and investment activities of heating systems in residential buildings, will cooperate with NGO Association of Free Entrepreneurship and with other local governments in the preparation of network projects for the Fund Just Transition, promote and use systemic heat, monitor and control air quality, counter energy poverty. The city will also replace the bus fleet with a zero-emission one and will cooperate with the United Nations Association Poland in terms of education and promotion of the Sustainable Development Goals among residents. (ŚWIDNICA)

- Intensive development of the Krosno Energy Cluster is planned in Krosno, which is to contribute to the construction of the local energy market for the benefit of residents and the environment through access to clean energy produced locally. In the following years, it is planned to implement investments in new renewable energy sources (with energy storage), to develop a self-consumption system at the place of its generation and to implement modern systems for managing surplus energy (after the construction of the Power Unit). (KROSNO).

- Further activities of Mielec will consist in the implementation of strategic objectives and increasing the area of diverse biodiversity by establishing flower meadows in various parts of the city. It is planned to establish various flower meadows in the green belts along the streets, in open spaces next to housing estates and in selected areas in parks. (MIELEC)

- Maków Mazowiecki will seek further support in order to define the desired development directions in the field of sustainable energy management. It would refer to both investment and non-investment activities in the sector of private housing, public housing, spatial planning, as well as heat and energy supply. These activities should bring an ecological effect in the form of limiting the emission of harmful substances into the air, reducing final energy consumption and should focus on supporting the production and distribution of energy from renewable energy sources (RES), development of modern energy economy, development of technical infrastructure and creating conscious and friendly the environment of the society. (MAKÓW MAZOWIECKI)

- Based on the recommendations developed during the project implementation in 2022, Warsaw plans to continue activities related to building conditions conducive to reducing food waste. The city also declares popularization and educational activities dedicated to cities with similar needs, regardless of their size. As part of the project, educational campaigns involving residents, buyers and non-governmental organizations will be carried out,

and their recipients will also be visitors to the city. The city will also continue to actively participate in the EUROCITIES Food System Working Group where it will share experiences, lobby European institutions to recognize the key role of cities in transforming the food system, and network and collaborate with others. take part in partnership projects. Warsaw has also committed to achieving climate neutrality in 2050 as part of the Green Cities Program, one of the tools of which is to reduce food waste. (WARSAW)

- In Nowy Targ, activities aimed at environmental protection have been undertaken for many years. The last decade has been a period of increased investments in water and sewage infrastructure, but also in the field of air protection or the organization of urban space (green areas). Despite the fact that significant external funds have been obtained and a large amount of work has been carried out, there are still many tasks to be performed, some of which are already well advanced at the conceptual or even design stage. Such tasks include development and modernization works of a wastewater treatment plant, which meets the current legal requirements, but its development potential is insufficiently used. As a regional treatment plant, it could serve even more inhabitants of Podhale, provided that some devices and technological nodes are expanded and modernized. Modernization would also bring the goal of energy self-sufficiency closer and fit into the guidelines of the circular economy. Such a project is included in the wide-ranging investment plans of the city and the Nowy

Targ water company, but the lack of funds limits the ambitious development plans (NOWY TARG).

Many cities will continue activities aimed at the development and improvement of the quality of life of the local community, civic activity and social participation:

- In Skarżysko Kamienna, it is planned to create a local point of the Women's Rights Centre as part of the Centre for Social Integration, where voluntary help will be available to people experiencing gender-based violence. The task of the Centre will also be to conduct educational and information campaigns and to cooperate with similar organizations throughout Poland. Preparations are also underway to create a Ukrainian House in the Municipal Cultural Centre, a place that integrates Ukrainians and Poles and supports war refugees (SKARŻYSKO-KAMIENNA)

- Malbork will continue the development of the Distributed Business Incubator. As part of the URBACT project, the Local Urbact Group was established. One of its initiatives is the Local Leader Academy, which aims to select and integrate local leaders who, with the support of local governments and city instruments, will jointly work for its development. It will also strengthen the potential of non-governmental organizations that have an impact on supporting grassroots initiatives of a pro-social nature. Further activities related to the Local Partnership Program activating and engaging residents in work for their environment and activities related to developing an idea for building a local sense of identity,

social participation and accessibility of public spaces for all user groups will be continued. The city will continue the revitalization project "Malbork for + - social activities", the main goal of which is to improve living conditions, activate and involve families in the activities of two daily support centres in the specialist and backyard formula. From March 2022, the facility was also opened for youth from Ukraine and their mothers. (MALBORK)

- Iława declares to conduct educational activities of a self-education nature, the result of which would be an increase in the competences of the inhabitants of the housing estate covered by the project. Residents supported by experts during the workshops could promote participatory methods of change in the environment, which could become a source of innovative approach to changes in housing estates in the city and beyond. (IŁAWA)

- Elk is planning a number of initiatives under the "New Perspectives" measure. These can include cyclical classes aimed at whole families in the field of intergenerational communication, parent support, social counselling and individual and group consultations with various specialists, activities that will include health prevention, healthy eating, meetings with nature, activities aimed in particular at to adults, whose aim will be to increase self-acceptance and self-confidence, as well as development activities for children and adolescents, the subject of which will include personal development and cognitive training. As part of this measure, the activity of a family counselling centre is also important, as its priority task is

to support the family in crisis and difficult life situations. As part of it, the inhabitants of Elk can obtain professional, free help in various forms. There are also family and neighbourhood picnics in Elk neighbourhoods in order to activate the local community, the Intergenerational Solidarity Day in order to build a permanent and consolidated bridge of understanding between generations and to strengthen intergenerational ties and relations, as well as the introduction of the Elk 3+ Family Card and the 60+ Elk Senior Card. As part of the "Sources" activity, a number of cultural events are planned for intergenerational integration and discussions on recognizing and naming emotions and feelings. (ELK)

- As part of further educational and popularizing activities, Dąbrowa Górnicza is planning to conduct study visits, which will allow for getting to know the undertaken projects in practice and free exchange of experiences. A knowledge base on the implemented social projects related to the "Factory Full of Life - revitalization of the Dąbrowa Górnicza downtown" program is also made available. (DĄBROWA GÓRNICZA)

- Zabrze joined the Norwegian Financial Mechanism to implement the "Municipal Accessibility Program" project in cooperation with the Silesian University of Technology in the years 2022-2024. As part of it, the strategic document "Urban Accessibility Standard" is to be prepared, which will contain guidelines and recommendations for activities undertaken in Zabrze, inter alia, in the field of architecture, transport, information and communication

or training. The "Urban Accessibility Standard" together with the "Zabrze City Accessibility Program" will constitute the foundation of a systemic approach to broadly understood accessibility, thus implementing the city's vision based on popularizing and consolidating active social attitudes, involving residents in shaping the features of a modern city, in conscious participation in initiatives of the largest possible group of Zabrze residents, including people with special needs. As part of the Norwegian Financial Mechanism, in the years 2022-2024 it is planned to implement an IT tool for participation. The platform is to enable residents to obtain information about current consultations, at what stage, about the civic budget functioning in the city, and also to be a space for residents to submit their own ideas. The city also participates in the Urban In competition in the competition category City available with the design challenge "Available place, which aims to develop by the participants of the competition a solution informing people with special needs in the city of Zabrze about places available to them. The implementation of this project would enable people with special needs to locate places where they can use the services offered, e.g. hairdresser, restaurant, bank, fully independently. This would break the stereotype in the perception of people with disabilities, include this group in the city's life and strengthen the sense of inclusiveness. In addition, I will conclude the initiatives already undertaken in the city: organization of the conference "Days of Disabled People", the project "Transport door to door", program

"Zabrzański senior 65+". (ZABRZE)

Two cities will continue their activities related to the development of a coherent system for managing executive documents and projects in the city as well as monitoring and evaluation of the implementation of strategic documents:

- Bielsko-Biała plans to continue works within the WUF11 Legacy through revitalization activities planned to be implemented on the basis of the Municipal Revitalization Program, the development of which is planned for the years 2022-2023. The final evaluation of the existing revitalization program implementation, including the implementation status of the projects included in it and the achievement of the program objectives, will be naturally used in further revitalization activities in the city. The results of this analysis, as well as the recommendations included in it, will be taken into account in the preparation of the next edition of the revitalization program, both in terms of organization and content. It is expected that the results of this analysis will avoid the weaknesses of the revitalization process. Collecting data in the intra-city division will allow for the ongoing monitoring of socio-economic changes taking place in the area of revitalization and for ongoing response to any crisis phenomena that may arise. (BIELSKO-BIALA)

- Further activities in Gliwice will be based on the development of a coherent management system for executive documents and projects in the city based on the experience and method used

to implement the city's development strategy, deepening the analysis of the city's economic situation, in order to more efficiently monitor the progress in achieving the set goals, as well as more effectively and faster response to changes in the economy and the development of a methodology for studying the quality of life in the city, based on the monitoring of indicators set out in the Gliwice 2040 strategy and in relation to sustainable development indicators (GLIWICE).

In the case of Rzeszów, the activities will focus mainly on education in the field of supporting innovation and promoting sustainable industrialization. Solutions developed within the set challenges will be improved, which, based on the experience gained, may be a scalable element for other regions:

- Challenge 1. The developed Partnership to achieve the set goals will be extended to grassroots initiatives from industry and education, which will support a modern educational space. Thanks to the availability of a variety of tools developed under the Partnership, students will have the opportunity to develop technological thinking. An additional element of cooperation is the integration of the ecosystem around artificial intelligence, thus creating new directions of cooperation, exchanging experiences and representing them in contacts with state and local government authorities.
- Challenge 2. Creating a prototype of the "3D Printing Integrator" platform as part of the PRINT HACK - HACKATHON

FOR 3D PRINTING INTEGRATION hackathon will enable the integration of the 3D printing environment and presentation of its wide application based on artificial intelligence. The platform will also have an impact on raising the competences of Rzeszów students and young people who will get access to advanced knowledge and accompanying events promoting the use of technology in everyday life. The platform is also an important element in the fight against the exclusion of children and adolescents from access to knowledge and development.

- Challenge 3. Implementation of the project will allow for the development of a safety strategy for water and energy storage and for the operation of the rainwater harvesting system. The constructed test stand will be used to test elements of small water power systems, including actuators and drive systems, as an element of the renewable energy sources system. It will also be educational in nature, allowing the popularization of modern solutions of renewable energy sources and methods of its storage. It will be built at the Rzeszów University of Technology and, in the future, it will be implemented in the urban tissue of the Municipal Water and Sewerage Company.
- Challenge 4. Conducted research entitled "Rzeszów, as the Laboratory of the Future. The impact of 3D printing on the economy and social life of the City of Rzeszów. " it will enable the collection of research results that will be used to develop Challenge 2 of a platform integrating the 3D printing environment. They will also

be an important element of industry-science-local government cooperation.

In addition, many cities plan educational and information campaigns aimed at direct recipients of projects, residents and other interested parties, and sharing their knowledge, methods and developed solutions with other cities that will be interested in activities in a similar direction.

Cities also presented their advisory-based recommendations for soft guidelines and tips that could be adapted to local conditions and that other cities with similar characteristics could benefit from:

- Katowice recommends cooperation with universities and the preparation of a workshop formula as well as a development strategy as well as a concept of urban and architectural land development for areas requiring support. The experiences of the city of Katowice from the already conducted editions of the workshops confirm the legitimacy of the choice of the work formula thanks to obtaining high-quality student works, which are an excellent inspiration for further work in the City. The creation of interdisciplinary teams of students of economic, spatial and environmental faculties, ultimately results in the development of well-developed, good-quality and economically viable project and undertaking proposals by the authors of the competition entries. The discussion on specific areas in the city that takes place during the works also involves residents in the process of creating / issuing opinions on solutions, including through cooperation with District Councils.

The working tool used is a kind of "Urban Lab", within which the real needs and problems of the inhabitants can be learned, for which interesting solutions can be proposed. From the point of view of the process of educating students, work focusing on specific areas in the city has an extremely valuable practical value. (KATOWICE)

- Recommendations presented by Skarżysko Kamienna include the implementation of educational and cultural programs related to equality (e.g. preparation of literary and art competitions on equal rights, sharing information in the spaces of municipal institutions about places where people affected by discrimination can obtain help, supporting grassroots initiatives for the equality of women and men and active cooperation with local senior clubs and community centres) involving various entities in events related to gender equality, including honorary, media and other patronage, social activation based on involving residents in anti-discrimination activities, organizing joint talks for children and adolescents in schools and community clubs with Police representatives, as well as monitoring the phenomenon of domestic violence broken down by gender - for this purpose you should step for detailed data to the Police units. The report should, if possible, present the situation in individual areas of the city (districts, housing estates). The obtained data can be used to increase the educational offer and information campaign in the field of gender-based violence in individual community clubs (community centres, community centres, etc.). (SKARŻYSKO-KAMIENNA)

- Based on the experience related to the implementation of the school's EKO project, Starachowice recommends conducting a detailed diagnosis of the residents' needs in the first stage. The city also suggests undertaking international cooperation with a selected partner in order to learn about good practices in the implementation of innovative programs related to the education system. As part of the cooperation, the Starachowice commune has established a partnership with the city of Bergen in Norway, which with its profile and activities fits in with the objectives of the Local Development Plan in Starachowice. The exchange of good practices and the implementation of effective solutions in the field of environmental protection, social integration, innovation, the functioning of local government and other areas is aimed at preparing and implementing innovative solutions for the local community. Additionally, the city recommends starting cooperation with the academic community in order to develop model solutions in the field of environmental education. (STARACHOWICE)

- In Ustrzyki Dolne, activities are implemented in a thoughtful, strategic manner, focusing on the maximum use of funds from external sources, which results in easier implementation of subsequent projects and initiatives. The priorities include both hard - infrastructure and soft - social projects. The activities are accompanied by a pro-ecological context, great importance is attached to education, supporting entrepreneurship, cultural offer and all other aspects determining the harmonious development

of a commune friendly to its inhabitants, visitors and appreciated outside. Among the recommended practices, Ustrzyki Dolne mentions social dialogue, drawing on patterns and transferring good Polish and foreign solutions to the local ground, development based on a sense of one's own identity and using the resources at hand, and implementing innovations based on extensive consultations among specialists. (USTRZYKI DOLNE)

- Halinów is just beginning its adventure with changing the way of managing educational activities by establishing the Shared Services Centre. After introducing all the know-how, the city declares that it will be willing to share its experiences with other cities thinking about changing the way education support is organized. The city also has experience in designing educational and care buildings (HALINÓW)

- In Malbork, an instrument was searched to find, in opposition to the identity built on the presence of the Teutonic Knights castle for which the city is known, other less spectacular places in the city, also at the neighbourhood level, not only around the city. The answer to this challenge was revitalization, which after 5 years of implementation has become a key social and economic program for the city in relation to its problem areas and an important part of thinking about the development of the entire city. Activities carried out in backyards in Malbork are deeply immersed in the social context and strongly involve the local community in the processes of city renewal. By working in the backyards, you enter

the private world of residents, so it is not only a simple investment activity, but most of all working with residents, often at odds, with different needs and expectations. The experience of agency is built slowly and patiently. Residents must be given the right to self-determination and seek compromise solutions with them. It is also important to respect the ideas of the inhabitants, even if they contradict the initial visions of the initiators of the idea. In this way, residents have a sense of real influence. The commissioning of three public spaces is an example of overcoming helplessness, conversations with residents and achieving the effect of joint activities that the city wants to continue.

Measurable results in improving the functioning of children and their guardians on many levels have activities that include and involve families, teachers, educators, local leaders in the project "Malbork for + - social activities". Thanks to the support in the project, children and parents establish trust-based relationships and ties with the local community. The role of the social partner of the project was also important - Association of the Polish Scouting of the Gdańsk Banner in cooperation with the Malbork Army Unit, who, using their over 100 years of experience, perfectly suited the role of an animator of local activities, despite the initial difficulties in convincing the local community to joint activities. The operation of the facility in the water tower is a good example of revitalization in the area of culture and national heritage. This example shows how revitalization supports the broadly understood memory of the

city's cultural and historical heritage. After renovation, this space was given new social functions, which became an inspiration, but also a kind of responsibility for this place. (MALBORK)

- Bielsko-Biała presents a recommendation for an extended analysis of the effects of previous revitalization programs carried out on its own with the use of expert advice. For this purpose, it is necessary to develop a database in the intra-city division, which would reflect spatially and would be consistent with the methodology of designating a degraded area and revitalization area. Not all cities can afford to finance and organize ex post evaluation of the revitalization program. In this situation, having a database in an intra-city division and using the advisory assistance of external specialists seems to be a particularly advantageous solution. Moreover, the city can share its experience from many years of carrying out the revitalization process. (BIELSKO-BIAŁA)

- The recommendations presented by Elk included guidelines related to social activities. The implementation of projects for families assumes a model of networking institutions and entities. The proposed solution aims at social inclusion of disadvantaged groups through:

- networking of institutions, creating a register of entities from the broad social environment interested in implementing activities for the family,
- coordination and promotion of support provided to families in relation to various fields of implementation of public tasks and network activities,

- mechanisms of coordinating the activities of local government institutions for the benefit of the family,
- creating an organizational framework for strengthening grassroots initiatives for the family,
- creating a space for the exchange of knowledge, experience and problem solving,
- broad inclusion in the proposed directions of activities of particularly endangered areas of the city selected as part of the diagnosis.

Involving parents in the activities of street educators, which bring tangible results in improving the functioning of children on many levels. Establishing a relationship with parents based on trust enables deeper assimilation with the local community. Thanks to such a relationship, parents are also more willing to participate in educational activities that strengthen their parenting competences and engage in solving local problems. Social activation based on involving local communities in the possibility of influencing their local environment - more friendly, colourful and adapted to the needs of residents (e.g. building playgrounds using residents' ideas, renovating existing places of spending free time). Including dog therapy in environmental activities, which helps build relationships, integrate disparate groups, but also strengthen individual potentials, empathy, duty and work with emotions. Dog therapy also enables the psychosocial development of children and adolescents and is a fantastic way to spend your free time in a constructive way. (EŁK)

- Jarocin lists a few short recommendations for other local governments regarding housing policy. Among them are listed:
  - making housing development a priority in the development of the commune and treating it as a "flywheel" for improving the quality of life of the inhabitants.
  - an active local housing policy as a priority in the commune's development strategy and in the strategy of solving social problems increases the chances of obtaining external funds for investments.
  - systematic expansion of the commune's housing stock as an important factor of effective social assistance - it enables addressing the assistance to selected categories of inhabitants depending on the emerging needs.
  - differentiation of the housing offer depending on the needs and situation of support recipients (sheltered flats, training flats, assisted flats, flats with 24-hour support) - increases the flexibility of the operation of aid institutions (Social Welfare Centre, Social Services Centre) and social organizations providing support.
  - training and assisted housing as a more tailored and cheaper alternative to housing residents in social welfare homes.
  - complementarity of the active housing policy with the objectives and tasks implemented under the revitalization program (increasing the quality of public space and attractiveness of living in the commune).
  - differentiation of the location of housing resources - the location of investments in both the city and village councils increases the chances of stopping the outflow of inhabitants.

- use of land belonging to the commune as the location of investments in order to reduce their costs. (JAROCIN)
- Activities related to the design of the new centre of Tychy will be able to serve as an inspiration and a kind of map of sustainable spatial development process, which may be useful for other cities. This model will include elements related to the formal and legal procedure, identification of key magnets and development barriers, identification of stakeholders, identification of needs, forms of investment implementation and technical solutions. (TYCHY)
- Świdnica can share with medium-sized cities its experiences related to the reduction of low emissions, including remedial actions aimed at reducing the emission of pollutants in the municipal and housing sector. The key measures taken to reduce low chimney emissions in Świdnica are: replacement of low-emission boilers or connecting buildings to the heating network, modernization of local boiler houses and improvement of the energy efficiency of buildings (thermal modernization), the use of renewable energy sources, such as photovoltaic cells, solar collectors, heat pumps, biomass, further renovation and modernization of green areas, i.e. carrying out activities aimed at improving the development of existing parks, lawns, squares, street greenery belts and greenery in the residential space. In order to improve the environment, Świdnica conducts joint activities with neighbouring communes, belonging to the union of communes of the Wałbrzych Agglomeration. The experience of Świdnica in the implementation of joint EU projects

carried out in partnership with many other entities may also be valuable. Usually, local governments are afraid to be a leader in projects where cooperation of several local governments is required, which is why Świdnica will be happy to share knowledge on how to prepare and implement partnership projects concerning, inter alia, exchange of heat sources, thermal modernization, renewable energy, etc. (ŚWIDNICA)

- Mielec presented good practices concerning the establishment of flower meadows and during their flowering. The practices indicated by the city include: paying attention to the ground when establishing flower meadows, eliminating invasive plants, e.g. Canadian goldenrod, which displaces native plants from the meadow community. It is necessary to perform phytosanitary supervision after establishing a flower meadow in the first year after the grass emerges. (MIELEC)

- Good practices presented by Maków Mazowiecki concern environmentally friendly production of electricity. The task is unique because it will be based on an unprecedented hybrid system, which will use several types of renewable sources to produce electricity, including photovoltaic and wind installations. The hybrid system with the use of a remote collection and visualization system for measurement data, in addition to ensuring the effectiveness of the use of renewable energy sources, will also be demonstrative and educational. As a result, the project may serve as an example for subsequent local governments and significantly contribute to in-

creasing the knowledge of "green" energy. The implemented project shows the possibilities of increasing the use of renewable energy, which can bring tangible benefits to the city's community in the form of increasing local energy security, improving the condition of the environment, reducing unemployment and activating local entrepreneurship, significantly reducing building heating costs and attracting tourist traffic. The use of renewable energy in Maków Mazowiecki is friendly to both the environment and the local community, therefore it is recommended to use the lowest-  
-nuisance sources, such as a turbine. (MAKÓW MAZOWIECKI)

- Good practices developed under the project by Wałbrzych will be disseminated as model solutions for other cities where similar social (energy poverty) and environmental problems (low emissions and insufficient adaptation to climate change) have been identified. Each city facing the challenges of global warming and the resulting climate change, similarly to Wałbrzych, is the target recipient of the products of this project. Dissemination of good practices and products will take place, among others by publishing studies, reports and investment effects on a dedicated website. Wałbrzych has experience in disseminating good practices developed as part of a pilot revitalization project, which has become an element of the national knowledge base on revitalization. Under this project, model solutions will also be made available to other cities through study visits, conferences and seminars. (WAŁBRZYCH)

- Rybnik will educate the local community and popularize the

experience of implementing the project among other cities in the local, supra-local, regional and national range as part of membership in the following associations: Silesian Association of Communes and Poviats, Association of Communes and Poviats of the Western Subregion of the Silesian Voivodeship, Business-Science Association - Pro-Silesia self-government, Association of Mining Communities and City Interest Group. The planned form of educational and popularizing activities is: presentation of good practices during conferences, workshops and working meetings. In 2023, Rybnik plans to enter the Procura + competition, initiated by ICLEI - Local Governments for Sustainability, for activities in 2022. Public authorities may apply for this competition, and prizes are awarded, inter alia, to for public purchases (and related initiatives) that have achieved a significant economic, environmental and social impact or contain circular or innovative elements. Rybnik's activities in the area of responsible consumption and production will also be presented internationally thanks to the involvement of the City as a stakeholder and member of the Expert Group in the Best-ReMap - Healthy Food for Healthy Future project, whose Polish partner is the Medical University of Silesia. The main objective of the European Commission project Joint Action on implementation of validated best practices (in Nutrition) is to adapt, replicate and implement effective health interventions based on proven effective practices in in the area of, among others reformulation of public procurement in terms of the quality of ordered food in public institutions. In order to expand the volume of

high-quality food products included in a balanced menu in selected public institutions in EU countries, a pilot tool will be carried out for the purpose of constructing public procurement and institutionalizing the implementation of public procurement procedures for food, based on quality standards. Rybnik is the only local government in Poland that will test the application developed and successfully used in Slovenia in its educational institutions providing nutrition for children and adolescents (link to the original website: <https://www.katalogzivil.si/>). In the longer term, the European Commission will work on introducing the tool in all EU countries. Responsible and sustainable consumption activities will be continued by the City of Rybnik in the StratKIT + project (financed by Interreg BSR, which will be implemented in 2022-2024). The sustainable public meal toolkit will be expanded and the issue of sustainable consumption will be introduced to other municipalities and related / co-financed by the local government. In the long term, it is planned to create an interdisciplinary team whose task will be to develop the city's food policy. This policy will guide the city's activities in the area of Objective 12. Responsible production and consumption. For this purpose, contacts established with other cities and communes where the process of transforming the food system has already been initiated (e.g. Warsaw or Izabelin) will be used. (RYBNIK)

- The example of Szczawno-Zdrój can be used by cities interested in the development of local communities and shaping the conditions for social and economic development in cities with simi-

lar characteristics. The example of the implementation of a sports, educational and recreational complex presented by the city and the experience gathered may be a good example of integrated planning, involvement in the use of innovative and comprehensive solutions, as well as reliable preparation of the project and its implementation. The good practices used in the implementation of the project may also include, inter alia, taking into account coherent strategic planning in the commune and the region, bringing added value for the development of the local community, planning and implementation in accordance with the analysis of the community's needs, effective use of the existing infrastructure and natural resources, as well as using the experience of other communes implementing similar projects. (SZCZAWNO-ZDRÓJ)

- The recommendations presented by Warsaw have been divided into those that result directly from the implementation of the "EKOcapital - let's not waste food" project, in particular its main component, i.e. food collection (unsold but edible) at marketplaces (detailed recommendations) and those that relate to the SDG 12 (general recommendations).

The detailed recommendations include those concerning:

- An appropriate legal framework

Food collected as part of fundraising events may be donated to those in need only through organizations authorized to carry out such activities. Therefore, the system of collecting and distributing food surplus should have an appropriate legal and organizational

framework. The rules applied in the competition for the implementation of a public task should assume that collections should be made by a non-governmental organization and the collected articles will be transferred to local organizations, which will pass them on to people in need.

- Coordination of activities

Each market where unsold but edible food is collected should have a coordinator assigned to it. The coordinator is responsible for establishing cooperation with market managers, establishing relationships with buyers and their education, but above all for organizing the collection. This is a person who plays a key role in the project. For market managers, buyers and the local community, she is the face of the project, so if possible, make sure that it is the same person throughout the duration of the project.

- Incorporation of marketplace managers

Regular cooperation with marketplace managers translates into greater understanding and support for the activities carried out. When planning activities at marketplaces, it is necessary to establish cooperation with marketplace managers and include them in the project from the moment of planning the activities. Before collecting food, it is worth planning information and educational meetings with marketplace managers.

- Involvement of volunteers

It is very important to involve volunteers in fundraising events. However, bearing in mind that fundraising is hard, high-intensity

physical work, working outdoors, sometimes in unfavourable weather conditions, and that it is difficult to maintain constant cooperation with volunteers throughout the duration of the project, their work should be treated as a desirable additional activity, and not conditioning the feasibility of the project.

- Provide storage space for equipment

Organization of food collections at marketplaces requires the provision of space for storing and transporting equipment necessary to conduct collections, e.g. scales or trolleys for transporting the collected food. In the first place, it is worth looking for such a space in marketplaces.

- Ensure the disposal of spoiled vegetables and fruits

In the process of collecting food, there is a problem related to the need to dispose of some of the harvested products that turn out to be unfit for consumption. Therefore, collection coordinators should be properly prepared so that they do not accept spoiled products from buyers or hand over spoiled products to organizations. This will minimize the problem. You should also properly plan the disposal of broken products, either on your own or by delegating this task to the organization to which the products will be transferred, through an appropriate provision in the competition requirements.

- Educational activities

Educational activities on not wasting food and helping people in need, addressed to managers and buyers, are of key importance in the implementation of the project. They should be conducted

throughout the duration of the project, using a variety of forms - printed: posters, paper newsletter, and electronic: graphics, tips, recipes, curiosities and various distribution channels: directly at marketplaces, in social media: on the profiles of marketplaces and groups local on Facebook, on the website of the city hall. An important element of educational and information activities are direct talks and meetings with marketplace managers and buyers. The activities carried out raise the awareness of the problem among the local community, from which, inter alia, volunteers are recruited.

- Promotional activities

Promotional activities are an important component for the comprehensiveness of the project. It is worth combining two components in promotional activities: direct promotion of food collections and the involvement of managers and buyers in their implementation, and a campaign promoting saving resources and not wasting food. In its assumptions, the campaign may, but does not have to, refer to activities carried out at marketplaces, and its main goal should be focused on building correct attitudes among the local community and encouraging the rational use of resources and reducing the volume of waste.

- Efforts to ultimately limit the role of the office in organizing and financing activities

The realization of food collections and their distribution in the formula of implementing a public activity financed from the local government budget should, by definition, be a transitional

form. Activities should be planned and conducted in such a way that all parties involved in the project (entrepreneurs, social organizations and residents) develop cooperation mechanisms that will allow the gradual withdrawal of the city hall while maintaining the implementation of the action consisting in reducing food waste and transferring its surplus, which cannot be sold to the needy.

The general recommendations include those concerning:

- Ensure coordination of activities

Efficient management and coordination of activities implementing the SDG 12 requires commitment and cooperation between the units responsible for various aspects of the city's operation (in particular waste, cooperation with entrepreneurs, social issues, education) as well as broad involvement of residents and external entities.

- Education

The implementation of the SDG 12 requires a change in habits and the development of appropriate models of behaviour both among entrepreneurs and consumers, therefore the aspect necessary to achieve lasting and long-term effects is the education of the inhabitants. The aim of educational activities must be to internalize the expected pro-environmental attitudes. The educational (informational and educational) component should be an element of all activities related to the implementation of the SDG 12, regardless of whether they concern food waste or waste segregation. Educational activities help to prevent negative effects (e.g. food waste) in the long term by changing the habits and attitudes of residents.



- Improve the quality of the available data

Both direct action and education will be the more effective the better the causes of the current state of affairs are known. For this, research is needed both among entrepreneurs and residents. Research should, in particular, diagnose barriers to changing behaviour into the desired one.

The problem of monitoring the implementation of the SDG 12 is also the shortcomings of collective data on its individual components. This is especially true for the issue of food waste, where we can only rely on estimates that are low in accuracy. Without clear baseline data, it is very difficult to monitor the progress (or lack thereof) and the effectiveness (or lack thereof) of actions taken. Therefore, research on the approach of various groups (producers, distributors, consumers), including the issue of wasting food should be carried out cyclically. In this way, you can at least observe trends in this area (although to a large extent these will still be declarations, not hard data).

- Rzeszów will be able to share experiences related to the implementation of projects implemented on the basis of the developed Partnership. These include the development of a prototype of the first Polish platform integrating 3D printing with the use of artificial intelligence for Rzeszów, which will present an important element of regionalization of knowledge focusing on the values of the region, development of a mechanism supporting the education of 3D Printing Laboratories of the Future, development of a demonstrator of a rainwater storage and processing system for applications in small

hydropower and current operation in small and medium-sized farms in a scalable system allowing for adaptation to the needs of personalized recipients and the implementation of bottom-up initiatives affecting the promotion of the assumptions made under the 2030 Agenda, which will be scalable and can serve as an example for other cities . The use of research results developed in the framework of the challenges posed will serve the development of business and the implementation of scientific and research tasks in the region. (RZESZÓW)

In addition to the planned activities of cities, an important component of the Heritage of the 11th Session of the World Urban Forum will be the 'Toolbox for local communities, which is also being developed under the "Action Plan for Cities." Model Locality '. The toolkit is to be, on the one hand, an online encyclopaedia for residents, containing a knowledge base on how they can affect urban space and city management processes (in the wiki formula), and on the other - a platform for the exchange of experiences and the possibility of communication between residents, social activists and activists. urban. The toolkit will contain a list and a clear explanation of the most important concepts, links to publications that can be downloaded, links to websites of various entities and organizations dealing with social participation and news relating to the process of social participation, which is a help and instruction for active participation in urban life.

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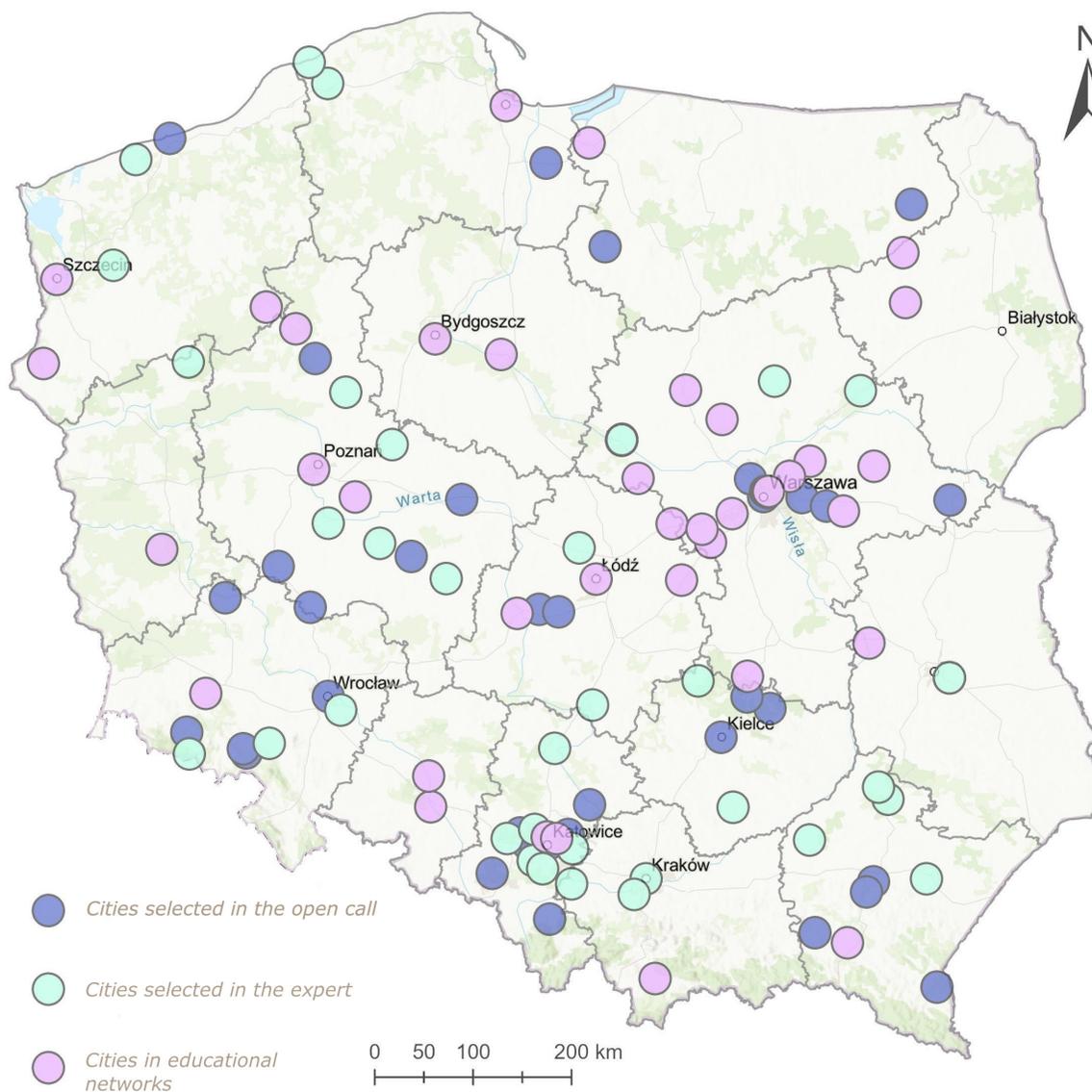
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77	Stalowa Wola	"Model solutions for difficult challenges - Program for Local and Institutional Development of Stalowa Wola".	13
78	Starachowice	"Ecological Education in EKO school"	4
79	Szczawno-Zdrój	"Program and spatial concept and construction design of the Educational, Sports, Recreation and Recreational Complex at ul. Słoneczna 1A in SzczawnoZdrój	4
80	Szczecin	"Using the full potential of the municipal wastewater treatment plant of the city of Szczecin in the pursuit of energy self-sufficiency"	7
81	Szczuczyn	"Increasing the investment competitiveness of the urban-rural commune of Szczuczyn in relation to large urban centres"	8
82	Szydłowiec	"Clean air in the commune of Szydłowiec"	7
83	Śrem	"Planting perennial plants at Ks. J. Popiełuszki street and at A. Mickiewicza street in Śrem"	13
84	Środa Wielkopolska	"Reconstruction and expansion of the wastewater treatment plant in Chwałków together with the expansion of the laboratory in order to increase the efficiency of operation"	6
85	Świdnica	"Ecologic Świdnica"	7
86	Świdnik	"Shadow zone with a picnic area"	13

87	Tłuszcz	"Expansion of the water and sewage network to improve the quality of life of residents in the Tłuszcz commune"	6
88	Trzebiatów	"Comprehensive reconstruction and revitalization of the market square in Trzebiatów"	11
89	Tychy	"Masterplan for the new centre of the city of Tychy - a model of strategic action for the sustainable development of the city"	11
90	Ustka	"Ustka - the new opportunities flow from the waters of the Baltic Sea"	14
91	Ustrzyki Dolne	"A new model of tourist transfer in the Bieszczady Mountains"	9
92	Wałbrzych	"Improving the quality of life of residents by adapting to climate change and ensuring access to green energy at an affordable price"	7
93	Wałcz	"Limiting the emission of harmful substances as part of the low-emission economy for the Municipality of Wałcz and elements of sustainable urban mobility"	11
94	Warszawa	"ECOcapital - let's not waste food!"	12
95	Wągrowiec	"Green Reading Room"	11
96	Węgrów	"The City of Węgrów in sustainable development - practical aspects of improving the condition of the natural environment in selected areas of urban policy"	7
97	Wołomin	"Clean Wołomin"	12
98	Wrocław	"Gray to Green"	13
99	Zabrze	"The Accessibility Program of the City of Zabrze"	16
100	Zawiercie	"Help yourself by helping others. Through volunteering to work - the homeless on the way to a better life"	1
101	Zduńska Wola	"Live local, work globally"	8
102	Zielona Góra	"Low-emission public transport in Zielona Góra"	11
103	Złotoryja	"Model Construction of a Municipal Selective Waste Collection Point in Złotoryja"	12
104	Żyrardów	"Żyrardów in a closed circuit – practical aspects of implementing circular economy in selected areas of urban policy"	3



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