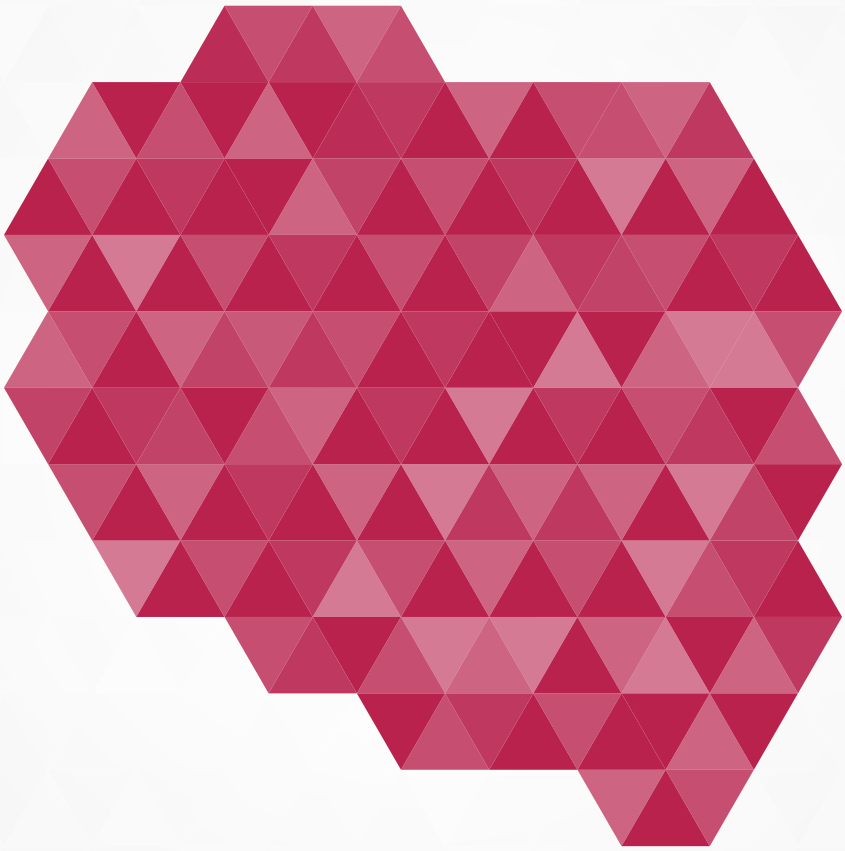
POLAND CATCHING-UP REGIONS 3

OVERVIEW REPORT



European Commission

MINISTRY OF INVESTMENT AND ECONOMIC DEVELOPMENT

WORLD BANK GROUP

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1818 H Street NW
Washington DC 20433
Telephone: 202-473-1000
Internet: www.worldbank.org

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ACKNOWLEDGEMENTS

This report was prepared by a core team comprised of Paul Kriss, Marcel Ionescu-Heroiu, Grzegorz Wolszczak, Chyi-Yun Huang, Piotr Kamiński, Marcin Piernikowski, Ciprian Moldovan, Bogdan Eugen Dolean, Marcin Mazur, Agnieszka Boratyńska, Jan Szczucki, Maciej Gajewski, Dominic Patella, Michał Wolański, Magda Niewęgłowska, Mateusz Pieróg, Jamie Lee-Brown, Łukasz Marć, Wojciech Sacha, Bartłomiej Skowron, Alicja Szczepińska, Dorota Tekieli-Bisińska, Anna Tórz, Damian Iwanowski, Anwar Aridi, Lisa Cowey, Dariusz Wiatr, Jerzy Toborowicz, Vojtech Nosek, Janina Franco, Jas Singh, Anand Subbiah, Jonathan Karver, Małgorzata Kotańska, Michał Smoła, Jerzy Piszczek, Reena Badiani-Magnusson, Karolina Marta Goraus, Katarzyna Sałach, Anna Kozieł, Anna Król-Jankowska and Filip Kochan.

The team would like to thank Commissioner Corina Crețu for initiating the Catching-up Regions Initiative, Minister Jerzy Kwieciński from the Poland's Ministry of Investment and Economic Development for their invaluable support and the European Commission's team for outstanding engagement and support, especially Marc Lemaître, Erich Unterwurzaher, Christopher Todd, Wolfgang Munch, Justyna Podralska and Andrzej Urbanik.

The team would also like to thank Arup Banerji, Carlos Pinerua, David Sislen, Natasha Kapil, Marialisa Motta, Karla Gonzales, Sameer Shukla and Andrea Liverani for the advice and guidance provided throughout the elaboration of this report; Agnieszka Boratyńska, Barbara Skwarczyńska and Małgorzata Michnowska for their excellent project support; and Wojciech Gawęda, Jelena Stosic, Mariusz Masłowski, Francisco Borja Munoz, Ernesto Jose Petit Masci, Shagun Mehrotra, Qingyun Shen, Cevdet Unal, Defne Gencer, Peter Johansen, and Ashok Sarkar for their technical advice.

The team is also indebted to all counterparts for the support offered in the elaboration of this study, the timely feedback, the excellent collaboration throughout, and their passion for developing their regions and institutions, especially: Jadwiga Emilewicz, Minister of Entrepreneurship and Technology; Henryk Kowalczyk, Minister of Environment; Piotr Woźny, Prime Minister's Plenipotentiary for the Clean Air Program; Piotr Zygadło, Marta Leśniak, Anna Sulińska-Wójcik, Aleksandra Sztetyłło-Budzewska, Agnieszka Laskowska-Skup, Anita Wesołowska and Piotr Machańskifrom the Ministry of Investment and Economic Development; Przemek Hofman, Hanna Uhl from Ministry of Entrepreneurship and Technology; Zbigniew Kamieński, Marzena Słupeczańska, Katarzyna Rutkowska-Newman, Agnieszka Michalska, Izabella Samko, Magdalena Przyborowska, Anna Trudzik, Piotr Wróbel, Daniel Markiewicz, Andrzej Wiktorowicz, Maria Milewska, Krzysztof Piekarz, Dorota Fijałkowska, Jakub Skibiński and Tadeusz Wyrzykowski from National Fund for Environment Protection and Water Management; Andrzej Guła from Polish Smog Alert; Aleksandra Kalafarska, Beata Szyndera, Angelika Szewc, Małgorzata Pęcherska, Jolanta Filipczuk and Aleksandra Gromotka from the Śląskie Marshal Office; Joanna Sarosiek, Wioletta Dąbrowska, Katarzyna Poleszczuk-Woźniewska, Izabela Łokić and Aneta Kostro-Węglicka from the Podlaskie Marshal Office; Anna Daszuta- Zalewska from Białystok Science and Technology Park; Sebastian Rynkiewicz from Metal Processing Cluster; Mariusz Popławski, Maria Truskolaska University of Białystok; Marcin Moniuszko, Andrzej Małkowski from Medical University of Białystok; Lech Dzienis, Tomasz Stypułkowski from Białystok University of Technology; Agnieszka Czuczwara, Tomasz Krzeszowiec, Zbigniew Dynak, Agata Zemska, Justyna Lasak, and Michał Frycz from the Dolnośląskie Marshal Office; Cezary Madryas, Andrzej Kucharski and Damian Derlukiewicz from Wrocław University of Technology; Roman Szełemej, Andrzej Kosiór, Martyna Dąbrowska from Wałbrzych City; Sławomir Hunek, Barbara Buryta, Tomasz Charkot from Dolnośląskie Regional Development Agency; Artur Mazurkiewicz, Katarzyna Kiek, Marcelina Palonek from Dolnośląskie Employers' Association; Małgorzata Zakrzewska, Łukasz Siekiera, Piotr Kinas, Dorota Milska, Aleksandra Rutkowska, Monika Urbaniak and Anna Tomaszewska from Łódzkie Marshal Office; Agnieszka Chudzik from Łódź City; Antoni Różalski and Adam Kaźmierczak from Łódź University; Radzisław Kordek,

Bartłomiej Grobelski and Agnieszka Rzeźnik from Łódź Medical University; Sławomir Wiak, Dariusz Gawin, Grzegorz Kierner, Grzegorz Liśkiewicz from Łódź University of Technology; Marta Wankiewicz, Andrzej Berut from BioNanoPark, Marcin Szmyt, Piotr Wolski, Dorota Korenicka and Igor Jasiński z Zachodniopomorskie Marshal Office; Maciej Łapko from Regional Office for Spatial Economy; Jarosław Gurbin, Beata Przybylska, Ewa Niewiadomska-Roman from Grudziądz City; Edyta Płaskonka-Pruszak, Marcin Heller, and Joanna Gobinet from Kujawsko-Pomorskie Marshal Office; Ewa Birek, Katarzyna Podlaska-Krzywiec from Office for Spatial and Regional Planning; Marek Wojtkowski, Krzysztof Kukucki, Iwona Bieńkowska, Aneta Chełminiak, Daria Figurska, Agnieszka Biesiada, Jolanta Stańczak, and Izabela Księżak from Włocławek City; Tomasz Chymkowski, Damian Chełminiak, and Maciej Leszczyński from Brześć Kujawski Municipality; Roman Nowakowski and Kamil Klejba from Choceń Municipality; Zbigniew Słomski, Waldemar Marciniak, and Kornelia Potrzebska from Fabianki Municipality; Stanisław Adamczyk, Aneta Kwarcińska, and Anna Grzywacz from Kowal Municipality; Larysa Krzyżańska, Anna Narewska, and Izabela Gawrońska from Lubanie Municipality; Magdalena Korpolak-Komorowska, Maria Maciaszek, and Katarzyna Knasiak from Włocławek Municipality; Eugeniusz Gołembiewski and Aleksandra Zbonikowska from Kowal City; Aleksandra Kotewicz from Social Assistance House in Grudziądz; Anna Stańczak from Specialized Army Healthcare Office; Joanna Marcińska-Prytuła from Medical Center Jedynka; Ilona Krysztyniak from City Office for Family Care in Grudziądz; Elżbieta Kilian, Katarzyna Zieja, and Łukasz Przychodzki from hospital in Grudziądz; Magda Pyszora-Załoga and Paulina Łącz from Foundation Oddech Nadziei; Tomasz Pietrusiak, Piotr Łyczko, Karolina Laszczak, and Kinga Dudek from Małopolskie Marshal Office; Tomasz Ożóg from Skawina Municipality; Marcin Madej, Janusz Sułowski, and Piotr Janowski from Małopolskie Regional Fund for Environment Protection and Water Management; Rafał Adamus, Andrzej Waliczek, Stanisław Gmitruk, Łukasz Frydel, Ewa Maniecka, Elżbieta Kisiel, and Małgorzata Kuchna from Śląskie Regional Fund for Environment Protection and Water Management; Ilona Wołyniec from PKO Bank Polski; Bartosz Urbaniak, Adam Hirny, Mateusz Wojnar and Jarosław Rot from Bank BNP Paribas; Bolesław Meluch, Adrian Pieńkowski, and Arkadiusz Lewicki from the Association of Polish Banks; Anna Parfieniuk, Paweł Kołodziński, and Katarzyna Teter from Santander Bank; Piotr Michałowski, Paweł Paszczyk, Małgorzata Kowalczuk, Massimo Merighi, Wojciech Deska from European Investment Bank; Anna Chmielewska, Marcin Tomaszewski, and Urszula Kochanowska from European Bank for Reconstruction and Development; Jan Rączka energy consultant; Maciej Wojniak, Henryk Mucha, Mariusz Kawnik, and Jacek Brzozowski from PGNiG; Izabela Markiewicz-Halemba, Bartłomiej Bugiel, Rafał Soja, and Mateusz Purat, and Kinga Zembrzycka-Stachoń from TAURON; Aleksandra KotewiczAnna Pakulska, Mariusz Koszytkowski, and Jakub Girczyc. The team would like to express its gratitude to the Kujawsko-Pomorskie Marshal Office, Włocławek City Council, Investor Assistance Centre, Włocławek Innovation and Entrepreneurship Incubator, Higher Vocational State School in Włocławek, National Labor Office in Włocławek and the representatives of business institutions and the entrepreneurs from Włocławek functional urban area.

ACRONYMS

BSI	Business support institution
CAPP	Clean Air Priority Program
CGA	Comprehensive Geriatric Assessment
CuR	Catching-up Regions Initiative
DRT	Demand responsive transport
EE	Energy efficiency
EC	European Commission
EU	European Union
ESIF	European Structural and Investment Funds
FUA	Functional urban area
GoP	Government of Poland
HIE	Health information exchange
IT	Information technology
KNF	Financial Supervision Authority
KPMO	Kujawsko-Pomorskie Marshal Office
LAG	Local action group
LEEM	List of eligible equipment and materials
MoIED	Ministry of Investment and Economic Development
MSMEs	Micro, small, and medium enterprises
NFOŚiGW	National Fund for Environmental Protection and Water Management
NHF	National Health Fund
NPASEE	National Program for Anti-Smog and Energy Efficiency
NUTS	Nomenclature of Territorial Units for Statistics
PBA	Polish Bank Association
PCI	Podkarpackie Center for Innovation
PER STI	Public Expenditure Review for Science, Technology, and Innovation
PHC	Primary health care
PROs	Public Research Organizations
R&D	Research and development
RDF	Regional development fund
RE	Renewable energy
ROP	Regional Operational Program
SA	Social Assistance
SDG	Sustainable Development Goals
SFB	Single family building
SMEs	Small and medium enterprises
ToRs	Terms of reference
TT	Technology transfer
WB	World Bank
WBC	Włocławek Business Center
WFUA	Włocławek Functional Urban Area
WIEI	Włocławek Innovation and Entrepreneurship Incubator

OVERVIEW OF THE POLAND CATCHING-UP REGIONS INITIATIVE

BACKGROUND

This report provides an overview of the third phase of the Poland Catching-up Regions Initiative (PL CUR3). It presents components that have been delivered over the period July 2018–June 2019 in collaboration with local, regional and national stakeholders, the European Commission (EC), and the World Bank (WB). More detailed reports are available for each of the individual components in English and Polish at the project website[1].

The mandate of the European Union's (EU) Cohesion Policy is to narrow the development gaps and reduce the disparities between the Member States and regions. Around €454 billion of European Structural and Investment Funds (ESIF) have been allocated to help the EU regions become more competitive in the 2014–2020 programming period, with a focus on the less developed regions (with a GDP per capita [PPS] of less than 75% of the EU average), and transitions regions (with a GDP per capita [PPS] between 75% and 90% of the EU average). However, not all of the EU regions have been able to fully take advantage of the benefits, due to, among other reasons, the effects of the 2008 economic crisis, as well as structural problems.

Consequently, Corina Crețu, the Commissioner for Regional and Urban Policy, together with the Task Force for Better Implementation, initiated the Catching-up Regions Initiative to identify growth constraints in less developed regions, and provide targeted assistance and programs to foster growth. Thus, development support for lagging regions is offered to a broad range of stakeholders (regional and local administrations, educational institutions, business support institutions, small and medium enterprises [SMEs], entrepreneurs, investors, non-governmental organizations, and international financing institutions). The initiative is meant to maximize the impact of regional investments.

The Government of Poland and the European Commission (EC) were particularly interested in finding ways to improve the performance of catching-up regions and identify ways to spur growth and innovation in their economies. Consequently, in April 2016, Commissioner Corina Crețu, officially launched the Catching-up Regions Initiative together with Minister Jerzy Kwieciński, Marshal Adam Jarubas in Świętokrzyskie, and Marshal Władysław Ortyl in Podkarpackie.

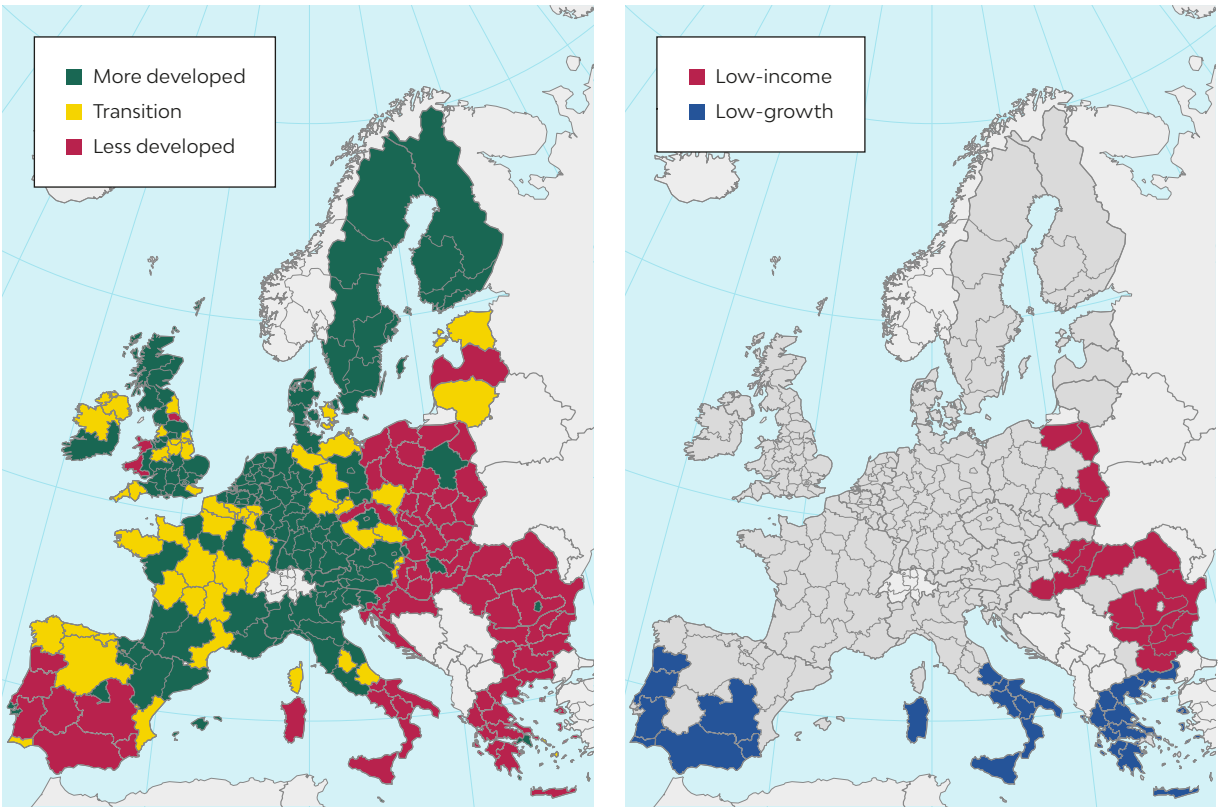
Two types of lagging regions were identified in the EU (Figure 1):

- LOW-GROWTH REGIONS: cover less developed and transition regions that did not converge to the EU average between the years 2000 and 2013 in member states with a GDP per capita (PPS) below the EU average in 2013. These include almost all the less developed and transition regions of Greece, Italy, Spain, and Portugal.

- LOW-INCOME REGIONS: cover all the regions with a GDP per capita (PPS) below 50% of the EU average in 2013. This group covers the less developed regions of Bulgaria, Hungary, Poland and Romania.

Poland and Romania were the first countries to pilot this initiative, with two regions each—Świętokrzyskie and Podkarpackie in Poland, and in northwest and northeast Romania. In Poland, the initiative was undertaken with the World Bank as a partner. The positive results of the work undertaken for the first phase of the Poland Catching-up Regions Initiative (2016–2017) led to an extension of the collaboration in Poland, to a second (2017–2018), and by May 2018, a third

FIGURE 1 **Nomenclature of Territorial Units for Statistics (NUTS) 2 regions classified by EU Cohesion Policy category (left) and Lagging Region category (right)**



phase (2018–2019). In addition, similar engagements with the Bank have commenced in the Slovak Republic, Romania, and Croatia. Moreover, the World Bank is using the 'catching-up regions' approach in its work throughout the world.

The third phase of the CUR activity focused on two main topics: i) Polish midsize cities which are in socioeconomic decline; and ii) replication or extension of activities piloted during the two previous CUR phases. Over this year, seven regions have been engaged in the following seven components:

Polish midsize cities in socioeconomic decline:

1. Optimization of services in an aging society: public transport (Zachodniopomorskie Region)
2. Optimization of services in an aging society: health care services (Kujawsko-Pomorskie Region)
3. Strengthening entrepreneurship within the Włocławek functional urban area (Kujawsko-Pomorskie Region)

Replication or extension of previous activities:

4. Expanding and scaling-up energy efficiency initiatives to improve air quality (national level, Małopolskie and Śląskie regions)
5. Supporting entrepreneurship and innovation (Łódzkie, Podlaskie, and Dolnośląskie regions)
6. Enhancing the use of financial instruments (Podlaskie and Śląskie regions)
7. Supporting spatial planning in the Włocławek functional urban area (Kujawsko-Pomorskie Region)

Below descriptions shortly present each of the components; they demonstrate achieved results, rationale behind each intervention, a method of tacking a given development bottleneck, and lessons that the teams learned on the way. In principle, the CUR approach focuses on linking problems with solutions and with resources that could help finance their implementation. Sometimes the identified financial needs are large (for instance an estimated value of the country-wide anti-smog and energy efficiency program is ca. €30 billion), sometimes recommendations focus on finetuning existing solutions or re-using existing structures and entities to minimize costs while maximizing impact (spatial planning, financial instruments, entrepreneurship).

WHY WAS POLAND CHOSEN AS ONE OF THE PILOTS?

The choice to focus on Poland was threefold: because of Poland's size, the wide-ranging challenges its regions face, and its remarkable development story. Poland's economy took off in the early 1990s and continued its growth into the new millennium. In 2004, Poland joined the EU, and in 2008, it officially became a high-income country, according to the GNI per Capita Atlas method of the World Bank. As such, Poland is one of the few countries that managed to overcome the 'middle-income trap' in recent decades, and one of the very few big countries (it had a population of around 38 million in 2014) that has managed this transition well[2].

Poland is also a very good performer with regard to the absorption of EU funds. For the 2007–2013 and 2014–2020 programming periods, it has had the largest allocations of structural funds in the EU (€72 and €82 billion, respectively). Over the 2007–2013 programming period, Poland absorbed most of the EU funds allocated to it. A large percentage of the 2007–2013 funds was directed toward bridging the infrastructure gap and constructing transport, urban water and wastewater, environmental, educational, sanitary, and other infrastructure assets. While Poland's absorption performance is remarkable, the impact of EU funds is the country's continual concern, as well as the disparities in the development levels between its regions.

During the 2014–2020 programming period, there was a shift in the focus of the EU, away from hard infrastructure assets toward addressing systemic aspects of competitiveness, innovation, and entrepreneurship. This shift acknowledges that while it is critical to consolidate the progress made, it is equally important to ensure that the Cohesion Policy achieves a better leverage effect than they were able to achieve in the low-growth regions. The objective of the policy change is also to identify ways in which the EU member states, including Poland, could soon compete with the top performing economies in the world.

HOW WERE THE REGIONS FOR POLAND CATCHING-UP REGIONS 3 CHOSEN?

In February 2018, prior to the commencement of the CUR3, the Directorate-General for Regional and Urban Policy Poland Desk team launched an open call for proposals to solicit ideas from the Polish regions willing to participate in the third phase of the initiative. The call pertained to roll-out activities that had been developed during the CUR1 and CUR2 with the aim to apply gained experience and good practices in new regions and test their scale-up potential with limited budgets. The EC, the Ministry of Investment and Economic Development (MOIED), and the WB jointly selected the best proposals. Additionally, project partners selected three new topics to be piloted under the CUR3 that could have subsequent scale-up potential. Finally, the anti-smog or energy efficiency component was extended, as the work performed under the CUR2 bode well for further progress in this important area. The key aspect of the components' selection for the CUR3 pertained to overcoming disparities at the subregional level, and focusing on declining cities and lagging areas within the regions. These challenges are pertinent to many parts of the

world and they are also gaining increasing attention in the EU and Poland, which is evident in European and national strategic documents. The CUR3 activities were aimed at enhancing growth and improving the quality of life for citizens in these lagging areas, helping the regions tackle steady population outflow and economic decline.

As in the previous phases, the willingness and readiness of the identified regional governments to actively participate in the implementation of the initiative was a significant factor that helped influence the final choices. The Ministry of Investment and Economic Development was consulted throughout the selection process to ensure seamless coordination between the government's planning and the operational work.

WHY WAS THE WORLD BANK SELECTED TO PROVIDE TECHNICAL ASSISTANCE?

The European Commission and the World Bank share a long-standing partnership for development, ranging from the joint financing of infrastructure projects to the provision of technical assistance to EU and non-EU countries. The EC considered the World Bank to be capable of bringing its technical and operational expertise, as well as its convening power and role as an honest broker, to address some of the constraints facing the lagging regions. It was assumed that by combining its operational expertise with its global knowledge, the World Bank would support the achievement of strategic development outcomes and help respond to key development challenges.

In turn, the World Bank sees the European Commission, not only as a strategic development partner, but also as an invaluable source of knowledge about properly tailoring development solutions. The European Commission is arguably one of the most efficient development institutions in the world, and is to a large extent, responsible for helping several of its Member Countries overcome the middle-income trap and become high-income economies. This is one of the reasons the World Bank has dubbed the EU the "Convergence Machine"[3]. It is looking to learn relevant and applicable lessons from the EC's activities, for its other client countries.

In all phases of the Poland Catching-up Regions Initiative the teams working together mobilized both the international and local experts, to properly respond to the variety and complexity of the issues to be addressed. A core coordination team has been set up in the Bank's Warsaw office, to ensure efficient and expedient communication between the teams on the ground, the regional and national stakeholders, the project leadership, and the European Commission team.

HOW WAS THE SCOPE OF WORK DEFINED?

Like the previous two phases during CUR3, the regions were engaged early on to determine a suitable focus for the concrete actions. It was important to identify activities with potential tangible impacts that could be realistically implemented within the one-year time frame. Several meetings were organized with all the relevant stakeholders (the regional governments, the MOIED, the EC, and the WB) to prioritize the actions list and to identify the specific outputs to focus on in the Poland CUR3. General meetings of all the potential participants were organized in the World Bank's Warsaw office, followed by subsequent individual meetings in the engaged regions.

PROJECT IMPLEMENTATION

A characteristic feature of the CUR Initiative is that its activities and teams are multidisciplinary. From spatial planning, to transport, health, entrepreneurship, innovation, and financial instruments for energy efficiency, the Poland CUR3 covered a wide gamut of development areas.

Building upon experience from the CUR1 and CUR2, it was determined that without both strong on the ground and overall technical coordination, it would be difficult to manage such a diverse program. Therefore, a strong coordination team on the WB side was maintained to ensure the delivery of technical outputs, the management of communication with the stakeholders, and administrative support for the program.

To allow simultaneous work on all activities, autonomous teams were established for each component, with the technical work coordinated by an activity leader and a team of experts. Each activity team was present in the field on a regular basis and carried out frequent (often weekly or biweekly) communication with the stakeholders. This ensured the active engagement of all the parties and the tailoring of the outputs to their needs and requests. Thanks to this hands-on approach, steady progress on the defined actions was achieved.

Steering Committee meetings were organized bimonthly with all the stakeholders present to: 1) assess the progress of the work to date (the Bank shared short presentations with the Steering Committee participants prior to each meeting); 2) discuss problems and issues encountered along the way, and take decisions how to solve them; 3) propose next steps to be taken with clear deadlines and responsibility for their delivery; and 4) agree on a change of an approach, or on additional/different work to be completed. The frequency of the Steering Committee meetings ensured that all the identified problems and issues were addressed in a timely manner, which helped save time and resources needed later in the process to achieve the agreed upon results.

KEY SUCCESS FACTORS

The Poland CUR work has been appreciated by all the parties involved. After three years of implementation in Poland, the CUR has become a stand-alone, recognizable approach and tool used in other EU countries (the Slovak Republic, Croatia, and Romania). The Poland experience now serves as an example for the elaboration of similar approaches in other World Bank client countries. Some of the factors that have made the Poland CUR a success, are listed below:

- **Buy-in and involvement of regional stakeholders.** Development is all about people. The best ideas, tools, and policies cannot achieve the proper development impact, if they are not adopted by the right people. The fact that the regional stakeholders in the targeted regions were fully involved in the project, from the definition of its activities to the implementation of the recommendations, made the difference.

- **Integration with existing operational programs and strategies.** While the actions that were targeted under the Poland CUR are distinct and well-defined, it was important that they were not designed independent of the existing strategies and programs, rather, they were perceived as complementary to the existing national and regional strategies and programs.

- **Mobilization of additional resources.** There is only so much that can be achieved within the timespan of a one-year project, but the opportunity to access additional EU and national funds was a key motivation for the implementation of the proposed recommendations.

- **Dedication, commitment, and leverage of the European Commission's team.** The EC team not only financed the initiative, it was actively involved throughout. The EC team not only reviewed all of the outputs produced; it monitored the activities on the ground, and worked as a mediator when difficult decisions had to be taken. The involvement of the EC in every step of the process, ensured the smooth progress of the work, and an efficient and effective response to the challenges and bottlenecks that appeared along the way.

- **Periodic Steering Committee meetings.** While preparing frequent progress reports and meeting at short time intervals can be quite demanding for all involved, it turned out that these frequent meetings and discussions were a key ingredient to the success of the initiative. Without the meetings, small problems would have turned into big problems that were more difficult to overcome.

- **Local coordination.** While international experts helped provide key technical knowledge, it would have been difficult to keep the initiative together and running smoothly, without the proper coordination of efforts on the ground; and without a strong coordination team, it would have been difficult to deliver all the required results in the allotted time frame, given the big teams and the diverse sectors involved.

- **World Bank expertise.** The World Bank combines operational expertise with sectoral know-how. It has a unique advantage in dealing with technical assistance projects focused on development issues; particularly projects that have a strong operational and implementation focus. In addition, the World Bank acts as an honest broker, focused on achieving concrete development results (rather than generating a profit), and it has the convening power required to bring the different stakeholders around the table to discuss complex and difficult matters, and then take action.

- **Hands-on approach.** The European Commission has designed the CUR Poland as a hands-on activity, with the purposeful direct involvement of all the relevant stakeholders. This approach was geared toward achieving concrete results, rather than just a proposal of recommendations. As such, concrete results were achieved throughout the implementation of the project, with the different stakeholders responsible for achieving these results.

- **Ambitious but pragmatic objectives.** The EC team decided at the outset that each CUR component would achieve ambitious, yet feasible objectives that were defined by all the participating stakeholders, which could realistically be accomplished within the allotted time frame of 12 months.

NEXT STEPS

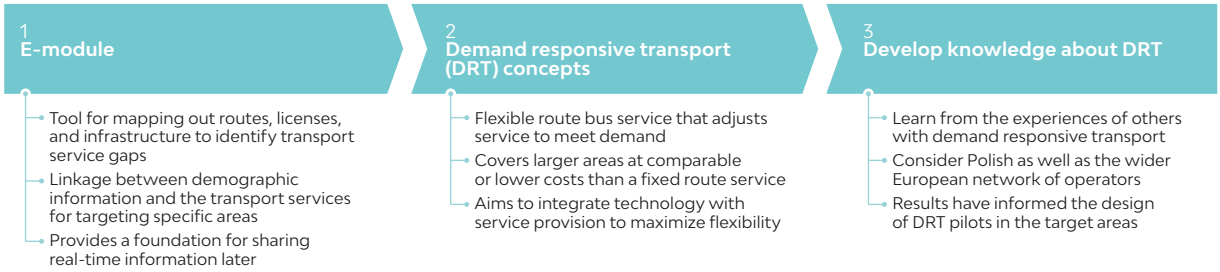
The implementation of the fourth phase of the Poland CUR is currently being discussed. The suggested focus is assistance to shrinking cities in Poland, a multifaced theme that is currently debated broadly in the country, due to its large aging and decreasing population. In fact, the lessons drawn from Poland in this area could be applicable to other central and eastern European countries that are facing similar challenges and demographics.

RURAL PUBLIC TRANSPORT IN ZACHODNIOPOMORSKIE

OVERVIEW OF THE RESULTS

The CuR3 transport component focused on three immediate opportunities for tackling rural transport challenges in Zachodniopomorskie. The first level of opportunity was to provide the Marshal Office (regional authority), counties (Polish: *powiats*), municipalities (Polish: *gminas*), and the national government of Poland with usable information to support planning. This opportunity was pursued by centralizing information about the current public transport in an online tool called an 'e-module.' The second level of opportunity was to develop the best possible interventions to improve rural transport access in alignment with Poland's current legal framework. This undertaking was carried out through the development of demand responsive transport (DRT) pilots that address gaps in the existing services. The third level of opportunity was to study solutions that could improve access to rural public transport, with a view to enhancing the success of future interventions. This goal was pursued through a structured program of knowledge exchange with the operators of the demand responsive transport systems. Activities under the CuR3 transport component focused on four target areas of Zachodniopomorskie Region: (i) Drawski County; (ii) Łobeski County; (iii) Świdwiński County; and (iv) Kamieński County. The results achieved for each activity are summarized below (Figure 2).

FIGURE 2 Results of CuR3 transport component



Source: World Bank Analysis

WHY?

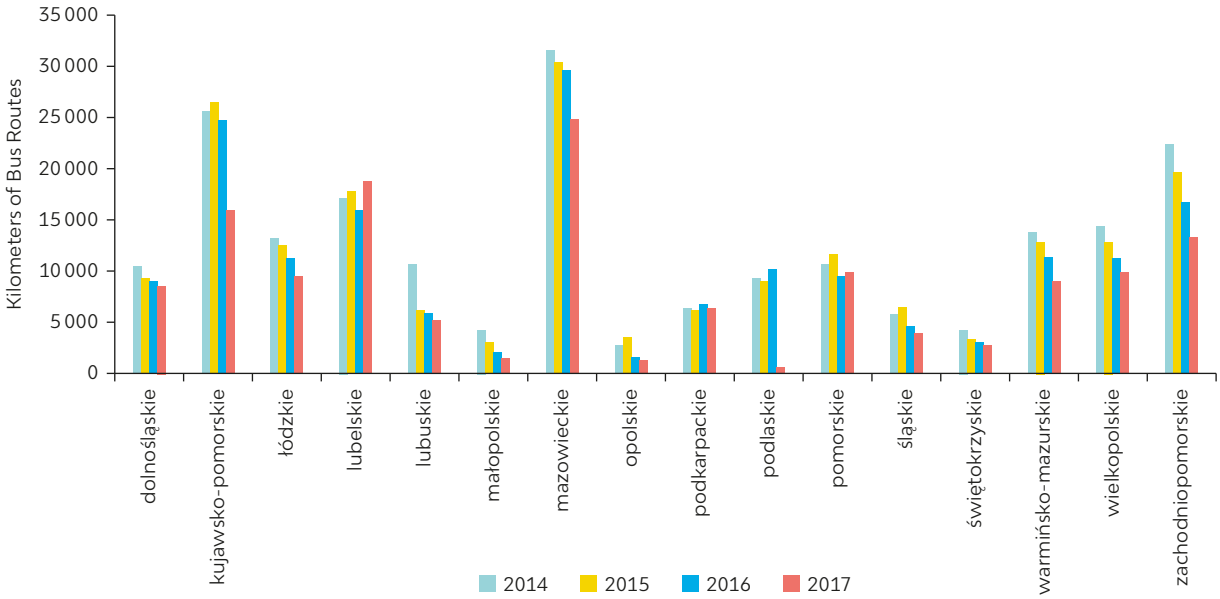
Improving rural public transport in Poland is a large challenge with respect to the geography and size of the intended beneficiary population. Roughly 39.5% of Poland's population lives in rural areas (about 15.2 million rural inhabitants out of a total population of 38 million). Approximately 93% of the 312,700 square kilometers that comprise Poland are considered rural. The physical scale of Poland's rural areas alone is about 3.5 times the size of Austria. The number of people living in rural Poland is roughly twice the population living in Greater London. Providing any form of network service to this many people spread across such a wide area is inherently challenging. In rural areas of the country, those challenges are compounded by a licensing system that involves three tiers of government, and relies on paper-based records, such that information sharing and network planning across institutions is limited.

The institutional landscape that applies to rural public transport in Poland is fragmented and the first challenge is to get a clear picture of the existing services and gaps in service. There are three tiers of local government that issue licenses for rural public transport operation: i) counties; ii) municipalities; and iii) Marshal Offices. More specifically, within Poland there

are 16 regions, 314 rural counties, and 1,584 rural municipalities with a role in Poland's rural transport subsector. Each has the authority to issue rural public transport operating licenses within their geographical area of responsibility—that is, 1,914 potential authorities. Licensing is not coordinated across the different tiers of government. The resulting services are poorly integrated—overlapping routes typically do not have integrated timetables between operators. Timetables for bus transport also are not well integrated with the timetables for the regional passenger rail services. There is currently no existing mechanism for integrating ticketing or fares between operators or modes of transport.

The current network of rural public transport is commercially, but not socially optimized, and commercial constraints have forced reductions in access. Poland's rural public transport network is characterized by three issues: i) service is provided primarily only along commercially viable routes that do not require government subsidy (beyond the reimbursement of concessional fares); ii) for customers that do not receive concessional fares, there is a high cost of services relative to rural income levels and to the cost of urban public transport elsewhere in the country; and iii) low levels of service in areas that offer a less commercially viable density of demand, and a clientele with lower ability to pay. In these areas, public transport is often only provided for school transport as mandated under Polish law. Rural transport networks in Poland are shrinking overall, with particularly pronounced contractions in several regions (including Zachodniopomorskie). For example, between 2014 and 2017, the length of regional bus lines in Poland contracted by 30% (see Figure 3). In Zachodniopomorskie, regional bus services contracted by 40% over this same time period. Clearly, rural communities have been experiencing a decline in their level of access to public transport.

FIGURE 3 Shrinking network for rural public transport—example: regional buses



Source: Central Statistical Office of Poland; Notes: i) data includes lines operated by enterprises employing more than 9 persons; ii) data excludes urban transport services; iii) data was divided into regions based on the location of the enterprise providing services.

Rural public transport has a high cost for customers and is of low quality. The average monthly rural household income per capita in Poland is PLN 1,723 (€400 equivalent) from both cash and noncash sources. The rural public transport that does exist is expensive relative to this financial situation. For example, an average monthly rural bus pass for a 25-kilometer journey is approximately PLN 230–265 (about 13–15% of average per capita household income). The proportion of households at risk of poverty in Poland's rural areas was 21.5% after social transfers in 2017, which also implies that the average income figures do not represent the financial means of poor households with below-average incomes. The combination of high costs and declining levels of rural transport access is contrary to Poland's 2030 Agenda for Sustainable Development that targets the inclusion of rural areas as part of achieving the Sustainable Development Goals (SDG).

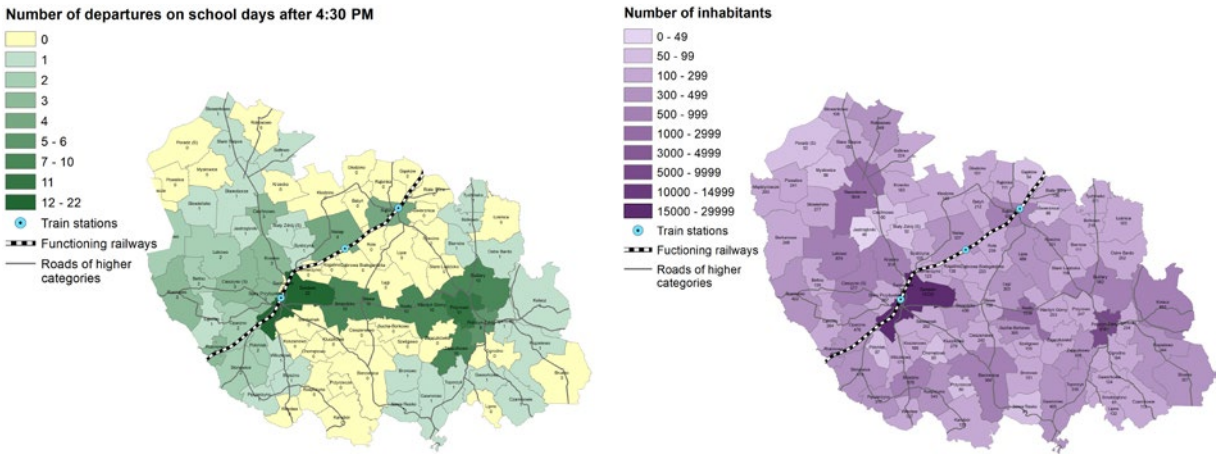
Poor public transport access has consequences beyond transport for people in rural Poland – particularly for vulnerable groups. For example, survey data from the 2017 EU-SILC *Incomes and living conditions of the population of Poland* report noted that 6.4 % of the rural respondents who reported unmet health care needs, cited distance and no access to transport as the main causes of their inability to access healthcare (versus 2.7% for urban areas). That same figure was 9.3% for rural respondents who happened to have legally recognized disabilities. While comprehensive data on rural transport behavior in Poland is not available, statistics such as these imply that increasing the level of access to rural public transport can play an important role in improving the social and economic welfare for the country's rural population—particularly among the low-income and vulnerable groups.

HOW?

Centralizing information and making it useful: e-module to support planning

Identifying existing services, gaps in coverage (Figure 4), and potential beneficiary populations was the first step to understanding solutions for Zachodniopomorskie's rural transport challenges. The methodology for this activity included: i) centralizing the data on the existing infrastructure and licensed services (which were in paper form); ii) digitizing all the information using geographic information system (GIS) software; iii) conducting field surveys to photograph and catalog bus stops; and iv) developing an online platform known as an 'e-module' that enables the wide sharing of information across authorities, and allows for updates following the inevitable changes to the existing network. Achieving this task required data collection from the Marshal Office, all the counties and municipalities within the target areas. The field surveys used mobile devices that were integrated with GIS software to facilitate rapid data collection. Given the level of human resources needed to execute this task, the World Bank procured the services of a technical consultancy with both Polish and international experts to manage the task of data collection and the development of the e-module platform.

FIGURE 4 Analysis of 'white spots' after 4:30 p.m. (left) and population data (right), example: Świdwiński County



Source: World Bank analysis and mapping

Developing interventions: DRT pilot schemes

Developing a way forward for addressing poor rural transport required thinking beyond the traditional fixed-route bus services. Preliminary analysis of Zachodniopomorskie's context suggested that it would be difficult to achieve economic and fiscal viability for the traditional fixed-route bus services in underserved areas. Therefore, the methodology for this activity focused on DRT solutions that are used in Europe and elsewhere to provide access to rural areas.

DRT is a road-based public transport alternative that typically uses smaller buses or vans that do not operate according to a fixed schedule. DRT makes use of flexible service routes that facilitate the coverage of geographically large areas with lower population density. This service works through pre-booking schemes that combine both new and old technologies (for example, booking rides by voice over a landline). The routing of vehicles and the travel times for passengers are optimized according to actual demand such that services flexibly adapt to customer needs, thereby enabling operators to make efficient use of their rolling stock and human resources by not running empty routes. Efforts to achieve integrated network performance (for example, DRT links to rail services) also were factored into the analysis used to establish DRT pilots. The institutional and contractual frameworks proposed for DRT pilots sought to work with the existing market of transport operators and the capacity of the counties and municipalities that would have a role in managing the service delivery. The World Bank directly advised on the design of the DRT concepts, using both Polish and international team members.

DRT knowledge development

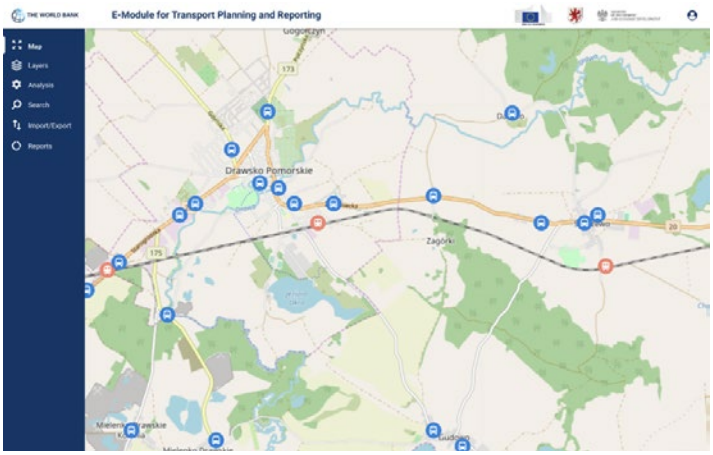
Learning from Polish and other European experience enhanced the likelihood of the successful implementation of demand responsive transport solutions in the future. The approach adopted for this activity was to first examine the relevant experience within Poland, and to then broaden the investigation to other examples in the European Union. Poland has two operating examples of DRT. The first (and oldest) is the Kraków Tele-bus which was established in 2007. More recently, the municipal transport operator in Szczecin also initiated DRT services in 2017. While Poland's two operating DRT systems offer valuable lessons, they also operate in urban/peri-urban contexts that are significantly different from the context found in rural Zachodniopomorskie. For this reason, the CUR3 transport component also sought to learn from other European systems, most notably the rural DRT schemes operated in Stirling County (Scotland, United Kingdom) where population densities in the service areas are low. The overall methodology for this activity was to learn the local operating conditions from Polish authorities, while supplementing this information with knowledge from international experience in aspects of DRT that are unfamiliar to Poland.

WHAT?

e-Module to support planning

The Zachodniopomorskie e-module presents a coherent view of infrastructure, services, and beneficiary populations. The e-module includes layers in three key categories of information, including: i) transport infrastructure and operating public transport routes (rail and bus, see Figure 5); ii) points of interest that offer 'demand generators' for public transport, such as shopping areas, health facilities, churches, government services, parks, and others; and iii) demographic information on the beneficiary populations at the municipal level, including age profile, gender, and employment levels. These layers have been structured in an online portal for viewing by county, municipal, and Marshal Office officials with a system to authorize user credentials to view and/or edit information.

FIGURE 5 Example of bus stop and railway station data displayed in the e-module

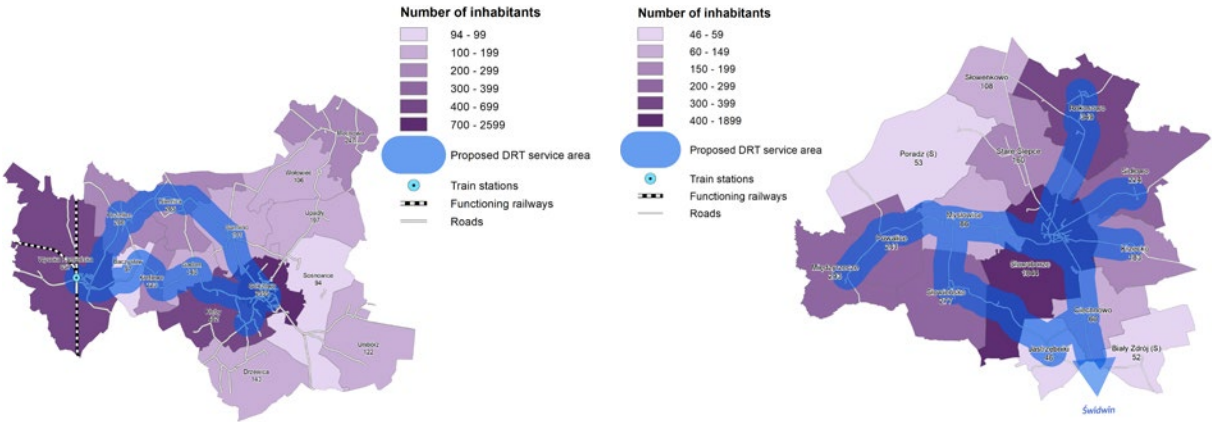


Source: Zachodniopomorskie e-module for transport planning and reporting

Demand responsive transport pilots

Six DRT pilots were developed across four counties. These pilots include schemes that were designed to serve different proposals for DRT applications. Two proposed pilots target the integration of the rural bus network with the rail transport system (Wysoka Kamieńska and Runowo, see Figure 6). Four other DRT pilots target improved connectivity with the local population centers, where customers can switch to other modes of public transport. These include one DRT pilot aimed at reactivating bus transport service where regular lines were closed early this year. The concepts for DRT pilots include: i) proposed service areas and service conditions for bookings; ii) indicative cost estimates; iii) proposed institutional arrangements for contracting and delivery. Importantly, there are elements in the proposed DRT pilots that remain flexible to the decisions that the local government officials will need to take, prior to the launch of a DRT scheme. For example, the funding mix, across different levels of government and the Regional Operational Program (ROP) remains subject to uncertainty. Similarly, there is a flexibility regarding the location and number of dispatch centers, with one option being a single dispatch center for all six DRT pilots proposed. Alternatively, there could be two dispatch centers, with one center for the three counties comprising the Central Functional Zone, and one for Kamieński County.

FIGURE 6 Example: DRT for rail integration in Kamieński County (left) and access to the town center in Sławoborze (right)



Source: World Bank

FIGURE 7 Demand responsive transport knowledge-exchange visits

Source: World Bank: i) Team field visit to the Kraków Tele-bus; ii) Visit to the Szczecin DRT dispatcher; and iii) Visit to the Stirling County Authority (Scotland, United Kingdom) and experience with the 'handheld' DRT ticketing systems.

DRT knowledge development

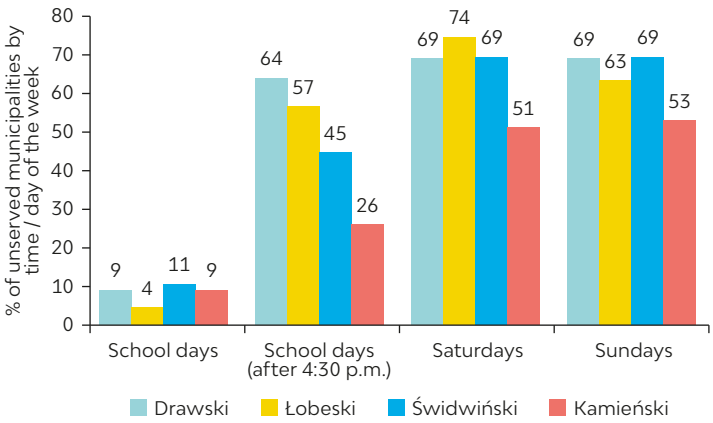
Officials from the Marshal Office, counties, and municipalities participated in site visits and knowledge exchanges with two Polish DRTs and Stirling County (Scotland, United Kingdom). During the knowledge-exchange visits, the delegations engaged with the public authorities, operators and dispatchers, and also used the DRT services as customers (see Figure 7). Knowledge-exchange activities sought to capture the essential elements of making DRT systems work effectively. Representatives from the World Bank, Marshal Office, counties, and municipalities used lessons and advice from the current operators in choosing the proposed design elements that are included in the DRT concepts for Zachodniopomorskie.

LESSONS LEARNED

The strategic observations from the CUR3 work in Zachodniopomorskie relate to: i) gaps in Poland's legal framework; ii) opportunities for improving services within the current legal framework; and iii) the pressing need for action. Specifically, there is a need for Poland's national government to adjust the current legal framework for rural public transport to move beyond a commercially focused model aimed at minimizing fiscal costs, to one that targets efficiency in comprehensive network management and achieves socially beneficial levels of access. A major priority, along with greater legal flexibility around the use of new technologies, is the development of specific funding mechanisms beyond the current reimbursement of concessional fares. However, despite the limitations of Poland's current model, there are immediate opportunities for action to improve access, such as the DRT program developed under this component. DRT has been effectively demonstrated in two Polish cities and has been used effectively in other EU member states as a rural transport solution for areas of low population density (including the United Kingdom, Germany, Finland, Sweden, Ireland, Austria, and Greece). Most importantly, the available statistical indicators suggest that improving rural transport is a critical component of Poland's rural development. Among the rural population, the needs of women and other segments of society that do not have access to private mobility, or that have mobility impediments of some form, stand out. The local governments need to take immediate action to improve access to transport for their population, despite the existing legal and institutional limitations.

The foremost challenges are the level of service and the quality of service, as very few municipalities lack public transport services entirely. Because of the legal mandate for providing school transport, there are relatively few municipalities that are completely unserved by public transport during regular school days. For example, in the target areas of Zachodniopomorskie only 4–11% of municipalities lack any public transport service during normal school days. However, when looking at the services beyond 4:30 p.m. on a school day, weekend, or typical holiday, the number of unserved municipalities greatly increases (for example, 74% of municipalities in Łobeski County lack any service on Saturdays—see Figure 8. The key lesson from this analysis is that the primary opportunities for improving access are on specific days, and times of day, when the current commercial models for delivering public transport services are failing to deliver. Specifically, this means weekends, early mornings, evenings after school hours, and holidays. Addressing gaps at these times is important to serving the full transport needs of the rural population. Importantly, these time slots also align with the existing gaps in the current use of their rolling stock and human resources by public transport operators. Therefore, the DRT pilots in Zachodniopomorskie were also designed to target those transportation gaps that would enable them to work alongside, rather than in competition with, the existing market for public transport services.

FIGURE 8 Significantly degraded public transport access in the evenings and on weekends



Source: World Bank analysis for DRT pilots in the target counties of the Zachodniopomorskie Region

Poland's current legal framework for rural public transport is prescriptive in a way that misaligns with the services needed in rural areas—that needs to change. Current Polish law is ambiguous about the use of technology, flexible route services, and the smaller vehicle sizes that would be amenable to rural public transport. The authorities are forced to choose between classifying service as 'regular public transport' or 'occasional transport'. Classification as regular public transport controls such issues as: driver licensing standards, the production of a regular timetable that must be posted at bus stops, requirement to pick up and drop off passengers only at bus stops, and the minimum vehicle size. The advantage of the classification as regular public transport is that operators then receive compensation for concessional fares

(for example, pensioners). Alternatively, authorities may classify a service as occasional public transport, which provides much greater flexibility, but forgoes compensation for concessional fares. The forced distinction between these legal classifications, and their associated trade-offs, misaligns with the transport system's foremost goal of delivering quality service to beneficiaries in the best possible way.

The experience of Polish DRTs and other DRTs in Europe suggest that there are three critical success factors: i) simplicity and design for low-cost operations; ii) maximizing customer convenience; and iii) effective public communications. Simplicity of the DRT schemes is closely tied to the appropriate use of technologies that manage operational complexity in efficient ways. This includes technologies for booking services, packaging route assignments, dispatching of operators, and in-vehicle communications with drivers. These factors determine the operating cost structure of services, which directly affects the level of fiscal support needed to sustain the services. Lessons learned from the DRTs in Poland and Stirling have shown how technology can enable a public authority to manage dispatch across multiple parallel DRT schemes (nine, in the case of Stirling) using a single person with a telephone sitting at a single computer. Providing customer convenience means multiple options for booking services, efforts to facilitate integrated trip making with other services and modes, and the effective packaging of any necessary operational complexity behind extremely simple user interfaces. Lastly, all the operators of DRT services who participated in knowledge sharing with the CUR3 transport component, emphasized the lessons they learned, and also offered strong advice about the need for extensive outreach and public engagement – especially during the early phases of the development of a DRT system. These lessons and the sound advice have been incorporated into the design of the DRT pilots for the Zachodniopomorskie Region.

FIGHTING SMOG VIA ENHANCING THE ENERGY EFFICIENCY OF SINGLE-FAMILY BUILDINGS: NATIONAL PROGRAM FOR ANTI-SMOG AND ENERGY EFFICIENCY (NPASEE)

WHY?

Low-stack air pollution from single-family buildings (SFBs) caused by the combustion of coal in space heating systems is a major source of pollution in Poland, and the government of Poland (GoP) is committed to addressing this problem with heat source replacement and energy efficiency (EE) upgrades of SFBs. The WB, with support from the European Commission (EC) has been assisting the GoP since 2017. In the first phase, the study concluded that the most cost-effective way to reduce both particulate and carbon dioxide (CO_2) emissions is to couple thermal retrofits of the SFBs, with switching from non-compliant solid fuel boilers to gas boilers, heat pumps, and renewable energy (RE) heating systems, wherever possible, and compliant solid fuel boilers, as mandated in the anti-smog resolutions. The WB recommended that a national program be designed to address the problem and be implemented over a 10-year period. The current second phase consists of the design of robust operational and financial instruments, as well as program implementation mechanisms, to launch a National Program for Anti-Smog and Energy Efficiency (NPASEE). This program will build on the existing Clean Air Priority Program (CAPP) that started implementation in September 2018. Early lessons indicate that it may not be possible to scale up the operational mechanism of the CAPP to address the needs of the new NPASEE program. The challenge for the new national program is to develop an implementation mechanism capable of ensuring that about four-and-a-half million SFBs in Poland get the support they need to thermally retrofit their homes and replace their heating sources over the next ten years.

HOW?

The pace of implementation of the NPASEE program will determine the state of the air quality in Poland over the next ten years. It is critical to establish the right financial and implementation mechanism to deliver the program at the scale needed to renovate all the SFBs in a 10-year period. A behavioral diagnostic of the stakeholders, including low-income SFBs households, the application process, existing communications campaigns, and an assessment of the readiness of the supply chain have been done. A distributional analysis using an Excel-based modeling tool conducted a scenario analysis on subsidy level segmentation and analyzed the implications of the existing CAPP program, together with existing tax credit schemes. It also estimated the program uptake, based on the affordability for SFB households to finance investments from their savings, as well as their creditworthiness to obtain commercial financing. Extensive consultations with the National Fund for Environmental Protection and Water Management (NFOŚiGW), the GoP and its ministries, the regional and local governments, the EC, the banking sector in Poland, the equipment manufacturers' associations, installers, and other key stakeholders in Poland were done as part of the analysis. The report presents an analysis of the segmentation of SFBs, the subsidies to be provided to the SFBs, and the funds-flow and delivery mechanism for supporting low-income, mid-income and high-income SFBs across Poland.

TABLE 1 Pace of SFB renovation

	2030	2035	2040	2045
Total number of SFBs	4,500,000	4,500,000	4,500,000	4,500,000
Period (years)	10	15	20	25
SFBs renovated every year	450,000	300,000	225,000	180,000

Source: World Bank

WHAT?

This report presents a proposal for all the key elements of a NPASEE that aims to reduce smog caused by low-stack emissions from SFBs. The NPASEE will need a robust organizational structure to manage the program and forge strong relationships with the principal implementation partners, which will include the regional funds, the municipalities, commercial banks, and aggregators, to help bundle applications with technical advice and the provision of EE services. A revised organizational structure to manage the NPASEE has been proposed, building on the existing organizational structure for CAPP, and in consultation with the NFOŚiGW. The NPASEE will need to have clear implementation procedures to be able to effectively replace the CAPP.

Managing and operating the NPASEE will be an immense undertaking that will require significant resources to support the program elements. Launching the program will require extensive inter-institutional coordination, clear and simple eligibility criteria, technical standardization, training for stakeholders, a well-designed outreach and communication campaign, and effective monitoring and evaluation mechanisms. The report provides a framework for estimating the cost for managing and operating the NPASEE.

Based on a behavioral diagnostic of stakeholders and an assessment of the CAPP application process, a simplification of the application process is recommended. The CAPP application process is widely acknowledged to be a demanding process, which could dissuade SFBs from applying for benefits under the program. The present process under CAPP requires applications to be approved by the board of the regional fund, which significantly impedes the pace of approvals and the program uptake. A key consideration and rationale for the simplification of the process is to make it easier and faster to approve applications under the NPASEE. The report recommends (i) simplifying the application form and (ii) combining the process for SFBs to provide technical information with an online list of eligible equipment and materials (LEEM) to streamline the application process and help cut down processing time.

An online LEEM, together with installer certifications and the online uploading of invoices, will enable implementation partners to undertake desk-based verification of project eligibility. The preparation of an online platform, where the application form is integrated with the online LEEM, will enable the SFB applicants to undergo automated approvals under the NPASEE. This would facilitate and simplify the process for random physical checks of 10–15% of applications, conducted by the NPASEE to ensure compliance with program guidelines and deter fraudulent applications. The online LEEM database should be coupled with a user interface of drop-down boxes to select equipment and materials in the online application form to simplify the filling in of applications. The LEEM should be a dynamic list that is updated with information from the manufacturers certified as eligible for use under the NPASEE. The dynamic database of eligible equipment and materials should ideally be maintained and updated by an independent organization contracted by the NPASEE.

A distributional assessment was done, by developing an Excel-based modeling tool, to conduct a scenario analysis on subsidy level segmentation. The modeling tool can help segment SFBs by income, analyze the implications of subsidy and tax credit schemes, and estimate the program uptake, based on the analysis of the affordability for SFB households to finance projects from savings, as well as their creditworthiness to obtain commercial financing. The modeling tool will be invaluable in examining financing options and program impacts. The analysis indicates that program uptake increases with the provision of subsidies and tax credits, but so does 'free-ridership' in all income groups. Free-ridership increases from 40% for SFBs

TABLE 2 Preliminary suggestion for subsidies for SFBs in different income groups

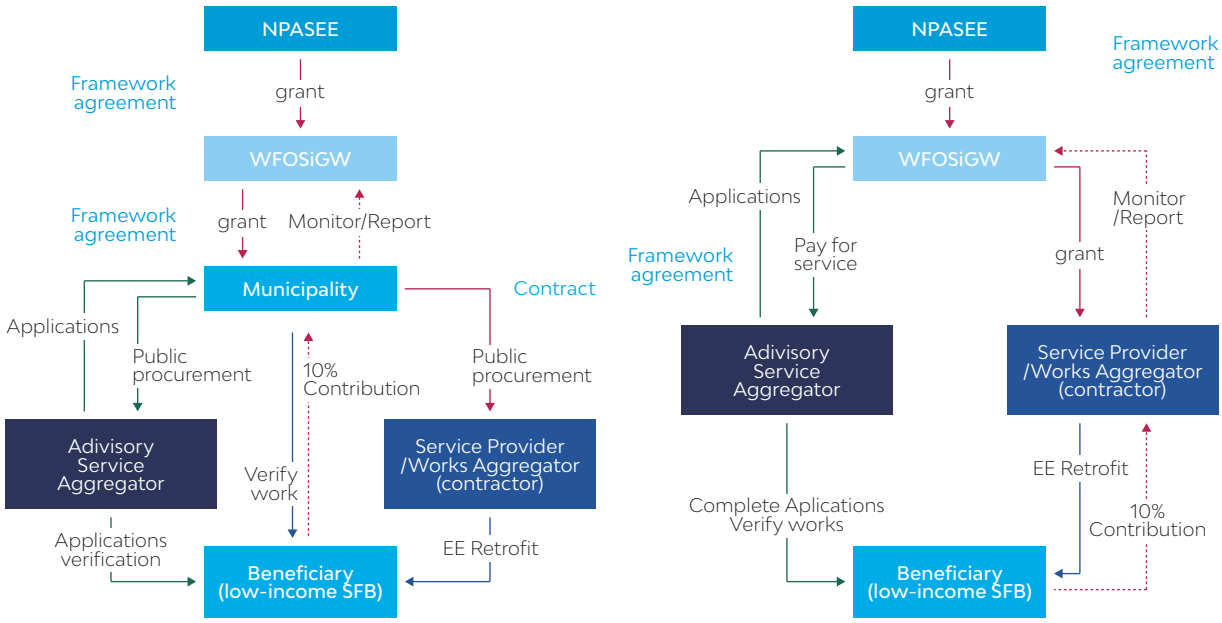
SFB income threshold (PLN per person per month)	SFB income segment	Number of SFB	Percentage of total SFBs
Up to 600	Low-income	479,600	11%
601–800	Low-income	406,546	9%
801–1,000	Middle-income	537,532	12%
1,001–1,200	Middle-income	607,239	14%
1,201–1,400	Middle-income	536,327	12%
1,401–1,600	Middle-income	493,471	11%
Over 1,600	High-income	135,1630	31%
Total		4,412,3451	

Source: World Bank

with income up to PLN 600 per person per month, to 90% for SFB with income over PLN 1,600 per person per month. It is recommended that just a few levels of subsidy be provided to a few distinct income segments of SFBs to encourage program uptake and reduce free-ridership.

A stronger role for the municipalities is proposed for low-income SFBs households. The regional funds have limited capacity or outreach to address the needs of low-income SFBs. It is recommended that municipalities and other distributional channels be incorporated to service low-income SFBs. Local governments have experience managing social assistance programs and have knowledge of the needs of low-income SFBs. Under the recommended scheme, the fund would channel subsidies for poor SFBs through the municipalities (Figure 9). The municipalities, in turn, could support the provision of turnkey financial and implementation services for low-income SFBs.

FIGURE 9 Proposed organizational structure and flow of funds for low-income SFBs



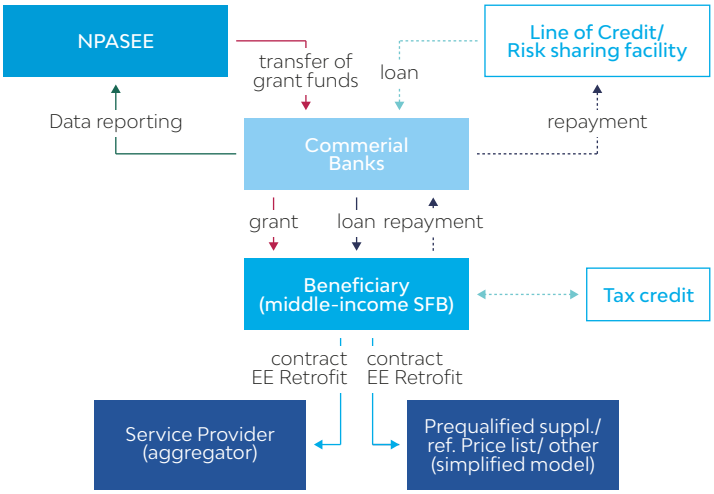
Source: World Bank

In cases where the municipalities would not have the capacity to undertake program implementation at the required scale, it is recommended that they use the services of aggregators to support low-income SFBs. Aggregators can aggregate demand by supporting low-income SFBs in completing validated application forms, and also provide full-scale project implementation services. Framework agreements can be signed with aggregators to provide services to low-income SFBs. The report provides draft framework agreements for engaging aggregators, which have been reviewed with the legal team of the NFOŚiGW. Some changes to regulations and existing processes may be needed to enable aggregators to provide services.

For middle-income SFBs households, it is recommended that the principal support be through commercial banks who could channel program subsidies, provide debt financing, and help deliver the program at scale (Figure 10). The regional funds are not equipped to meet the pace of implementation required to address the needs of this vast segment of SFBs. Commercial banks have experience with retail banking, and have retail and branch offices across the country. Their involvement can help significantly scale up the program implementation. An assessment of the advantages and disadvantages of channeling subsidies and loans through commercial banks shows that they have a clear advantage over the regional funds. It is recommended that all the commercial banks licensed to operate in Poland that are supervised by the Polish banking regulator, KNF, be eligible to participate in the NPASEE. Discussions with the Polish Bank Association (PBA) and the large commercial banks in Poland indicates that they are keen to participate in the NPASEE.

The key to the participation of commercial banks in the program will be the simplicity of the operational processes and low transactions costs. Banks have indicated that they are willing to approve applications, channel subsidies to SFBs as per program guidelines, and provide debt financing for eligible projects. The report provides a draft framework agreement for the NPASEE to engage commercial banks to support program implementation. The agreement has been reviewed with the legal team in the NFOŚiGW.

FIGURE 10 Proposed organizational structure and flow of funds for middle-income SFBs



Source: World Bank

High-income SFBs are not be eligible for subsidies under the NPASEE, and will benefit primarily from the tax credit scheme, and the financing from commercial banks. Commercial banks participating in the NPASEE could be required to gather nominal information on such customers to help record and keep track of the energy and environmental benefits of measures implemented by the high-income SFBs.

It is recommended that in the first phase, the NPASEE focus implementation on the regions with anti-smog resolutions and the 33 cities which have the highest levels of low-stack pollution. In a subsequent phase, the NPASEE could focus on the regions in Poland which are more polluted.

LESSONS LEARNED

The NPASEE will need a robust organizational structure to manage the program and forge strong relationships with the principal implementation partners, which will include the regional funds, the municipalities, commercial banks, and aggregators.

Anti-smog resolutions and their enforcement is key to create market demand for heat source replacement and thermal retrofits. Putting in place and enforcing regulations on heating technologies across all regions would be a move in the right direction. Only eight of the sixteen regions in Poland have adopted anti-smog resolutions, which require SFBs to replace non-compliant solid fuel boilers (manually fed coal boilers that can use low quality coal, wood and trash) with compliant boilers. The Małopolskie and Śląskie regions were the first to pass such resolutions and spurred the uptake of boiler upgrade. In addition, solid fuel quality standards are essential to support anti-smog resolutions to reduce air pollution and to stimulate SFB households to take part in the NPASEE.

The GOP should assess the need to implement regulations mandating thermal retrofitting of SFBs as an important complement to the existing anti-smog resolutions. The absence of government directives for thermal retrofitting of SFBs can greatly impact the demand for retrofitting under the NPASEE[4]. Thermal insulation is costly and has long payback periods. SFBs that only replace the heat source without installing adequate thermal insulation risk increasing their fuel consumption bills and may increase their energy vulnerability.

It is critical that this transition does not require SFB applicants under the CAPP to reapply under the NPASEE. The number of applications received under CAPP, but not yet processed, is significant. Therefore, to avoid having both modalities in parallel, a smooth and easy transition of non-processed CAPP applications to the NPASEE program, once it is effective, would be preferable. While some of the program implementation mechanisms and funds-flow structure will be different under NPASEE, it is recommended that applications received under CAPP should be processed under the new program, based on the revised guidelines for the provision of subsidies based on income thresholds.

SPATIAL PLANNING IN THE WŁOCŁAWEK FUNCTIONAL URBAN AREA

OVERVIEW OF THE RESULTS

The main objective of the Catching-up Regions (CUR3) spatial planning component was to support the eight municipalities of the Włocławek Functional Urban Area (WFUA) in formulating a joint concept for spatial development. Over the course of a year, the World Bank (WB) team engaged the local stakeholders through a series of consultations, to better understand their development conditions and the local context, sought out their specific capacity-building needs around spatial planning, and encouraged their interest in working together toward a common development vision for the WFUA. Building on the knowledge, experience, and available tools of the local stakeholders, the Bank team also conducted spatial analyses to assist with identifying both the constraints to, and opportunities for, development in the WFUA. The results of this analysis informed the eventual formulation of the 'Concept of Spatial Development' for the WFUA. Finally, two sample terms of reference (TORS) were drafted to guide the development of the concept of spatial development for the WFUA, as well as the preparation or updates of municipal studiums[5].

The advisory support provided by the Bank aims at empowering stakeholders to take decisions on the design and implementation of solutions to address the identified developmental bottlenecks. The Bank team took the lead on proposing different methodologies, conducting option analyses, and highlighting the pros and cons of given solutions. However, the ultimate decision-making and realization on the ground resides with the Polish stakeholders. The analyses, support, and findings provided will supplement useful material and tools in assisting the Kujawsko-Pomorskie Marshal Office (KPMO) and the municipalities toward better spatial planning and development of the WFUA.

WHY?

Currently, Polish law does not closely regulate spatial planning at the functional urban area (FUA) level, and the idea of planning and/or operating as a FUA is not yet deeply rooted. The WFUA consists of eight municipalities[6], each with a different set of priorities and challenges. Traditionally, each local government unit focuses only on tasks within its jurisdiction, and cooperation beyond borders is not a common phenomenon. Legislatively, the municipal authorities are responsible for creating 'studiums of spatial development' and local spatial plans[7] that focus on a single territory of a municipality. At the higher level, regional plans provide a planning structure, and tend to be broad-stroked and ineffective for coordination at the FUA level. Hence, there appears to be a regulatory gap at the FUA level that could be filled in by the local authorities' self-initiated efforts.

Under the CUR3 initiative, the KPMO identified the lack of integrated spatial planning at the WFUA level as a developmental bottleneck affecting the competitiveness of the whole region. This request for assistance formed the impetus for the spatial planning component under the CUR3. The WFUA spatial concept will determine future planning activities and the direction of development in the eight municipalities. The concept was envisioned by the project partners and stakeholders, as a means of spurring sustainable development in the WFUA and partially reversing the processes of depopulation of Włocławek (WFUA's main city), as well as the subsequent loss of strategic urban functions by the city.

HOW?

The WB team supported the local authorities in initiating joint spatial planning for the WFUA with a view to enhance its development opportunities and quality of life. The Bank team was not charged with preparing the WFUA's concept of spatial development, as the available time and resources were insufficient for such work. The team was tasked with encouraging the WFUA's municipalities to develop a joint vision of spatial development, and to increase their collaboration, while laying some foundational spatial analyses to advance the preparation of such a concept.

The Bank team took the lead in developing the methodology, preparing initial analysis, and providing outputs that then went through iterative consultations with stakeholders. Methodologies for the various spatial analyses were proposed by the WB team and subsequently discussed with the relevant regional and local stakeholders. The consultations and feedback received were critical to the process, and greatly contributed to the quality, accuracy, and usefulness of the eventual products. They contributed to adjustments in the assumptions used, and permitted the fine-tuning of the local specificities and context.

All raw data and analytical products were handed over to the project partners to enable their further elaboration and development. All data in formats that allowed additional analyses and adjustments (for example: both GIS geodatabases, shapefiles and layers, as well as production-ready formats, such as jpegs and pdfs) are now owned by the project partners. This data can be easily modified and used as input for the additional work foreseen in the future.

WHAT?

Spatial analyses

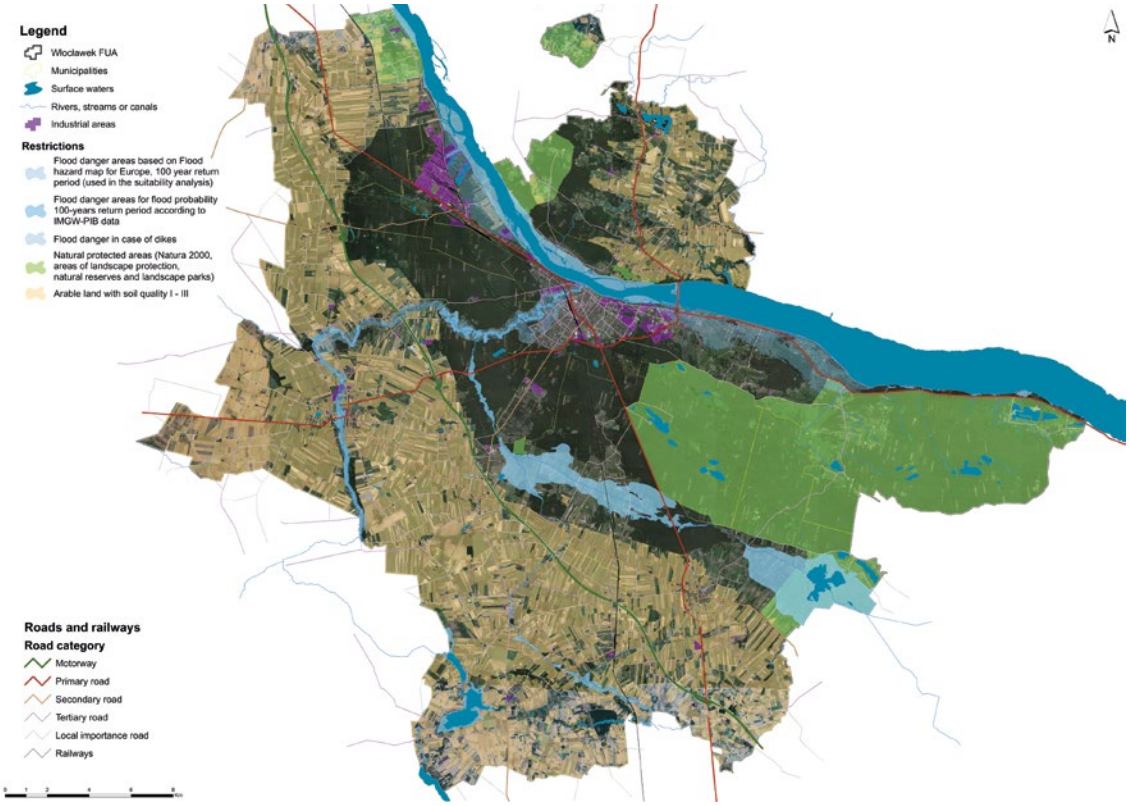
A series of spatial analyses was conducted by the Bank team as input to support an eventual WFUA concept of spatial development. These include:

1. **Development restrictions / compatibility of land use**—acts as a negative filter that excludes certain plots from development, or identifies incompatible land uses (see Map 1)
2. **Development suitability analysis**—categorizes land plots into five bands (already developed/restricted, low, medium, high, and very high suitability) according to their potential for development (see Map 2)
3. **Identification of strategic development areas**—guides municipalities through a facilitated and qualitative exercise to consider various factors (for example, economic, social, environment, infrastructure, development objectives and so on) to identify and prioritize strategic development areas (see Map 3)
4. **Public facilities and amenities provision and gaps**—identifies existing coverage and gaps in the public facilities and amenities provision (specifically for medical centers [2,000 meter radius], kindergartens [500 meter radius], and primary schools [1,000 meter radius]—see Map 4)

Participatory consultations and workshops with the local stakeholders

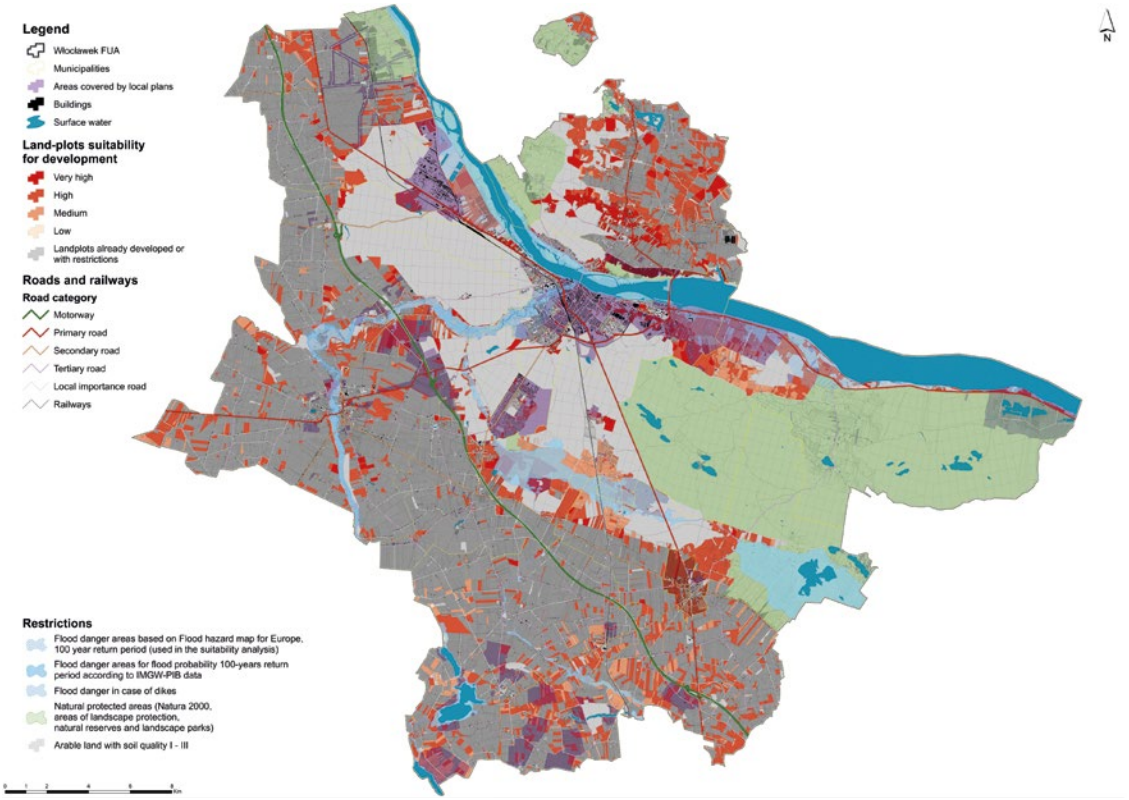
During the project identification phase, the lack of an institutionalized collaboration platform for WFUA municipalities was perceived as a critical area for action. While creation of an institution, such as an official WFUA association, was not set as a target, the stakeholders agreed that closer collaboration among the WFUA municipalities would be beneficial. The activities contributed to more frequent WFUA dialogues and exchanges focused on spatial planning. Recommendations were also made on potential mechanisms, platforms, and ways to strengthen spatial planning collaboration within the WFUA municipalities.

MAP 1 **Land development restrictions in the WFUA**



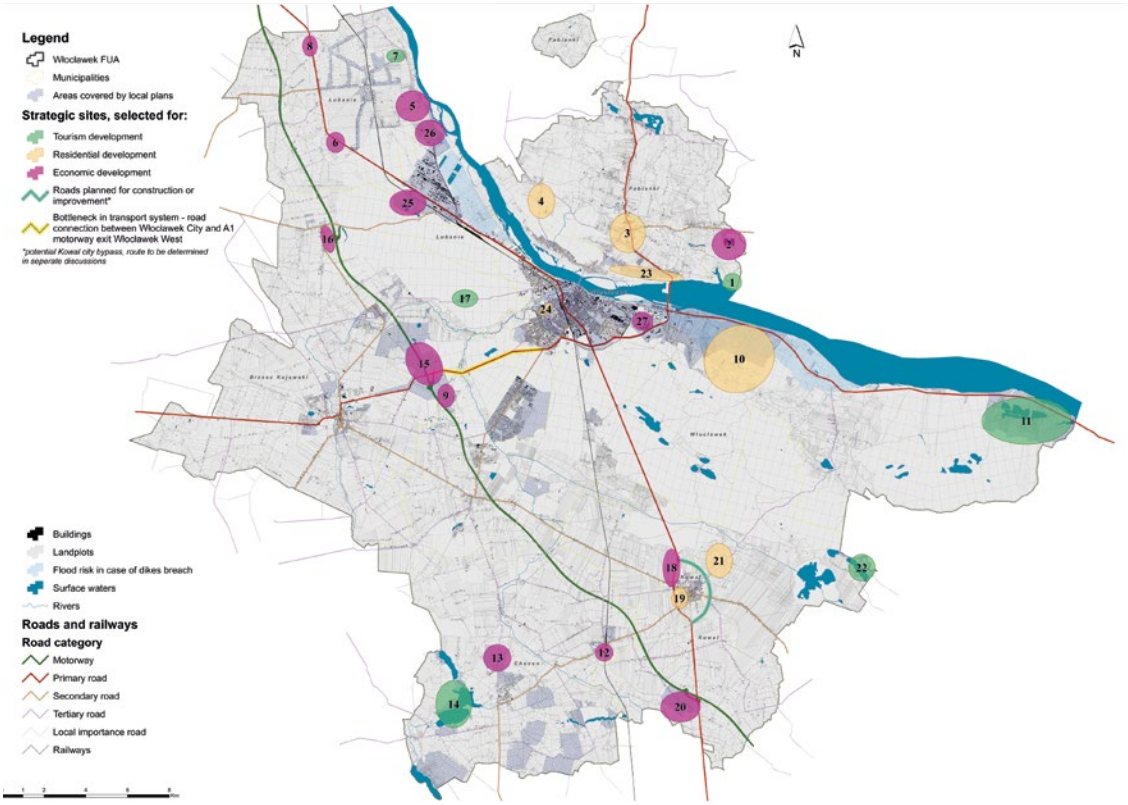
Source: World Bank Analysis

MAP 2 **Development suitability and land development restriction analyses of the WFUA**



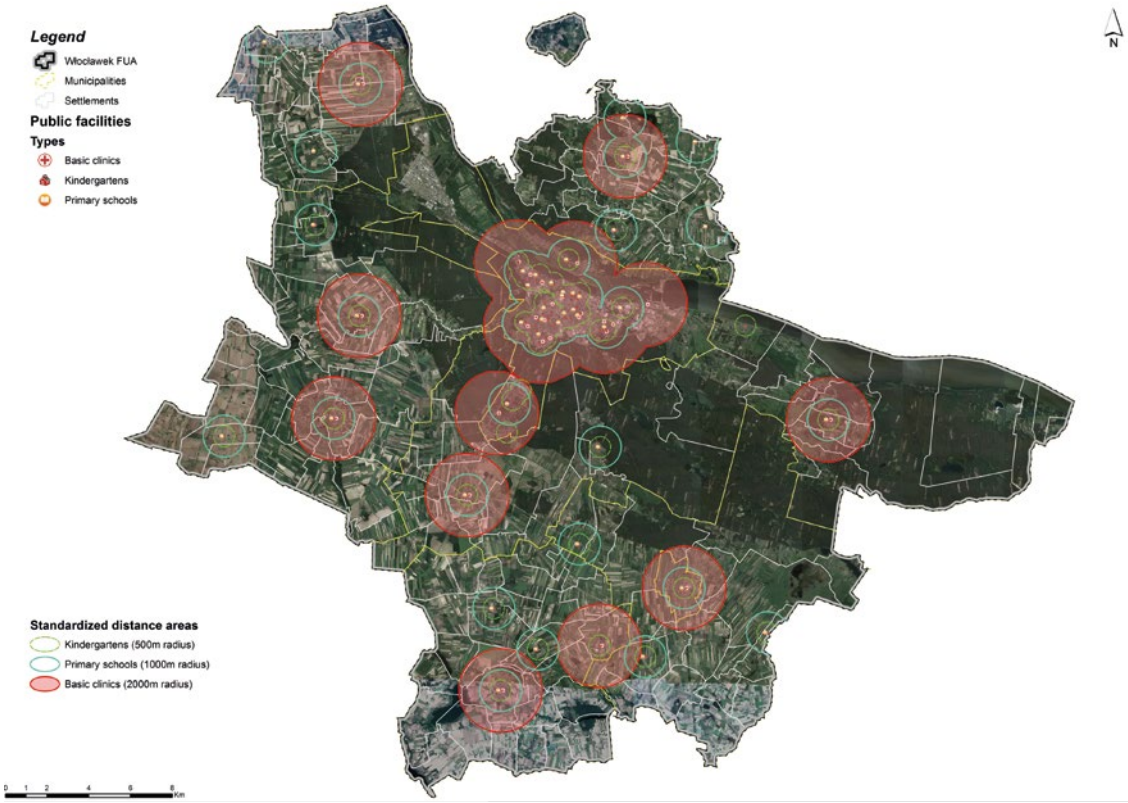
Source: World Bank Analysis

MAP 3 **WFUA's strategic development areas (as indicated by municipalities)**



Source: World Bank Analysis

MAP 4 **Provision and coverage of basic public facilities in the WFUA**



Source: World Bank Analysis

Example terms of reference (ToR) for a WFUA concept of spatial development and municipal studiums

Since the WFUA concept of spatial development is not mandated by Polish law, there is no specific format or mandated components that the concept needs to follow. However, project partners agree that such a concept should include: the key parameters for development, indicate the directions and priorities for spatial development, and identify key cross-jurisdictional infrastructure locations, among others. The WB helped prepare a sample ToR that proposed key sections on: the scope of work for concept preparation, the technical details that should be included, suggested preparation and consultation process, timeline and budget division per stage of work on the concept, documentation needed for the concept preparation, criteria for the selection of a consulting firm, and general criteria for bid assessment.

A ToR for the elaboration of the municipal studiums was also prepared. The underlying assumption was that when municipalities agree on key features of the WFUA spatial development concept, the next step will be to update their own studiums and further develop the municipal spatial plans. Prepared sample TORs are useful to streamline the process and ensure a better guided and coordinated approach for studiums and spatial plans across the WFUA. The draft was discussed with the stakeholders and adjusted to the needs expressed by the local authorities. It can also be utilized by the WFUA municipalities to commission works related to these documents (updating previous plans or drafting new documents).

Capacity-building support and institutional-strengthening efforts

The Bank team also assisted with additional institutional-strengthening efforts. The WB team helped collect information on the capacity-building needs of each municipality, solicit ideas about suitable platforms for future collaboration on the WFUA concept of spatial development, and then helped build a consensus around them.

LESSONS LEARNED

Integrated spatial planning is essential for the charting and coordinating of planning and development decisions across the boundaries of the municipalities, and to ensure the optimization of shared resources for the greater good of the WFUA. It can be observed that, currently, the WFUA suffers from a fragmented and uncoordinated development of the individual municipalities. At times, competition between individual municipalities even erodes the overall development potential of the WFUA. The identification of strategic development areas within each municipality is a first step toward understanding the development intentions of the neighboring municipalities. This also points toward the need for further deliberation and diagnostics to ensure the synergized and, if needed, phased development of these strategic areas. Formulating a common concept for spatial development will help coordinate future planning activities and determine a common development direction for the municipalities.

The current spatial planning policies and practices result in suboptimal and unsustainable urban development. Since studiums do not constitute local law and are often outdated, individual administrative decisions on a given plot frequently override the planning parameters of the studium (such as the land use)[8]. Much of the new developments in Poland occur through ad-hoc individual development decisions that do not take guidance from the higher levels of government, and therefore may not align with the existing urban development vision, at times even causing contradiction and/or disruption. As for the spatial plans, they are usually prepared only for small areas (a single plot or several plots). Urban territories often have several small, disconnected spatial plans that do not support a broader vision. That this level of plan is insufficient as a city management tool is well known in Poland. It will require action on the national level to update or reform the planning system and its associated laws.

Better guidance and recognition of best practices in the methodology and format for the studiums and spatial plans would enhance the WFUA-wide compatibility of these strategic documents. Currently, the municipalities do not have good references or guidance on how to prepare the planning documents (studiums and spatial plans). As a result, a range of quality and technical differences exist in the plans, rendering them incompatible with each other. The introduction of best practices or sample templates of TORs for preparing planning documents could be a useful way to ensure the compatibility and quality of the planning documents.

Understanding the development constraints is critical to strategizing feasible and sustainable developments; it also enables more efficient use of resources. Not all land is suitable for development. The development suitability analysis clearly demonstrated that more than 80% of the WFUA encounters some development restrictions, and also identified the types of restrictions. With this information and new awareness, the municipalities can adopt corresponding development strategies which will work with, instead of against, these constraints.

A consultative and interactive process is crucial to strengthen the collaboration between the various stakeholders toward formulating the WFUA concept of spatial development. The WFUA municipalities acknowledged that collaboration on various aspects related to spatial planning could be improved. While, currently, there is an absence of regular dialogue, or of a formal platform or other modality for spatial planning collaboration among the WFUA municipalities, the stakeholders agreed that the existing organizational setup could be leveraged to reinforce coordination in this field in the WFUA. The municipalities indicated the Steering Committee for the Włocławek Area of Strategic Intervention is an entity that could coordinate the spatial planning thematic in the WFUA; new institutional arrangements could also be explored.

Improvement in overall urban planning capacity would be required to enable more effective management of both the day-to-day planning tasks, in addition to more forward-looking and strategic spatial planning and development. Overall urban planning capacity is low among the WFUA municipalities, especially in the smaller ones. Training or upskilling would contribute toward more effective urban development, planning, and management. Local authorities also welcomed the idea of a common or shared technical support unit to further support their urban planning and management capacity.

INNOVATION AND ENTREPRENEURSHIP IN THE ŁÓDZKIE, PODLASKIE, AND DOLNOŚLĄSKIE REGIONS

WHY?

This chapter summarizes the technical assistance offered through the World Bank to the three Polish regions of Łódzkie, Podlaskie, and Dolnośląskie on regional innovation and entrepreneurship (I&E) support, during the period of 2018–19. The activity's objective was to enhance the regions' capacity to leverage technology transfer (TT) from public research organizations to private enterprises, in order to increase their competitiveness. The three regions, presently categorized as 'catching-up', have the potential to improve technology and knowledge transfer to the local enterprises and entrepreneurs so they can become key drivers of regional competitiveness and growth. However, technology transfer and industry-academia collaboration often lag behind the regional leaders and industrial hubs. Following up on the WB experience in supporting the design of the Podkarpackie Center for Innovation (PCI) in 2017–2018, it was suggested that the PCI model could be rolled-out to the three regions.

In Podlaskie and Łódzkie, the symptoms of the problem were similar to those in the Podkarpackie Region. These symptoms can be summarized as follows: low level of research and development (R&D) investments (especially by private firms), lack of university-based research projects with a strong commercialization potential, low level of innovation and contract research by the region's enterprises, and low uptake of funds from the Regional Operational Programs (ROPs). These problems were seen to be distributed evenly across each region. In contrast, low innovation activity in the Dolnośląskie Region was concentrated in one of its four subregions—the Wałbrzych area. This subregion has a number of specific characteristics, including: low start-up creation rates; lack of a skilled workforce, aggravated by growing out-migration of young people to Wrocław, and low linkages between companies in Wałbrzych with the nearest public R&D provider—the Wrocław University of Science and Technology, located some 70 kilometers away.

Despite the commonalities in symptoms, the underlying causes of the performance inhibiting problems in each region appear to be different. This was confirmed through analytical work and meetings with the key regional stakeholders. These differences combined with the yet-to-be seen performance of the PCI, led the World Bank team to ultimately propose different I&E policy intervention methods for each region. Although the resulting pilots that were proposed did not fully draw on the PCI methodology, they did incorporate strong proven experience from I&E support mechanisms from other EU member states, and the United States. They also offered an opportunity to channel wider international experience in initiating a cultural change toward innovation and entrepreneurship in universities, for both education and research. This is particularly valuable for the country, as it can leverage on activities initiated under the Poland 100 program.

Alongside the introduction of new supporting mechanisms, the World Bank team also proposed revisiting and improving more traditional instruments, such an innovation vouchers and proof of concept (PoC) grant schemes. The key role of the Marshal Office in improving the take-up of funds to support innovation was also recognized. Therefore, the World Bank team focused its effort on supporting the business innovation centers to better target support instruments to the enterprises that need them the most.

The key areas that the WB team targeted are highlighted in the Figure 11.

FIGURE 11 Emerging practical recommendations and key areas for policy support

BUILDING CAPABILITIES OF THE SUPPLY-SIDE

- Upgrade the capacity of research teams and technology-transfer intermediaries
- Introduce structured mechanisms for cooperation between local businesses and academia

IMPROVE LINKAGES AND THE FLOW OF INFORMATION

- Gather evidence of the public research organization's (PRO) portfolio
- Share resources across PRO's
- Communicate information about technology transfer and commercialization potentials internally

IMPROVE THE EFFECTIVENESS AND TARGETING OF THE EXISTING POLICY MIX

- Improve local government capabilities to design, implement, and monitor innovation and entrepreneurship (I&E) programs
- Promote and upgrade existing I&E regional programs and experiment with new ones
- Leverage existing national and EU programs through co-financing

ALIGN SUPPLY-SIDE CAPABILITIES TO THE DEMAND-SIDE (RESEARCH RELEVANCE)

- Prioritize actions in sectors with the highest potential for successful collaborations (nanotech in Łódzkie, medical technology in Podlaskie, and automotive and chemical in Wałbrzych)

ADDRESS COMPLEMENTARITY FOR THE ENTREPRENEURIAL ECOSYSTEM

- Build capabilities of local intermediaries through sharing international experiences
- Introduce initiatives and activities that would help attract risk capital, angel capital in particular

Source: World Bank

HOW?

The project set out to establish an analytical base to provide the foundation for policy interventions. The analysis was based on both qualitative and quantitative data and included consultations with different individuals and groups, to validate findings, test assumptions, and build regional support.

The World Bank team focused on uncovering the root cause of symptoms, to expose the real problems facing technology transfer and innovation in the regions. Second, the team developed a set of options for policy intervention based on the following criteria:

1. **Grounded in the analytical findings** that emerged from the data and field work, and designed to address identified gaps and potentials within the supply and demand framework
2. **Designed for piloting**— experimental in nature and intended for short-term implementation with the intention that, if a pilot fails to achieve its objectives, it can be adjusted, refocused, or terminated
3. **Low cost**—so that it does not require substantial budget commitment, but leverages resources from the regional and national, private and public, stakeholders
4. **Easy to implement**—by ensuring that they do not require complicated administrative procedures, or institutional and governance structures; rather, they are expected to leverage the existing structures and institutions

The pilots' design and development process built on the framework established by the functional and governance analysis component of the World Bank Public Expenditure Review for Science, Technology, and Innovation (PER STI)[9]. The elements of effective policy design are listed in Figure 12.

FIGURE 12 Dimensions and categories of the policy instrument functionality

DESIGN
- Origin
- Justification
- Objectives
- Logical framework
- Relationship with policy mix
- Inputs
- Activities
- Products
- Beneficiaries
- Results and impact
- Eligibility and selection
- Choice of instrument
- Monitoring and Evaluation (M&E)

IMPLEMENTATION
- Learning
- Calls
- Eligibility and Selection
- Application process
- Information management
- Finalization and follow up
- Budget adequacy
- Organization
  - Autonomy
  - Incentives
  - Monitoring
- Staff adequacy
- M&E

GOVERNANCE
- Relationship between instuments
- Relationship between institutions
- Relationship with other policy frameworks — limitants
- Relationship with other policy frameworks — responses

Source: World Bank

WHAT?

A strong analytical base for evidence-based policymaking was established. This highlighted specific issues for each region, and enabled the World Bank to clearly identify and diagnose problems. These issues became the target for tailored interventions that leveraged the present strengths and opportunities and fit into the existing or modified ROP. The team designed five pilots for the three regions as shown in Table 3.

TABLE 3 Pilot actions

Region	Proposed Pilots
Dolnośląskie	Business-Led Challenges
Podlaskie	Partnership for University-Industry Cooperation
	Proof-of-Concept Support Program
Łódzkie	Łódź Enterprise Innovation Support
	Poland I-Corps Program

Source: World Bank

Each pilot instrument was described through a concept note that aligned the new action with the existing or revised ROP, outlined a roadmap for development, secured the necessary stakeholders for implementation, and proposed a budget and timeline for completion.

Alongside the analysis and the pilot design, the World Bank also designed and delivered several capacity-building activities for the main stakeholders. These activities were intended to build design and implementation capacity within the regions' stakeholders, both to implement the proposed pilots and also to engage more effectively in the design of new I&E policy instruments. These included: workshops to support a better understanding of the state aid issues that are inherent in ancillary use of publicly funded research facilities for commercial organizations, introducing researchers to tools that are used by their U.S. counterparts under the U.S. NSF I-Corp program, to test the viability of their research projects for entry into the commercial market, and adjust their subsequent development pathways and frameworks for policy instrument design. The World Bank team also designed a study visit to the city of Prague to introduce and connect the Dolnośląskie Region counterpart to the SSP and Co@Fitt program which connects students to business-led challenges—an example of problem-based learning through business-led challenges delivered by the Technical University of Prague.

LESSONS LEARNED

Several transferable lessons emerged from this activity related to the design of regional I&E programs and policy instruments. These lessons are based on direct observations from the project, and draw on good practices in the design of innovation policy instruments. The key emerging principles for effective design of regional I&E policy instruments include:

1. Availability of evidence as a justification for policy intervention
2. Early and sustainable stakeholder engagement
3. Clearly identified instrument and program objectives that are measurable
4. Complementarity with the existing regional and national policy mix
5. Explicit and realistic logical framework, as well as monitoring and evaluation (M&E) indicators
6. Keen consideration of the implementation capacity and costs

Each of these instruments is discussed below:

Availability of evidence as a justification for policy intervention

Evidence-based intervention to design policy actions is critical, particularly on the regional level, where analytical and financial resources are usually scarce. It is critical to identify the root cause of an identified problem, as otherwise there may be a tendency to treat symptoms rather than root causes.

Showcasing examples from other countries that have clear commonalities with the pilot under development has strong benefits for all the stakeholders. This approach enables the stakeholders to talk to counterparts at a different phase in the implementation trajectory, and to consider options that have not previously occurred to them, or that were seen as being unfeasible or high risk. Innovation policy design is by nature imitative. Policymakers tend to imitate initiatives and programs implemented elsewhere, sometimes with little consideration of their impact. This is particularly important when considering ongoing pilots for replication, as they will not have had the time to mature and demonstrate success and impact. However, it is important to experiment, take risks, and not to simply copy solutions from elsewhere.

Early and sustainable stakeholder engagement

Early, regular, and meaningful stakeholder engagement with the key stakeholders and actors from the public sector, academia, private sector, and intermediaries is critical for the I&E policy design process.

Embedding emerging bottom-up ideas and nascent initiatives from the stakeholders into a pilot could secure increased commitment.

Clearly Identified instrument objectives that are measurable

Once the appropriate solution has been identified and agreed upon, the objectives of the intervention need to be defined in such a way that ambiguity and conflict is reduced. To accomplish this, goals must be clearly articulated; they must be realistic; and they must be observable and measurable, as opposed to abstract and generic. The instruments' objectives need to be juxtaposed with other existing instruments, to ensure complementarity and avoid overlap.

Complementarity with the existing regional and national policy mix

It is important that there is a clear complementarity between the regional pilots and the existing or planned national instruments and programs.

Serious consideration of the existing regional initiatives and instruments could yield better outcomes than launching new ones.

An explicit and realistic logical framework and M&E indicators

The proposed policy instrument should make clear how it will bring about sustainable change. Pilot instruments should include a clear M&E framework with the appropriate key performance indicators.

Keen consideration of the implementation capacity and costs

The capacity to implement actions through competent and connected human resources needs to be assured alongside the pilot design.

Identification of the source and size of the budget for pilots should happen very early in the process.

When additional resources can be identified, there is a tendency to design actions to a scale and size that will fully adsorb this new funding opportunity. However, substantial resources for large scale new initiatives are not always the optimum solution to an identified problem.

ENTREPRENEURSHIP IN THE WŁOCŁAWEK FUNCTIONAL URBAN AREA

OVERVIEW OF THE RESULTS

The World Bank experts examined the business environment and the situation of entrepreneurs in the functional area of Włocławek and prepared detailed recommendations for the economic policy of the city and region. The experts conducted in-depth interviews with entrepreneurs, local authorities and business institutions, as well as an analysis that highlighted the weaknesses and strengths of the subregion. Their recommendations provide a basis for the municipal and regional authorities to modify their policy and devise ways to implement the policy in the area of entrepreneurship support.

The main result of the project will be the launch of the Włocławek Business Center (WBC)—a business support institution offering services to local companies on the premise of a 'one-stop shop'. The World Bank team prepared analyses on the optimal legal form, sources of financing, competencies of staff, the scope of activities, and the monitoring for the rebranded institution that will be created by transforming the existing business incubator. Along the way, conceptual and consultative workshops were carried out, which facilitated the adaptation of the proposal to the local characteristics and capacities, and the ability of the policy makers to make an informed decision. The last phase of the project focused on capacity building with the local partners responsible for implementation: preparing an action plan for the WBC, a financial analysis of the municipal incubator, and study visits to Heerlen (Netherlands), Leszno and Kalisz (Poland)—all midsize cities that have successfully adopted similar solutions. Additionally, the Bank's experts proposed and supported the preparation of a 'pact for the economic development of Włocławek'—a public commitment by the local stakeholders and business community to cooperate on the most important challenges of the business environment in the Włocławek subregion.

WHY?

Proactive economic policy and support for enterprise development may help reduce the problem of high unemployment, while raising the attractiveness of the local labor market. The city has the second highest unemployment rate in Poland, among cities with over 100,000 residents, as well as an aging demographic structure (declining working-age population and children, and a rising number of seniors). It is also depopulating at the fastest rate among the cities in the Kujawsko-Pomorskie Region. Yet, the city has currently no tools to effectively support job creation and the growth of local companies. The WBC is conceived as an answer to these challenges. Support services to business should address the barriers to small and medium enterprises (SMEs), thereby, enabling them to ignite local economic growth.

The establishment of a business support institution guided by the idea of a 'one-stop shop for business' should consolidate and improve the business environment in Włocławek. Currently, a limited catalog of business support services is provided by eight different institutions, each of them focused on its own narrow mandate. There are major gaps in the local business infrastructure, with some rudimentary business services not being offered by any private or public provider. SMEs have limited or no access to the local services necessary for further growth, and only limited resources to look for support outside. As a result, they often stagnate, unaware of how they could improve. From their perspective, business support in Włocławek is dispersed, inadequate, and poorly advertised. For example, even though the majority of SMEs suffer from skill shortages, only 10% of the firms interviewed have heard about the government subsidies

that are dedicated to supporting skill formation for workers. Other identified factors hindering the growth of SMEs in Włocławek include: poor networking structure, low investment in staff, difficulty in accessing EU funds, and the lack of managerial skills. The entrepreneurs could effectively tackle all these barriers, by using the services of a business support institution (BSI). In Włocławek, a single institution could grant entrepreneurs simple access to adequate services provided internally or by other more specialized BSIs.

Building a dialogue platform between authorities and business could help capitalize on the strengths of the city. In comparison to other cities, Włocławek has an above-national-average percentage of people employed in industry, and overrepresentation of large and medium enterprises, particularly those engaged in manufacturing. Yet the companies mostly operate in isolation, are dissatisfied with the level of local cooperation, and the lack of pro-business initiatives. They expect that the authorities will take an active role in consolidating the local business environment. WCB can make city authorities more responsive to business needs by, for example, investigating the entrepreneurs' needs, or by organizing regular meetings of various stakeholders in the city. Increasing responsiveness and efficiency is vital in a city like Włocławek, which is struggling with low social capital and a pejorative image, both inside and outside the city. Bolstering trust and creating a positive association with the city may help slow down depopulation and encourage immigration.

Włocławek needs a high profile and inclusive platform where a dialogue about education can take place between the city, the schools and business. Despite high unemployment, many employers say it is hard to recruit workers, particularly with a secondary and higher technical education. The city should take on the responsibility of strengthening and promoting vocational and technical training in close cooperation with employers. Currently there is no platform for dialogue and cooperation between local enterprises, city authorities, schools and higher-education institutions. Enhanced cooperation with the business environment on programming and promoting desired specializations would address the labor market demand reported by the entrepreneurs. Another important area of collaboration is making the training as practical and as up-to-date as possible, including, but not limited to, the broader use of dual education.

Promoting entrepreneurship and exposing young people to the local business community is a way to retain talent and strengthen local ties. While SMEs are an important pillar of the local economy, the number of new companies in Włocławek is dropping (a 17% drop in registration from 2010 to 2017). The local stakeholders should find a way to promote entrepreneurship as a viable career option, by better using the experience of the local business community.

Strengthening the business environment in midsize cities should become one of the priorities of the regional development policy of Kujawsko-Pomorskie. In recent years, the emphasis was put on building infrastructure, rather than on the provision of basic and advanced services for businesses in midsize cities like Włocławek. In shrinking cities that suffer from brain drain, the bottleneck of growth seems to be the lack of access to human capital and to advanced services for business. The region should roll out programs for building the capacity of the local BSIs to provide quality services to business, and incentivizing the regional BSIs to engage in deprived areas like Włocławek.

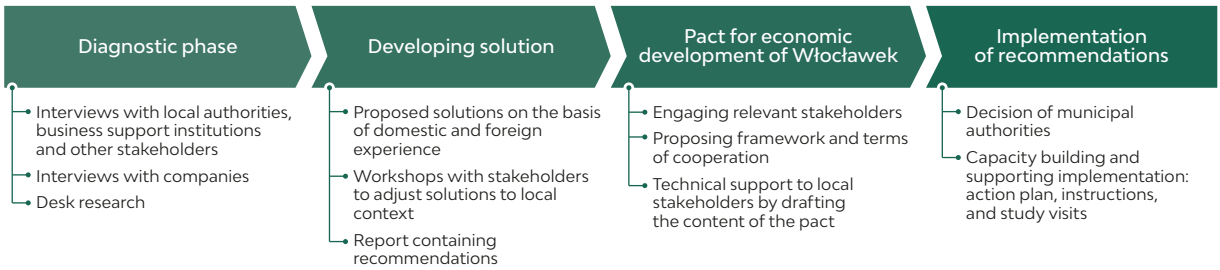
HOW?

The WBC is a response to diagnosed socio-economic challenges, shortcomings in the local business environment, and barriers to the development of enterprises. The diagnostic phase of the project provided insight into the business environment of the Włocławek functional area, based on the analysis of the existing data, 15 in-depth interviews with business environment institutions, higher-education institutions, local government and regional authorities, and 28 interviews with enterprises. On this basis, the experts of the World Bank pointed to the need for active, coordinated support for entrepreneurship. It was recommended that the Włocławek Innovation and Entrepreneurship Incubator (WIEI), currently offering subsidized leasing of space

for new businesses, be transformed into the Włocławek Business Center (WBC). The institution would offer a comprehensive range of services for enterprises, and would become a platform for dialogue between entrepreneurs and the local and regional government authorities, educational institutions, and other stakeholders.

The task of providing support for enterprise development in the Włocławek functional area can be divided into four phases (Figure 13).

FIGURE 13 Phases of the Włocławek Enterprise Support Project



Source: World Bank

The scope of the responsibilities of the Włocławek Business Center has been proposed by experienced managers of successful business support institutions in Poland, and adapted to the local conditions during workshops with a broad group of the local stakeholders. Three workshops were held in March and April 2019 with various audiences, including respectively: i) the vice president of Włocławek, civil servants from four units of the City Hall and the Investor Service Center, representatives of the Marshal Office and of regional business environment institutions, and WIEI staff; ii) the business community: the commercial chamber and the association of entrepreneurs, as well as the entrepreneurs themselves; and iii) Włocławek city councilors.

WHAT?

It is recommended that the offer of the Włocławek business environment be expanded and consolidated on the basis of the one-stop shop for business principle, by transforming the city incubator into the Włocławek Business Center. The Włocławek Business Center should become an economic policy tool of the city to address the challenges of the local economy. The World Bank team has identified four priority areas of activity for the WBC. The main two are: incubating new companies and supporting mature companies (Table 4). Incubation programs are a widely applied tool for strengthening entrepreneurship, and their success depends on whether they are comprehensive, phased, and time-limited. Support for mature companies will, above all, consist of: consultancy and specialist services, access to information on growth opportunities, and the organization of conferences, workshops and information meetings around which networking can develop.

TABLE 4 Recommended services for the incubation of new companies, and support services for mature companies

	INCUBATION OF NEW COMPANIES
Pre-incubation	• Creation of an offer by the WBC and providing basic advisory services to support people who wish to start a business • Offering financial and grant instruments for start-ups
Incubation	• Leasing office space and providing advice and support for new enterprises in the incubation program • Setting up a 'virtual' incubator • Launching a young entrepreneur academy
Post-incubation	• Building links between young and mature companies

SUPPORT FOR MATURE COMPANIES	
Specialist training and business counseling	• Investigating the growth needs and constraints of companies • Preparation of a catalog of growth services • Offering specialist services • Building a network of cooperation of external experts
Support for companies in acquiring external co-financing, including EU funds, for investment, training, internationalization	• Preparing information and promotion events related to current regional operational program competitions and available forms of support for local companies • Organization of information meetings and workshops on EU funds and repayable instruments, advisory support in the preparation of application documentation and project setup • Assisting firms in the settlement of projects • Building competence in the field of project settlement
Advanced services (to be implemented in a subsequent phase)	• Matching large companies with local SMEs within value chains • Attending R&D cooperation, matching companies with scientists and research centers
Support for city's investor helpdesk	• Cooperation with investor helpdesk in preparing offer • Organizing information meetings

Source: World Bank

The Włocławek Business Center will also provide public services to promote entrepreneurship and strengthen dialogue between the local government authorities and the business community (see Table 5). The first action is a response to the problem of declining entrepreneurship in the city. An additional outcome of this action will be a better understanding of the barriers to doing business in Włocławek, and the promotion of the WBC as a partner for current and future enterprises. Moderating the dialogue between business and the authorities, in turn, is meant to establish a permanent communication platform, where entrepreneurs will be able to express their needs and establish in-depth cooperation with the public institutions or the local government. Other anticipated outcomes include: improved quality of education, with better adjustment to the needs of the labor market, and an altered image of the city as more business friendly.

TABLE 5 Recommended actions to promote entrepreneurship and strengthen dialogue

PROMOTING ENTREPRENEURSHIP	
Implementation of the annual Business Idea Competition in all local schools	• Preparation of a competition framework for two groups: i) for school students and higher-education students, ii) for future entrepreneurs • Engagement of various stakeholders in holding the competition and finding sponsors among entrepreneurs
Researching entrepreneurial mindsets in secondary and higher-education schools	• Conducting an annual poll among school students and higher-education students • Preparation of recommendations for City Hall based on the poll results
Workshops for children and young people	• Organization of day camps • Organization of events commissioned by City Hall, for example, entrepreneurship picnics
Creating a network of volunteer mentors	• Creating a network of entrepreneurs who volunteer to share their business experience • Preparation of workshops with entrepreneurs for schoolteachers • Engaging entrepreneurs in school lessons and extracurricular initiatives
STRENGTHENING DIALOGUE BETWEEN LOCAL GOVERNMENT AND BUSINESS COMMUNITY	
Regular meetings of the local BSIs and City Hall	• Organization of regular meetings of representatives of the BSIs, the Marshal Office and City Hall to exchange information, coordinate the work plan, and form joint initiatives • Writing down and monitoring the implementation of settlements
Semi-formal meetings of entrepreneurs with the city president	• Organization of meetings, selection of participants, ensuring that settlements, if any, are carried out • Providing information on the WBC offer during meetings
Cooperation of entrepreneurs with secondary schools and higher-education institutions	• Promotion of dual training and coordination of thematic groups • Proposing forms of business-education dialogue/cooperation • Analysis of the demand for workers among local companies and potential external investors • Preparation of strategy for promotion of technical (dual) training

Promotion of WBC	• Preparation of offer and information material • Promotion of the WBC brand • Continuous cooperation with the local media
Promotion of a positive image of Włocławek	• Promotion of Włocławek's business successes • Promotion of the 'made in Włocławek' brand

Source: World Bank

The World Bank experts conducted an analysis on the optimal legal structure and sources for financing the Włocławek Business Center. Services supporting companies may be provided by entities of various legal structures. The choice of legal structure will influence the key aspects of the WBC's activity, and the effective realization of its mission in the long run. Currently, a city incubator is a part of the city's budgetary unit, which results in low transparency and accountability. Transforming it into a limited liability company will provide the WBC with the necessary decision-making autonomy, capacity to acquire and keep qualified staff, and to maintain the possibility of entering into partnerships with other BSIs. It will also permit the WBC to diversify the financing sources for its activities, in accordance with the character of the performed tasks. As a target goal, services for businesses should be demand-driven. Some of the WBC tasks, such as incubation, promotion of entrepreneurship, and the moderation of business-local government dialogue, have the character of justified public intervention, and should be co-financed from both city and regional funds. Table 6 sums up the different financing sources.

TABLE 6 Financing sources and proposed scope of responsibilities of the Włocławek Business Center

Area of activity of WBC	Public objectives carried out	Scope and source of financing		
		City budget	Regional Operational Program	Commercial
Incubation	Municipal economic policy, sustainable development of the region	Comprehensive incubation program	Comprehensive incubation program	
Services for mature companies	Municipal economic policy, sustainable development of the region	Networking and business initiatives, supplementing local BSI offer	Innovation, support services, internationalization	Access to EU funds, specialist training and business counseling
Promoting entrepreneurship	Municipal and regional economic policy	Local initiatives	Regional programs on entrepreneurship	
Social dialogue, education-business cooperation	Municipal economic policy	Moderation of dialogue related to the city's economic and educational policy		

Financing source currently available Financing source currently not available

Source: World Bank

In an iterative process of consulting about further steps concerning the WBC, between the stakeholders of the institution and the World Bank experts, the idea emerged of forming a pact for the economic development of Włocławek. The pact would set out in detail the actions and commitments of the individual stakeholders, that is, the city authorities, educational institutions, the business environment (chambers and companies), the County Employment Office, the Marshal Office, and the institutions of the local business community. The purpose of the pact would be to draw up permanent principles of cooperation between the stakeholders toward establishing an active economic policy for the city. A prerequisite for the success of the undertaking is to incorporate a proper evaluation process into its makeup that would assess the degree of execution of the established objectives. The World Bank will assist the stakeholders in the process of formulating the cooperation objectives.

The last and most important phase of the process is the implementation of the recommendations by the City Hall and the future WBC staff. The World Bank assisted in the preparations for the implementation of the recommendations through the following: i) organizing a study visit to the Dutch city of Heerlen, which has faced similar challenges as Włocławek; ii) organizing

study visits to business environment institutions in Kalisz and Leszno; iii) preparing an action plan for the first year of the operation of the WBC; iv) a financial analysis of the WIEI; and v) conducting workshops on organizing training by the BSI.

Effective implementation of the WBC mission and strategy will be, above all, determined by the skills, knowledge, and experience of its team. The WBC staff should be selected in accordance with strictly technical criteria, by open competition. The WBC team, engaged in the areas of activity described above, should be composed of at least five people working full-time, performing management, technical, and administrative functions.

LESSONS LEARNED

The implementation of an active local economic policy requires a willingness to cooperate on the part of the local stakeholders, as well as an in-depth dialogue with the business community. Public intervention to support companies should be based on research about the needs of, and obstacles for, the companies, as well as consultations with the stakeholders. This will ensure that the solutions are adjusted to the local circumstances and address the needs of the potential beneficiaries.

Effective support of the companies by business support institutions depends on their legal and financial conditions. For example, the Włocławek Innovation and Entrepreneurship Incubator was established with the mission of providing comprehensive support for young companies, but within a few years, it became a passive institution whose actual impact on the growth of the local businesses is difficult to assess. The investment in infrastructure was not followed by an investment in the skills of the staff of this institution, while the organizational form and financing model did not provide the right conditions for its development, and the effective implementation of its mission. As a result, the activity of the incubator was limited to offering the preferential lease of space. The key to the success of a BSI established by a local government is: i) to ensure stable financing sources, adequate to the entrusted tasks; ii) to build a professional team and a network of connections for their execution; and iii) to ensure that the institution has the budgetary and decision-making autonomy to implement the necessary mechanisms to monitor its effectiveness.

The economic policy of a region should take into consideration both the needs and the potential of its smaller cities. The social and economic challenges of the Włocławek subregion diagnosed in the report confirm the need for special measures to support medium and small urban centers. The sustainable development of a region requires the strengthening of the business environment beyond the regional capital, through programs targeted at the professionalization of the BSI staff, the incubation of companies, and the provision of business services. The criteria of the competitions should take into consideration the capacities and needs of cities in which the business environment is poorly developed.

FINANCIAL INSTRUMENTS IN THE PODLASKIE AND ŚLĄSKIE REGIONS

OVERVIEW OF THE RESULTS

The main objective of the CUR3 financial instrument component was to propose: i) an organizational model for the management of financial instruments that will be supported by funds returned from the 2007–2013 financial perspective in the Śląskie and Podlaskie regions; ii) guidelines how to collect and re-engage the returned funds; and iii) new financial products. Both engaged regions implemented financial engineering instruments supported by regional operational programs (ROPs) in the 2007–2013 programming period (Podlaskie ROP and Śląskie ROP). Resources used for financing these instruments have a repayable character and the financial intermediaries that offered these financing instruments, are now to return these funds to the regional authorities. Consequentially, the issue arose of how to utilize the funds returned from those instruments to further support micro, small, and medium enterprises (MSMEs) in the regions. The need to design new financial products that could be offered to MSMEs in both regions results from the fact that funds repaid from the 2007–2013 perspective should not compete with the financial instruments offered at present that are supported by funds from the 2014–2020 financial perspective.

The key recommendation for both regions is to establish a regional development fund (RDF) to manage the resources returned from the 2007–2013 period. The RDF would be a legal entity owned by the region (or with region's majority shareholding) that would collect the returned funds (and in the future also funds from subsequent financial perspectives) and distribute them to MSMEs in the region through financial intermediaries. The RDF could also be directly involved in the deployment of financial instruments in identified market niches, for instance, equity financing for start-ups, financing of ventures regarding renewable energy sources and energy efficiency. With time, the RDF could become the main managing and coordinating entity for the programming and implementation of the financial instruments at the regional level, supported by structural funds and other regional resources.

Moreover, additional analyses were performed for both regions tailored to their needs. For Podlaskie this consisted of a summary of experiences from the deployment of financial engineering instruments under the 2007–2013 Podlaskie ROP (loans and guarantees), including an evaluation of their effectiveness. For Śląskie, the analysis covered: i) organizational and procedural solutions used by the financial intermediaries to propose simplifications and modifications that would facilitate the use of the financial instruments; and (ii) the level of fees for the management of the financial instruments distributed in Poland, under the currently implemented ROPs (2014–2020). This knowledge may be useful in estimating the distribution cost of the financial instruments at the regional level.

WHY?

Development of an effective and efficient method for the use of public funds that were previously (2007–2013) committed to financial instruments, and are now due for repayment, is a challenge for many regions in Poland. Because financial instruments are also deployed under the currently implemented ROPs (2014–2020), and will also be present in future programs, designing an adequate mechanism for the collection and further distribution of the funds will enable the development of a sustainable management mechanism, and the support of the fi-

nancial instruments at the regional level. The functioning of such a mechanism will be aimed at improving the availability of financing sources for the regional MSMEs, with the subsequent benefit to the sustainable growth of the regional economies.

Both regions are looking for new financial products that could be deployed with the funds from the 2007–2013 perspective. The Marshal Offices try to expand the range of financial solutions available to MSMEs that, on the one hand, would complement the 2014–2020 financial instruments, and, on the other hand, would respond to the specific needs of businesses from the Podlaskie and Śląskie regions.

Podlaskie regional authorities required an effectiveness assessment of the financial engineering instruments implemented under the 2007–2013 Podlaskie ROP. The analysis of the experiences and conclusions derived therefrom, will be useful in the design of effective financial instruments in the future.

Śląskie, in turn, focused on the identification of potential simplifications in the financial product distribution mechanisms used by the financial intermediaries in that region. The purpose of that task was to improve the availability of financial instruments, and to create more straightforward procedures for MSMEs to obtain support. Implementation of the recommendations in this area will lead to the higher efficiency of funds devoted to financial instruments, and will ensure improved availability of development capital to their beneficiaries.

The analysis of the fees charged by intermediaries for the deployment of financial instruments (lending) in Poland provides the basis for the estimation of the cost of the development and management of a loan portfolio at the regional level. Its findings may be used by any entity distributing financial instruments, for example, the RDF, with the use of financial intermediaries. Moreover, it demonstrates how this aspect of financial instrument development may be monitored at the regional level.

HOW?

Individual interviews and workshops with financial instrument stakeholders, the analysis of regional and national documents, the review of literature, and an online survey are the foundation of the findings in this component. In both regions, most of the activities of the World Bank team were performed in cooperation with the Marshal Office personnel involved in the financial instrument programming and management, and with other financial instrument stakeholders at the regional level. They specifically included financial intermediaries that implemented financial engineering instruments under the 2007–2013 ROPs, representatives of business organizations, and entrepreneurs representing the regional MSME sector.

Interviews and workshops covered a variety of stakeholders. In Podlaskie, the World Bank team conducted 17 individual in-depth interviews with entrepreneurs, representatives of the regional SMEs, and representatives of the financial intermediaries. Also, two workshop meetings were organized (with the participation of the regional authorities, personnel of the Marshal Office, and representatives of the financial intermediaries). The workshops were focused on the issues surrounding the design of new financial products and possible solutions regarding the management model for funds returned from the financial engineering instruments. In Śląskie, the WB team conducted 16 individual in-depth interviews (with respondent categories similar to that of Podlaskie), and three workshop meetings (also with participation of the region's authorities and the representatives of the Marshal Office) about the management model for funds returned from the financial engineering instruments. Additionally, an online survey was conducted in Śląskie among entrepreneurs to determine their financial instrument needs. This survey was carried out in cooperation with the Śląskie Enterprise Center.

National and international experiences, as well as the available data on the functioning of financial instruments in Poland, were used in the work. In the reports for both regions, references were made to the literature, program documents (including ex ante evaluation of financial instrument use in the ROPs, and related financial instrument investment strategies in Podlaskie and Śląskie for the 2014–2020 programming period), and reporting information on the implementation of the financial engineering instruments in each of the regions.

WHAT?

The team of the World Bank analyzed two management models for funds returned from the 2007–2013 perspective, each in three variants (see Table 7). The first of the models (external) anticipates incorporation of an independent organizational entity from the structure of the regional government administration that would be responsible for the management of returned financial resources. It is also possible to delegate those tasks to an existing entity of the same independent nature. In the second (internal) model, executive structures of the regional government (the Marshal, Region Board, and Marshal Office) perform the management tasks for the financial instruments created based on the 2007–2013 funds. A variant of this model would be the continuation of the existing arrangements, that is an extension of the currently applicable agreements between the marshal offices and the financial intermediaries. The analysis included the indication of the strengths and weaknesses of those solutions.

TABLE 7 Management models for funds returned under the 2007–2013 perspective

		Evaluation of solution adequacy
External model RDF	Option 1: incorporation of a legal entity—regional development fund. RDF collects and re-engages returned funds. The funds are committed with the use of financial intermediaries (tenders, monitoring, testing, and deployment of new financial products)	YES
	Option 2: incorporation of a legal entity (as above). RDF collects and re-engages returned funds. Funds are committed directly by the RDF itself. The RDF operates as a typical financial intermediary	NO
	Option 3: incorporation of a legal entity (as above). RDF collects and re-engages returned funds. Funds are committed both directly by the RDF and with the use of financial intermediaries. Direct operations concern specific (niche) financial products—'mix' of options 1 and 2	YES
Internal model	Option 4: continuation of the existing agreements with the financial intermediaries	NO
	Option 5: collection and re-engagement of funds returned with the use of financial intermediaries (Marshal Office organizes tenders and selects financial intermediaries)	YES third choice option
	Option 6: collection and re-engagement of the returned funds directly to MSMEs by the Marshal Office (Marshal Office acting directly).	NO

Source: World Bank

Creation of a separate RDF that would manage funds returned from the 2007–2013 perspective is the main recommendation for both regions. This recommendation is based on the analysis of the possible organizational solutions that can be used to collect and re-engage funds returned from the financial engineering instruments, and on the experiences of other regions in this regard. In the future, the RDF could also manage funds allocated to the financial instruments implemented under the current and new ROPs. In this model, a specialist regional entity would be created to focus on the organization and implementation of the financial instruments at the regional level, using mainly financial intermediaries operating within the region. The analyses also found that this type of entity could independently deploy financial instruments for special niche markets to test the validity of the intervention in this form.

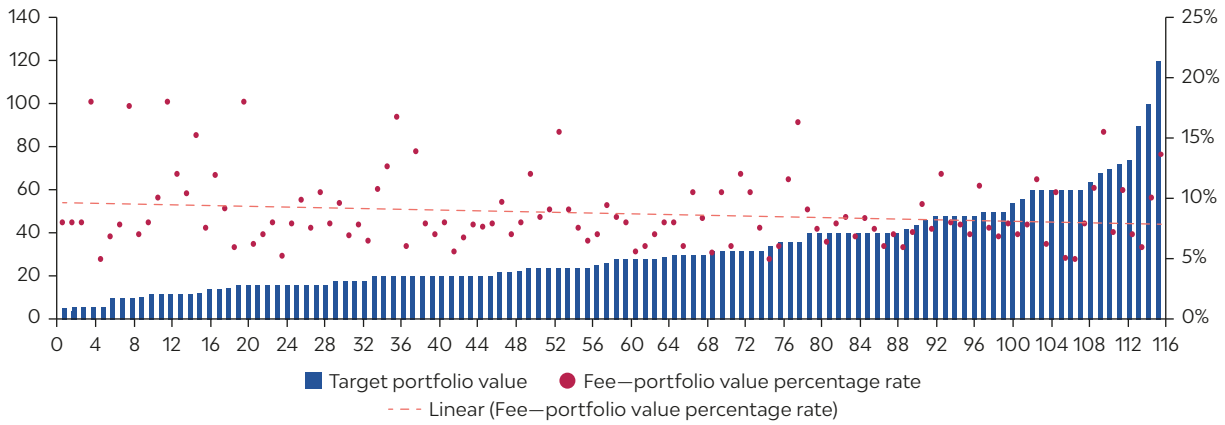
Thanks to the involvement of the financial intermediaries, this model leverages the already existing potential of those institutions and assumes their further development. This solution aims to create a robust and efficient network of financial intermediaries that distribute a broad range of financial instruments. The existence of such a network would improve the availability of finance sources for the MSMEs.

The RDF could design and distribute new financial products, based on the 2007–2013 funds, that would complement the products implemented on the basis of the funds from the current ROP. This approach requires the design of products complementary to the ones currently offered (2014–2020), and should strengthen the comprehensiveness of the financing available in the region. The World Bank team proposed the specifications of the new products, considering the specific needs of the MSME sector. In Podlaskie, three new debt products were proposed: i) working capital loan, ii) working capital loan for exporters, and iii) a loan for real property purchase. In Śląskie, in turn, they included: i) tourism loan, ii) loan for own contribution in EU projects, and iii) a loan for real property purchase. In the future, the RDF would take over the task of monitoring the needs of the regional businesses and, in response, the design and deployment of the new financial instruments.

The intermediaries operating in Śląskie could further simplify and improve their procedures, using the experiences of other intermediaries, among other methods. Apart from the financing terms (interest rates, fees, collateral), the formal requirements related to applying for financing and accounting for the expenditure covered by the loan, are one of the important factors affecting the decision of entrepreneurs to use a given source of debt finance. Analysis of documents describing the process of loan application with lending funds in Śląskie, showed desirable improvements in the area of: i) requirements related to admissibility of financing of a given enterprise, ii) rules of customer service and presentation of the products offered by the fund, and iii) the documents and procedures. The proposed solutions vary in terms of the workload and resources required. While some may be implemented very quickly, and with little resources or at almost no cost (like the development of a guide for applying enterprises, and the design of loan calculators), others definitely require a larger effort, as well as systemic changes (such as the digitization of the lending process, and obtaining international certification).

The results of the analysis of the financial intermediaries' bids, selected in tender procedures (in terms of intermediaries' fees), permit the setting of benchmark fee rates, for similar tenders carried out in the future[10]. Information about the average fees may be useful for the managers of the funds allocated to financial instruments, including regional development funds. The main finding of that analysis is that the intermediary's fee cannot depend on the portfolio size only. On the one hand, there is a negative correlation between the fee rate and the value of lending portfolios. The more the average rate decreases, the higher the portfolio value. However, the scale of such a decrease is minor (see Figure 14), also, the average fee rate varies, depending on the portfolio size (see Figure 15). On the other hand, however, for the portfolios of specialist products, even for high-value portfolios, the cost of the development and maintenance of the portfolio is higher (for example, loans to support energy efficiency ventures, thermal performance upgrade loans, and loans for research and development with implementation—see

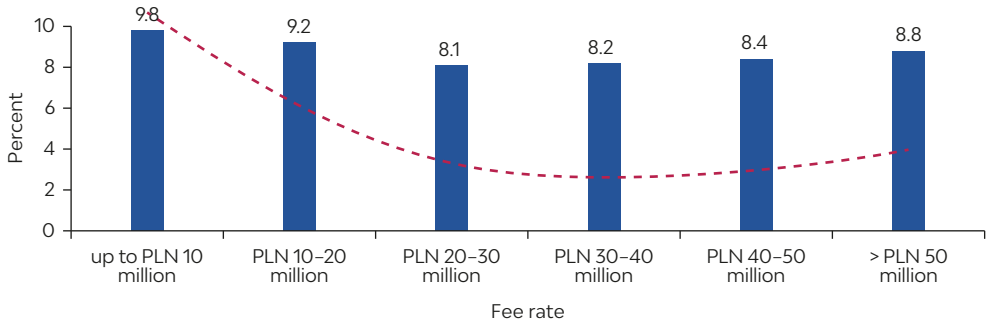
FIGURE 14 Fees for the development and management of loan portfolios, with consideration of the target portfolio values



Source: Calculations based on tender records (information from the Bank Gospodarstwa Krajowego).
Note: Left axis – target portfolio value in PLN millions; right axis – fee rates of the financial intermediary selected in the tender procedure)

Table 8). High fee rates for financial intermediaries apply also to the lowest-value portfolios, as they often consist of a high number of low-value loans (microloan portfolios), which results in a higher maintenance cost for such a portfolio.

FIGURE 15 Average fee rates according to loan portfolio value



Source: Calculations based on tender records (information from the BGK).

TABLE 8 Distribution of fees by subject (loan purpose / subject of the financing)

Loan purpose / subject of the financing	Number of bids selected	Share in global portfolio value[a]	Average fee rate
Energy efficiency	3	4%	12.2%
Research and development	3	5%	11.2%
Start-up	10	4%	10.6%
SME development	91	75%	8.4%
Thermal performance upgrade	6	7%	8.1%
Internet access	1	1%	5.9%
Real estate property	2	4%	5.5%
Total	116	100%	8.59%

Source: Calculations based on tender records (information from the BGK).
a Share in the value of all portfolios in accordance with the outcomes of the analyzed tender procedures.

LESSONS LEARNED

The option that involves creating a regional development fund is the optimal model for the collection and management of funds returned from the 2007–2013 financial engineering instruments. This solution seems to be the best, in terms of operating effectiveness. In the strategic dimension, it also enables the development of a specialist entity that will focus the organizational tasks for the financial instruments at the regional level. The fact that the RDF is subordinate to the regional government authorities, ensures that the region's development priorities will be considered in the design of the financial instruments. The fact that the financing will be distributed by the regional intermediaries, will facilitate the creation of a network that will ensure better availability of the financing sources to the MSME sector in the region. One of the weaknesses of this solution is the institutional sensitivity, due to the RDF being overseen by the regional authorities.

The function of designing instruments for specific financing sources could be fulfilled by the RDF. New financial products need to be developed, and their parameters must always be designed in a way that ensures the complementarity of the new products with those that are already available (in particular, those from other regional sources). This assured complementarity also means that the design of the financial instruments in the future (under subsequent financial perspectives) should consider the option of designing the financial products based on the

returned funds (which guarantees more flexibility in the new product design). This method of design provides an opportunity to develop a comprehensive catalog of financial instruments that respond to the needs of the businesses in the region.

The analysis of the performance of financial engineering instruments implemented with the 2007–2013 Podlaskie ROP funds, found the effectiveness of these interventions to be high (for lending instruments) and adequate (for guarantee instruments). Therefore, investing the funds returned from the 2007–2013 perspective, with the use of the same approach in the future, seems reasonable.

Financial intermediaries in Śląskie should continue to make improvements to the solutions used, in order to minimize procedural difficulties and the administrative burden on the side of the final recipients. Simplifications may be made in the formal documents, with better adjustment of the distribution process to fit the character of the final recipients (such as their size, financing value, and purpose). It is also advisable to improve communications regarding the financial instruments supported by the region's authorities, to develop tools that will facilitate the decision-making process in relation to the use of the financial instruments (such as, a repayment simulator, and guides to the financial product application process), and to educate the applicants about the process (for example, by explaining to a rejected applicant, the reasons for the refusal to grant a financial product).

Financial intermediaries are characterized by a low level of digitization of the financial product distribution management processes (monitoring, product portfolio risk analysis, client acquisition, and so on). Due to a clear trend towards financial services digitization, it seems clear that in the coming years, changes in this area will be one of the key challenges for both the financial intermediaries and the entities that manage the support programs implemented in the form of financial instruments. Support activities addressed to the financial intermediaries should be considered, as they could help lead to the digitization of the financial instrument distribution process.

Analysis of the fees for the lending instrument deployment by the financial intermediaries in Poland (analysis of the 2017–2018 period fee rates accepted for financial instruments distribution that were supported with the funds of 2014–2020 ROPs) enables an estimation of the cost of the fees for financial instrument distribution at the regional level. Those findings constitute general guidelines, as the actual rates depend on many variables, and are not simply proportionate to the size of the portfolio that the intermediary is obligated to develop and monitor.

INTEGRATED HEALTH CARE FOR THE ELDERLY (65 YEARS OF AGE AND OVER)

OVERVIEW OF THE RESULTS

The main objective of the component was to propose a service delivery model that facilitates the integration of care for the elderly who are 65 years of age and over in Grudziądz. Based on obtained qualitative and quantitative data, extensive discussions with the local stakeholders and experts, as well as a review of the available literature on foreign care models for seniors, a model of coordinated care for the elderly in Grudziądz was proposed. The model meets the objectives set by the local stakeholders.

The model also provides the local entities with a platform for cooperation and tools that will enable Grudziądz to plan, coordinate, and monitor the provision of services. It also provides examples of the human, material, and financial resources needed to support the delivery of a service model for citizen 65 and above.

The comprehensive model of coordinated care for persons 65 and over in Grudziądz includes the following components:

1. Establish the Senior Citizens' Office—a unit within City Hall that plans, coordinates, monitors, and supports data gathering, analytical work, and the implementation of the project for the elderly in Grudziądz. The Senior Citizens' Office will prepare projects and initiatives based on the existing structures to manage the needs of the elderly population in Grudziądz (including the education of seniors and their families, prevention programs, and the management of avoidable demand or public expectations); and will oversee the health information exchange (HIE) systems that will support the service providers in a vertically integrated way, connecting the social care and medical care

2. Establish the function of an elderly care coordinator within the primary health care facilities, in cooperation with other facilities organizations and institutions providing local and regional care for the elderly

3. Assess the health, well-being, and independence status of the elderly on a regular basis, in order to determine the scope and type of care/assistance that is needed, and to provide suitable care plans

4. Introduce mechanisms for the transfer of information between the health care and social assistance institutions about the state of health, needs, and the available services for the elderly population. The European Commission will support the implementation of the model through financing concrete care solutions within their EU Structural Funds programs. A number of potential projects (in the form of ready-to-use EU flashcards) have been prepared to potentially support the implementation of the individual stages of the model

The implementation of the project support model includes:

1. Organize training for health care and social assistance personnel, as well as for the families and informal caregivers, in the following areas: available tools for the comprehensive assessment of the state of health and needs of a patient 65 and over, elderly care provision, care plans implementation, caregiver competencies, as well as the use of a database of potential volunteer workers (caregivers) willing to take care of the elderly, and so on

2. Build information technology (IT) tools to enable the creation of care plans for the elderly in Grudziądz, the so-called Care Plans

3. Adjust the current health and social infrastructure in Grudziądz, as well as city transport and communication systems, to the needs and abilities of seniors

4. Build the local IT system for the flow of information on the state of health and needs of patients 65 and over

5. Build the local IT system for the flow of information on the services available to patients 65 years of age and over

6. Creation of an online database of volunteer caregivers for the elderly in Grudziądz

WHY?

Poland is considered one of the fastest aging countries in the European Union. Significant changes in the population structure are currently taking place as a result of vital statistics, migration, and longer life expectancy. Statistics Poland indicates that this can be seen in the changes in the proportion of post-working age population (women aged 60 and over, and men aged 65 and over). In 2000–2016, the size of this population increased by more than 2.1 million, up to 7.8 million, and the share of the population rose from 14.8% to 20.2%. According to the preliminary data, at the close of 2017, the post-working age population was more than 8 million, and its share of the total population rose to nearly 21%. By 2050, the number of the elderly (aged 60 and over), will grow by 4.6 million to reach 13.7 million, a 51.3% increase.

With respect to demographic trends, the Kujawsko-Pomorskie Region is no exception. The main statistical office in Poland points to a further decline in the total number of residents in the region, with an increase in the number of residents of post-working age. The proportion of the population 65 years of age and over in the Kujawsko-Pomorskie Region rose from 9.9% in 1990 (the national average was a little over 10%), to reach 15.3% in 2015 (the national average was 16%). For 2040, the projection is for 26.6% (and 26% on the national level).

In the comparison with the rest of the region, there are fewer basic health services in Grudziądz per patient. However, in Grudziądz patients are using specialist care more often. As in the whole country, the largest care costs in Grudziądz relate to hospitalization, including the treatment of people 65 and over. However, the highest costs per patient 65 and over concern stays in care and treatment centers. Older people, at an increasing rate, are becoming so-called assistance clients, due to their special care needs, both institutionally and at home.

The Grudziądz population has similar issues as the rest of Poland in terms of the needs and the provision of services for the elderly. Despite the large regional differences in the provision of specific care (a diabetologist in one county in Poland can be twenty times more difficult to access than in another county), the lack of coordination between the different health facilities, health and social assistance facilities, NGOs and other institutions providing care for the 65 and over population is a common issue for all. No information flow is in place between even the same type of facilities within the health system. The lack of information on the scope of services available, and the weak nature of the support system for its provision is also a common feature. Health and social assistance personnel, being trained in silos (that focus on the narrow scope of services to be provided) quite often are unable to work jointly as team members; they communicate and manage their patients or clients only on a case-by-case basis, instead of treating them as part of a larger process of care. All the above, could be described as community-based care, which the model for Grudziądz introduces.

Due to the growing demand, as well as their rising unit costs, services for the elderly are becoming an increasing burden on the budget of the health and social system. There is no interface between the health care and social care on a systematic level (although there have been cases where personnel from a health facility and a social assistance facility work together with a specific patient). One reason for this situation could be the lack of clear and common methods of assessing the health and independence of seniors. Another reason could be the lack of information flow between the health and social sectors in real time, even on the local level.

The proposed model addresses: the lack of integration between the health care and social care services; the lack of IT tools for information data exchange; health and social assistance personnel without joint work protocols; and caregivers who are not equipped with the proper knowledge to provide complicated care. The new model also provides opportunities for community and civic engagement to better coordinate and use the various care programs and initiatives to enhance the skills and attitudes of the care personnel.

As a tool, the coordination of care may play a leading role in the planning and launching of proper care for the elderly population. Thanks to the cooperation of various institutions responsible at the local and regional level, the local authorities may have an opportunity to improve the health and quality of elderly care within their area (within the legally supplied national systems).

HOW?

In order to create a care model relevant to the local context, an assessment of the needs of the elderly in Grudziądz was carried out at the beginning of 2019, using quantitative and qualitative methods. The objective of these analyses was to tailor proposed solutions to the needs and aspirations of the Grudziądz community, as well as to provide timely solutions to real problems.

A qualitative analysis was made based on the focus group interviews carried out in Grudziądz. This method of qualitative research consists of interviews in which a group of people were asked about their perceptions, opinions, beliefs, and attitudes toward the health and social services.

Four groups have been subject to this research: the population 65 years of age and above, doctors, nurses, social assistance workers, and caregivers. The survey's questions focused on the needs, barriers, and conditions of the system in which such care is provided. The topics covered by the survey included the care needs of the residents of Grudziądz, as well as the health and social care available within the city.

Based on the interviews, we can conclude that seniors in Grudziądz feel lost in both the health and social care systems. They often feel insufficiently looked after by their care providers. Older people also indicate many difficulties related to obtaining their care benefits, including problems related to transport. The elderly also emphasize their lack of knowledge about their own health and the assistance services that are available to them.

A quantitative analysis of the availability and use of health and social services was carried out using data for the Grudziądz population, obtained from the National Health Fund (NHF) and Social Assistance (SA). The data obtained from the NHF included information for 2018, as well as information from Social Assistance for both 2018 and the previous years. These data showed an increased use of health and social benefits by seniors. In addition, care for the elderly costs much more than care for patients in other age groups. Since 2012, the number of older clients of social assistance rose nearly twofold, and with the overall decline in the number of social assistance clients, they accounted for 13.8% of all social assistance beneficiaries in 2018.

In addition, an assessment of the IT architecture in Grudziądz was carried out, based on direct interviews and publicly available data. The scope of the IT assessment included: a diagnosis of the readiness of the IT systems in selected health and social facilities, as well as that of the

municipality of Grudziądz; a review of the most frequently used software packages at the relevant facilities in Grudziądz; an inventory of the main data flows in the present health and social system; analysis of the current governmental initiatives on the national level related to the data sharing platform; and the IT connectivity of the health and social facilities, with an indication of planned development.

The most important IT limitations identified in Grudziądz include: limited communication and exchange of information between the various entities involved in the future planned coordination of care (including the lack of the interoperability standards HL7 FHIR and IHE PCC/IHE XDW), and the lack of a tool enabling the flow of this information. Therefore, it is necessary to create an IT tool that will facilitate the implementation of coordinated care in Grudziądz.

Moreover, numerous meetings were held with the local stakeholders to discuss possible solutions for the care of the elderly, that helped match the model to the city's real needs. In total, five meetings took place. The first meeting was aimed at familiarizing the local stakeholders with the Catching-up Regions 3 Initiative, and the plan to build a model for coordinated care of the Grudziądz elderly within this initiative. The second meeting was aimed at discussing the broadly understood health and social care needs and problems of the local stakeholders in Grudziądz. The third meeting was aimed at presenting the health and social data obtained and analyzed by the World Bank. During the fourth meeting, training was provided for the potential care coordinators in Grudziądz. This training was conducted by the representatives of the POZ in Siedlce (Mazovian Region), where such care is already being carried out. During the last (fifth) meeting, training in the field of overall geriatric evaluation was offered to health and social care workers in Grudziądz.

All the above activities have made the integration of social and medical care a crucial task in Grudziądz for the implementation of coordinated care for the elderly.

WHAT?

The proposed comprehensive model of coordinated care for people 65 years of age and over in Grudziądz includes four components. The proposed components should be treated as a guide to be adjusted during the implementation phase. Some tools for the model's implementation have been proposed in the form of a short project description (fiche).

COMPONENT A

Senior Citizens' Office—Establishment of a unit within City Hall that deals with the planning, coordinating, supervising, and decision-making of all matters that relate to the care of the elderly in the region

The establishment of the Senior Citizens' Office includes: employment of personnel (at least two full-time workers dedicated to delivering policy for the elderly in Grudziądz), provision of equipment, as well as the determination and assurance of financing for operational costs.

The main tasks of the office:

1. Providing a contact point—information office for the population 65 and over

2. Planning local activities related to seniors' care, based on the regular collection and analysis of data concerning the care needs of the elderly in Grudziądz

3. Developing the EU and regional projects supporting implementation of the model

4. Preparing care programs for the seniors in Grudziądz, securing their implementation in accordance with an earlier established plan and timetable

5. Monitoring of the programs' implementation, in terms of quality and outcomes

6. Improving communication between the institutions, service providers, and supporting communication with the patients

COMPONENT B

Elderly Care Coordinator—Establishment of the function of a coordinator and service provider for the care of the elderly within the primary health care facilities, in cooperation with the other facilities providing local and regional care for seniors

The institution providing the elderly care coordinator should have sufficient human and financial capabilities to properly supervise the process of diagnosing, managing, and monitoring the patients' health and illnesses, as well as their integration into the coordinated care program. The elderly care coordinator should work closely with the regional authorities, that have a broader view of the local coordination projects and their funding possibilities, particularly, funding from international sources.

It is possible to establish the following two types of coordinators:

Option 1. The coordinator is established within the primary health care units (PHC). Such a coordinator may be an employee of a health care system who is already working in the PHC facility (for example, a nurse or public health graduate).

Option 2. The coordinator is established as part of the local action group (LAG), which are often non-profit organizations involved in local activities for specific interest groups, in this case, the elderly and other dependent people.

Although he or she needs to work closely with the local authorities and the representatives of the health and social care, the position of coordinator is an independent entity. His/ her activities could be financed mainly from the project's resources, the local community, or the National Health Fund. The number of coordinators depends on the size of the population covered. A minimum of one coordinator should be responsible for a population of 2,000 patients aged 65 and over.

The coordinator's tasks include:

1. Establishment of individual care plans for the selected group of patients, based on the health and well-being assessment, together with the other health professionals

2. Agreement on the care plan with the patients' families and teams involved in their care plans' implementation (including those beyond the health facility)

3. Cooperation with the patients and their families (caregivers), in terms of access to the type of health and social care available in the city's organizational support system

4. Cooperation with the Senior Citizens' Office, as well as with the health and social care facilities (including care and treatment institutions, nursing homes, non-governmental organizations, and others) regarding the type of, and scope of access to, the health and social care available to the elderly patients in the city

COMPONENT C

Assessment of Health—Assessment of the state of health, well-being and independence/dependence of the elderly for the purpose of establishing the degree and type of necessary care and assistance; regular assessments are also needed to determine the scope and type of necessary care and assistance

An assessment of the patients' well-being is not limited to the identification of the diseases they are suffering from, or the symptoms that lower the quality of their daily lives. Other elements of key significance are the assessment of bodily functions, mental well-being, and social relations. The assessment of patients' bodily functions is crucial in an intervention to support patients whose daily lives have been hampered due to a loss of individual functions.

The most advanced and comprehensive way to regularly assess the health and well-being of seniors is the Comprehensive Geriatric Assessment (CGA). This tool is so extensive that it is considered to be an interdisciplinary process of assessing the state of the physical and mental health, behavioral activities (including intellectual potential, functioning in a social environment), as well as defining the social and health needs of the elderly.

CGA will be carried out with the support of a pre-established elderly care coordinator in cooperation with a doctor, nurse, physiotherapist, and social worker. It should be carried out when the seniors enter the coordinated care project, and then repeated periodically, depending on the patients' condition.

COMPONENT D

Introduction of information transfer mechanisms between the health care and social assistance institutions about the state of health, needs, and available services for elderly people

There is a need to create a set of tools that will help the implementation of coordinated care in Grudziądz. The level of advancement of the tools may vary—from IT or management tools, down to newly created tools for systems enforcing rules and control, gathering data, and monitoring and evaluating actions. The following actions will be necessary:

1. Improvement of the knowledge and basic efficiency of the service providers; hiring additional workers for care and social assistance, ensuring new and modernized medical equipment to support the performance of care (excluding investments in infrastructure and advanced equipment)

2. Brief refresher courses to train medical personnel in topics related to diagnostics and the implementation of the newly introduced expanded actions (for example, CGA, as well as practical on-the-job training, such as, in communication or health education); particular attention should be paid to issues that concern the transfer from the current care model set on corrective medicine to the preventive care and educational model

3. Substantive support and training of personnel in topics related to the implementation of coordinated care (for example, managing contracts, monitoring and reporting requirements)

4. Modernization and expansion of the system of information on health and training of personnel in the use of software, especially IT systems compatible with the systems used in social assistance (such as Emp@tia)

5. Analytical IT tools for anticipating risk alone (such as an undesirable event like hospitalization) will have no impact on the health outcomes in the population. For real impact, additional interventions and behavioral changes, resulting from risk assessment, are needed. The population may be divided into different groups based on the following:

- Risk stratification
- Age and state of health
- Social and demographic circumstances
- Behavior

The proposed IT solution should have a modular architecture, based on open standards, that will allow the system to expand in the future to include: new user groups, new functionalities (that is, new use cases), and enable the system to integrate with other already existing IT systems in Grudziądz.

A two-stage implementation of the new IT system is recommended: first at the local level, then at the regional level, to assure broader connectivity.

Proposed steps to be taken:

1. To introduce a local IT system (in Grudziądz) that will connect social and health data from the already existing systems, or allow the users to directly enter the data themselves

2. To determine the basic interoperability standards supporting the coordination of care in cooperation with the national and regional entities; in this regard, the use of HL7 FHIR and IHE PCC / IHE XDW standards is recommended

3. To implement an IT system that enables the exchange of the information (data) necessary for the coordination of care; in this respect, a coordinated care system should be included in the regional eHealth platform being built in the Kuyavian-Pomeranian Region

4. To ensure the integration of IT systems in the entities involved in coordinating care with the data exchange system

Creation of the above IT system will facilitate the functioning of coordinated care through the proper management of acquired data. The City Hall in Grudziądz, or a similar institution, will be the administrator of the system at the city level for the population. However, individual patients' and clients' records will remain at the service provider level. The above-mentioned system should include the possibility of creating individual care plans for senior patients. The process of creating an IT system for the electronic care plans has been proposed by the WB team as a ready-to-use EU flash card.

LESSONS LEARNED

We have learned that it is possible to distinguish two types of models for the integrated care of the elderly—the state/provincial model and the community-based model. However, only the latter model seems adequate for the city of Grudziądz. This community-based model should be implemented locally, based on cooperation between the different providers of care, in which an active role is played by the coordination of health care and social care. The other model, recognized internationally, is the state/provincial model, implemented at the national or regional level, with a single administrative body and a common budget that ensures both health and social care.

The factors that distinguish local models from those at the national or regional level are[11]: a) focusing, above all, on the most important health and care needs of the elderly; b) cooperation between the different providers who jointly work for the continuity of care ; c) multidisciplinary care teams, which always include geriatricians; d) an active role for PHC doctors in the general management of the care of a patient; e) inter-organizational coordination of the home and community services, including access to institutional care; f) financing various providers from the already existing budgets; g) an integrated system of information and classification for home care.

As opposed to the above, the national models are more difficult to implement, since they usually call for changes in the existing legislation. Moreover, the implementation of such a model is a challenge for the organizations providing services, due to their joint financing.

Secondly, we have learned that in order to build a system of coordinated care, and the interpersonal relations necessary for its efficient operation—time, social capital, and trust—are needed. To achieve final success, it is important to have effective communication and good relations between the people who use the services, the health and social care staff, and the managers who organize the provision of services.

We also acknowledged that there is no universal methodology for implementing coordinated care. However, in many international experiences with implementing coordinated care, one of the main objectives is to promote such care outside of the hospitals, in order to prevent institutionalization.

We have also learned that despite the willingness of the local stakeholders to take part in the implementation of the model, and substantive support in the construction of the model itself, the implementation may be hindered due to the city's financial problems associated with the indebtedness of the local hospital. Currently, most of the city's financial resources are transferred to repay the hospital's debt. One of the solutions to this problem is to finance the project of coordinated care from EU funds. We expect that the hospital will undergo a restructuring process during the coming years. After this occurs, the decreasing debt of the hospital will hopefully release the City Hall budget and enable sustainable financing of the coordinated care model.

NOTES

1. http://www.worldbank.org/en/country/poland/publication/catching-up-regions
2. Most of the countries that have overcome the middle-income trap are city states (for example, Singapore, Hong Kong, and Taiwan) or relatively small countries (such as, Israel, Lithuania, Latvia, Estonia, and Slovenia).
3. World Bank. 2012. Golden Growth: Restoring the lustre of the European development model.
4. Under the CAPP, about 47% of applications from existing and new SFBs are for replacement of heat source alone and not for thermal retrofitting.
5. A municipal studium expresses the spatial policy of a municipality and is similar to a master plan. It provides general conditions and directions for spatial planning. A municipality is mandated to prepare a studium, however, studiums do not constitute local law.
6. City of Włocławek, the municipality of Brześć Kujawski, municipality of Choceń, municipality of Fabianki, municipality of Kowal, municipality of Lubanie, municipality of Włocławek, and Kowal City.
7. Local spatial plans are like local development plans or detailed plans, typically prepared for a small area or specific parcels. They constitute local law. The coverage of local spatial plans is low; some 70% of the country's territory is not covered with spatial plans. The lack of local spatial plans is a critical challenge, in itself, as the municipalities then lack the required instrument to provide objective and consistent planning decisions, or to enable effective development control and enforcement. This further impacts the municipality's ability to attract and facilitate private sector investments.
8. In Polish, this is "warunki zabudowy".
9. Correa, Paulo. 2014. Public Expenditure Reviews in Science, Technology, and Innovation: A Guidance Note. World Bank Group, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/21064 License: CC BY 3.0 IGO.
10. The analysis is based on the results of 49 tenders concerning the finance distribution for the implementation of lending instruments, carried out by the Bank Gospodarstwa Krajowego (BGK), the national development bank, from the beginning of 2017 to the end of March 2019, including 116 parts of contracts where a financial intermediary was selected.
11. Béland, F., & Hollander, M. J. (2011). Integrated models of care delivery for the frail elderly: international perspectives. Gaceta Sanitaria, 25, 138-146