InnoHEIs

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ACTION PLAN SILESIA

PART I – GENERAL INFORMATION

PROJECT

Improving Research and Innovation Infrastructure Performance: from Fragmented to Integrated and Sustainable Cooperation (Inno-HEIs)

PARTNER ORGANISATION

Marshal's Office of the Silesian Voivodeship

COUNTRY/ NUTS2 REGION

Poland/Silesia

CONTACT PERSON

Monika Ptak, email: monika.ptak@slaskie.pl, tel. +48 (32) 77 99 409

PART II – POLICY CONTEXT

NAME OF THE POLICY INSTRUMENT(S) ADDRESSED:

Regional Innovation Strategy of the Silesian Voivodeship for 2030

TYPE OF POLICY INSTRUMENT

Investment for Growth and Jobs programme	☐
European Territorial Cooperation programme	☐
Other regional development policy instrument	☑

FURTHER DETAILS ON THE POLICY CONTEXT

REGIONAL INNOVATION STRATEGY OF THE SILESIA VOIVODESHIP 2030+

The Silesia Voivodeship does not have a common research and innovation infrastructure management strategy established at the regional level. Many entities operating in the region set their own rules in this area, following different criteria. Therefore, the new *Regional Innovation Strategy of the Silesia Voivodeship 2030+* (RIS WSL 2030+), developed in 2021, takes up the challenge of developing solutions to increase the capacities in this area, including in particular the creation of a system of information about research infrastructure and rules of access to its resources for stakeholders, in particular entrepreneurs. The RIS WSL 2030+ responds to this challenge with the specific objective **C1. Increasing the capacity of regional innovation ecosystem actors to generate and implement innovations and modern technological solutions** is the objective dedicated to the implementation of this challenge, in particular **Measure D.1.3 Strengthening research infrastructure for regional science-business partnership**.

The core of the action plan in the context of the RIS WSL 2030+ is the strengthening of universities as well as research and development units, which in the period 2014-2020 underwent significant substantive and organizational transformation processes. Consolidation activities within the Łukasiewicz Research Network and specific support addressed to selected research universities contributed to structuring specializations and strengthening competencies focusing on the competitive advantages of individual entities in the research and development sector. Also, business environment institutions, including technology parks, incubators and clusters, strengthened their role as integrators of innovative services based on R&D infrastructure, which contributed to the intensification of cooperation with enterprises and identification of their development needs.

Thus, areas requiring further support for the development of research infrastructure have been highlighted. The action undertaken in the RIS WSL 2030+ is to be launched to improve the offer of cooperation of business environment institutions, universities and research and development units with enterprises in the region and beyond. In addition, the modernisation of infrastructure and related activities aimed at increasing competencies in the commercialisation of research results and cooperation with enterprises will help entities from the research and development sector to strengthen their activity within international consortia and research and development projects.

The measure dedicated to regional research and innovation infrastructure described in the RIS WSL 2030+ results in objectives for the new Operational Programme European Funds for Silesia 2021-2027 (currently at the agreement stage):

Specific objective: RSO1.1 Developing and strengthening research and innovation potential and the use of advanced technologies

Activities undertaken for this objective will concern support for:

- projects contributing **to increasing the innovativeness of the region** by improving the quality of research infrastructure in research organizations. Support will include the construction of new and modernization of existing/adapted research infrastructure along with the purchase and installation of laboratory apparatus and equipment in research organizations. Support will be provided for investments necessary to implement research agendas covering Regional Intelligent Specialization and research areas identified in the Entrepreneurial Discovery Process conducted in the Silesia Voivodeship.
- the **implementation of research and development work of an enterprise**, in particular in enterprises classified as SMEs, but also in large enterprises, including mid-caps, together with the possibility of commercialization through implementation, as well as the creation or development of research and development facilities in enterprises
- **innovation supporting services provided for entrepreneurs** by research organizations, Business Environment Institutions or Innovation Centers. The provided services may concern, among others, the support in the scope of conducting research and development works, implementing innovations and carrying out the process of digital transformation.
- process of **enhancing the competencies of employees** in research organizations and entrepreneurs involved in the management of research and innovation infrastructure.

The implementation of activities related to building cooperation networks for innovative development of the region is supported in Silesia by the Network of Regional Specialised Observatories (SO RIS). It aims to integrate actors of innovation ecosystems around regional areas of specialisation. SO RIS focuses on regional

scientific and technological potential by strengthening regional specialisation and adaptive capacity; building a regional market for research services; Building a link between the R&D sector, enterprises, NGOs and regional authorities; developing knowledge and competencies. SO RIS is a support instrument for the implementation of the Technology Development Programme. It is a key element of the Silesian innovation ecosystem, consistently developed since 2002 by the Marshal's Office using a bottom-up approach, responding to the real needs of the region.

PART III – ACTION

A1: DEVELOPING ASSUMPTIONS FOR A REGIONAL MAP OF KEY RESEARCH INFRASTRUCTURES

BACKGROUND

Research infrastructure is one of the key factors determining the competitiveness and innovativeness of regions. Improving the innovativeness of a region's economy and performing world-class research is not possible without access to properly equipped laboratories, analytical tools, sensors or IT and telecommunications infrastructure for data transmission networks, etc. An important element of research infrastructures is also the existence of organisational solutions in the region that guarantee the existence of cooperation and collaboration networks linking research infrastructures on a regional, national and international scale.

These organisations include technology parks, innovation centres, technology transfer centres, incubators, etc. The availability and excellence of infrastructure are important not only for conducting high-quality research and implementations, but also essential for educating future scientific and scientific-technical staff at an appropriately high level. There is no single integrated strategy for managing research infrastructure in the Silesia Voivodeship; issues of access and use of infrastructure are regulated separately by each organisation. There is also no detailed information on the number and condition of research infrastructures or their location. However, acknowledging the importance of research infrastructure for the innovative development of the region, the new **Regional Innovation Strategy of the Silesia Voivodeship 2030**+ includes activities aimed at ensuring transparency of actions in this respect.

Major strategic research infrastructures bring together the best researchers and innovative enterprises, which enables economic development and growth of social capital in a particular scientific area and the entire region. At the national level, there is a document identifying key research infrastructures - the *Polish Map of Research Infrastructure*, which is constantly updated. It indicates that in Poland (status for 2020) there are 70 Research Infrastructures in 6 thematic areas: technical sciences and energy (14), earth and environmental sciences (5), biological-medical and agricultural sciences (16), physical and engineering sciences (23), social sciences and humanities

(6), digital research infrastructures (6). In the Silesia Voivodeship, there are 11 Research Infrastructures from all the ones mentioned in the Polish Map of Research Infrastructure. The leader in the possession of these infrastructures is the University of Silesia, which is a partner in 7 of them. Other regional actors which have the mentioned infrastructure are the Central Mining Institute (2), Silesian University of Technology (1) and the Silesian Centre for Interdisciplinary Education and Research (1).

Research infrastructure is also an important element in building strong and durable economic ties and a necessary condition for undertaking innovative solutions and research in key technological areas for the region. Shortages in this respect, i.e. limited access to modern scientific and research equipment make it impossible for centres with specialised staff to implement projects of international quality and to achieve scientific and research specialisation and harm the process of innovation generation and implementation.

In 2020, the largest group of entities owning R&D equipment were units in the Mazowieckie Voivodship - 356 units. The gross value of the equipment at the end of 2020 in this voivodship amounted to PLN 6.6 billion, while its consumption rate was 82.6%. In the same period in the Silesian Voivodship, the number of entities with R&D equipment was 195 (2nd position in the country), and the gross value of the equipment was PLN 1.5 billion. The usage rate of infrastructure was 79.9%. The value of R&D equipment in the Silesian Voivodship concerning the country is high (6th place in the country). The highest gross value of apparatus in the voivodship is located in R&D centres in Gliwice and Katowice subregions. Despite constant development, a disadvantageous phenomenon is observed, connected with the growing degree of usage and decreasing replacement outlays. The usage of infrastructure expressed in the costs of its depreciation is above the national average and has an upward trend. The data indicate that research infrastructure in the region is characterised by a high degree of wear and tear. More importantly, the location of specific infrastructures and conditions of access to them is not fully known in the region.

The research carried out under the Inno-HEIs project, entitled "Improving the efficiency of research and innovation infrastructure in the Silesian Voivodeship. From fragmented to integrated and sustainable cooperation" shows that the R&D infrastructure operating in the Silesian Voivodeship covers all technological specialisations of the Silesian Voivodeship as specified in the Technology Development Programme for the Silesian Voivodeship 2019-2030. Its highest concentration is in technological areas: Technologies for Environmental Protection (23%), Materials Production and Processing (15%), Mechanical and Automotive Industry (14%), Technologies for Medicine (12%) and Technologies for Energy (12%). The specific character of the research infrastructure in the Silesia Voivodeship reflects the changes that have taken place in the region and correspond to the current direction of development - from heavy industry to a green economy based on modern technologies.

Mapping the research infrastructure in terms of regional smart specialisations has shown that in the Silesia Voivodeship the concentration of physical and human resources is in the areas of **Green Economy** and **Emerging Industries** (33% and 30% respectively), while in the areas of **Medicine** and **Energy** it is at the level of 16%. R&D infrastructure is most often located in research units and its development is mainly financed from public funds. The identification of infrastructure potential in the study revealed that in the Voivodship a significant majority of infrastructure is located in research centres (72% on average), which is also confirmed by statistical data. The remaining part is concentrated in technology centres (13% on average) and other innovation centres (8% on average). It was also found that the specific nature of the activities carried out in accelerators, transfer centres, etc., means that they have little or no research and innovation infrastructure.

The institutions where the R&D infrastructure is concentrated in the Silesian Voivodeship are the Silesian University of Technology, Częstochowa University of Technology, University of Silesia, Silesian Medical University, University of Economics, Central Mining Institute, Centre for Polymer and Carbon Materials, Institute for Chemical Coal Processing, Institute for Ecology of Industrial Areas, Institute for Welding, Centre of Excellence Institute for Mining Technology KOMAG, Institute for Medical Technology and Apparatus ITAM, Institute of Refractory Materials, Oncology Centre, Burn Treatment Centre, Silesian Centre for Heart Diseases, Foundation of Cardiac Surgery, Network of BioMedTech-Silesia Centres of Excellence, Centre of Excellence for Research and Teaching of Molecular Matrix Biology and Nanotechnology, Centre of Excellence of New Technologies for Treatment of Heart Diseases, Centre of Excellence of the Research Department of the Oncology Centre in Gliwice. These entities use the infrastructure for their research, for the implementation of projects, for offering specialised research services and for prototyping and testing technologies or products.

External users of R&D infrastructure are usually the business sector (91%) and scientific units: universities and research institutes (86%). The usage rate of R&D infrastructure varies, however, there is an incomplete booking of equipment. Full occupancy of infrastructure occurs in nearly 9% of the surveyed respondents; this mainly concerns infrastructure located in enterprises which have made targeted acquisitions and use it mainly for their research. It has been found that often the respondents do not have full information on existing R&D infrastructure in the region and when looking for dedicated services they turn to offers from outside the Silesia Voivodship. This situation concerns both entrepreneurs and representatives of science.

A separate issue is the impact of progressive digitalization and the increasing use of digital technologies on innovation and the level of socio-economic development. Meeting the challenges of the digital economy involves the need to adapt research and

innovation infrastructure to its standards - to provide virtual solutions. Despite the existing deficiencies related to the digital transformation of the economy in the Silesia Voivodeship, such as the lack of competence in operating some digital solutions (e.g.: cloud computing and result processing) or high costs of modern digital equipment, regional institutions in the Silesia Voivodeship are building research potential by taking up thematic issues concerning artificial intelligence as well as the use of Internet tools, resources, architecture and information systems. In a ranking of voivodships in terms of the number of centres and number of staff, the Silesia Voivodship is second in the country in this respect after the Mazovia Voivodship. In the region, 12 centres develop issues of artificial intelligence in the field of neural networks, data science, image processing, evolutionary algorithms and fuzzy and approximate sets, expert systems, robotics and natural language processing.

Significant barriers identified concerning the development of infrastructure, but above all more effective use of it for economic needs, are organizational and legal, technical, promotional, competence and also financial issues. The most important include insufficient investment, inefficient management, rapid wear and tear, incomplete use, staff and qualifications, and insufficient digital and data integration. Complementing this, there are also mentality, skills and competencies, whose deficiencies have been indicated in the final report Barriers and problems inefficient project implementation in Measure 4.2 POIR and Panda 2Module III, on behalf of NCBiR. This results in incomplete use of the potential of the infrastructure of entities that have it at their disposal and the lack of willingness to cooperate. This, at the same time, generates a mismatch between research infrastructure and the needs and implementation of the so-called "facade" investments. Other barriers affecting the degree of utilisation of infrastructure in science-business relations include mainly low price competitiveness of research, scientific rather than an application-based approach of scientists to conducted research, lack of long-term sales strategy of scientific entities and lack of activities combining the needs of businesses with the capabilities of scientific units.

Currently, the region needs to expand and internally integrate its innovation potential, which means developing new types of infrastructure and services and increasing the scale of interaction in the innovation ecosystem of the Silesia Voivodeship. The infrastructure of the innovation ecosystem provides a basis for scientific, research and development and implementation activities, hence its reference at the global level, and provides a basis for creating global chains of knowledge exchange.

An important role in this regard is the regular monitoring and forecasting of processes related to the use of regional research infrastructure.

In the experts' opinion, e.g. presented at the thematic workshop on 28.07.2021 and IDI surveys conducted for the evaluation study titled: „ *Improving the efficiency of research and innovation infrastructure in the Silesia Voivodeship. From fragmented to integrated*

and balanced cooperation" it is important that organizational, cultural and process changes, such as **strengthening the mechanisms of cooperation between people, institutions and sectors, streamlining the functioning of public institutions and meeting the principles of sustainable development and making more dynamic the processes associated with the development and use of existing infrastructure resources.** In addition, to support decision-making processes related to the financing of tasks, it is important in the context of strategic regional research infrastructure to **assess the usage rate of research and innovation infrastructure**.

A prerequisite is the expansion and improvement of research infrastructure. The infrastructure requires continuous investment to maintain its uniqueness and ensure its ability to deliver research and commercial services at a competitive level and in line with market needs. One of the most important conclusions from the study is that in the context of development challenges and opportunities for creating policies related to research and innovation infrastructure, it is important **to take coordinated action, which should be based on identified trends and needs that shape the development of regional research and innovation policies.**

To make fuller use of the potential of regional research infrastructure, it is recommended to conduct a complete review and ongoing updating of the ecosystem of R&D infrastructure in the Silesia Voivodeship, to support the process of improving regional infrastructure for its strengthening, more efficient use and support for the development of smart specialization and technological areas of advantage, including in the international arena, creation of networks of relations and promotion for its wider use, building human potential in the field of management and use of R&D infrastructure and its virtualization to network and internationalize it on the example of functioning infrastructures of national status.

To increase the utilization of existing R&D infrastructure resources, it will be important to implement solutions that address the identified performance gaps. To minimize the barriers, an international project Inno-HEIs was initiated in the region to improve policies related to the support of research and development and to improve the efficiency of R&D infrastructure and services provided. Increasing the contribution of scientific institutions and their research infrastructure to regional innovation performance fosters improved business and industry engagement and collaboration among members of the quadruple helix for the benefit of the regional economy. The result of the work is this Action Plan, which presents a blueprint for improving the use of regional research infrastructures

SOURCE OF INSPIRATION

The following good practices were used in the activity:

Large research infrastructure services for SMEs (Science Link & Baltic TRAM projects), which describe more efficient management of regional research infrastructure take into account the experience and knowledge of, among others, the Deutsches Elektronen-Synchrotron (DESY) projects (Science Link & Baltic TRAM projects). Science Link is a network connecting leading research centres with a specific specialization. The project aims to support and encourage innovation and entrepreneurship in the Baltic Sea Region. The network includes not only research facilities but also scientific institutes, universities and regional organizations, which act as service and promotional units. Particularly important lessons learned is the GP model, which covers two key issues of the knowledge economy: the interaction between universities and industry and access to advanced research services for SMEs and other regions. Research infrastructure services in the GP model are possible with the following key success factors,

1. Careful validation of concepts and approaches,
2. proactively combining research services with development activities,
3. comprehensive service agreements between parties with references to data and confidentiality issues,
4. promotion of open data for reuse (for research, pedagogical, and business purposes).

The results of the initiative are:

- Better, safer and more sustainable products (80 cases).
- A small model to motivate SMEs to use research services and follow up.
- Establishment of a network of Industrial Research Centers (IRC) units.
- Enhanced cooperation between knowledge, economic and development actors in regions, countries and the Baltic Sea Region as a whole.
- Businesses are served according to the demand and supply of research services.

Applied Science Research Infrastructure – INCESA. For the integration of research infrastructures and the search for complementary links within the regional service, the experience of INCESA consolidating the research infrastructure of applied sciences - solution of the University of Craiova was taken into consideration to support the regional evolution of R&D infrastructures and activities. INCESA is a Technology Transfer Center with evolving research laboratories in the fields of mechanical engineering, electrical engineering, biotechnology and bio-engineering and computer science including 4 research centres with 12 laboratories of innovative technologies and processes for SMEs, operating in six areas of strategic innovation activities dedicated to providing services to SMEs seeking innovation in the production process or the provision of services in the transport sector. An important aspect is also the

experience in the development of networks from the collaborative to the associative level through the creation of legal entities bringing together leading actors from each field to jointly undertake R&D&I activities and projects.

Minding the gaps – Mid Sweden University R&D management contracts with municipalities. Mid Sweden University (MIUN) developed a contractual model of collaboration for innovative development based on a stakeholder platform. This transformed Middle Norrland's atomized and gap-filled innovation system into a coordinated relationship management system that gradually improved the functioning of the local innovation system. To ensure good implementation results, regional authorities were involved in the activity and coordinated regional R&D initiatives. The use of this solution indicates that the introduction of an integrator in the Network has allowed to meet the needs of stakeholders and streamline the flow of information contributing to the generation of innovative R&D projects.

Collaborations between private companies and academic laboratories. The experience described by a good practice described by CNRS Institute - Centre-Val de Loire Delegation was also used. It also refers to the added value generated by the coordination of activities between actors of the research and economic sectors. To promote industrial change through the implementation of a multi-material approach, cooperation between private companies and academic laboratories has been improved through two different initiatives that are highly complementary. The implementation of this action was in line with the horizontal action RIS3 on industrial, agricultural and ecological change, which aims to lead the economic transformation towards innovation, decarbonisation and digitalisation and to acquire the necessary skills to meet future challenges (employment, added value, energy saving, closed loop economy, etc.).

The good practices described above are particularly important in terms of building a useful tool for better use of research infrastructure to support innovation in the region and transfer of knowledge and experience related to the use of research infrastructures.

As part of the Inno-HEIs project, a study entitled "*Improving the performance of research and innovation infrastructure in the Silesia region. From fragmented to integrated and sustainable cooperation*". The study aimed to diagnose the state of the regional innovation ecosystem in the area of research and innovation infrastructure and to identify the main barriers to development and challenges in this area along with recommendations for further action. The analysis carried out in the area of R&D infrastructure in the Silesia Voivodeship has made it possible to identify development challenges in this respect and has initiated a discussion on the development vision for the Silesia Voivodeship in the perspective of 2020+ in the context of supporting technological advantages of the region. The study included an analysis of the region's key needs in the area of research and innovation infrastructure, as well as an

assessment of the Silesia Voivodeship's potential in the area of research and innovation infrastructure. The results of the study formed the basis for developing actions and provisions in the Action Plan. The analyses covered the period from 2013 to 2020 with a 2020+ perspective.

As part of the preparatory work, the project team participated in bilateral meetings to exchange good practices within Inno-HEIs, which was one of the bases for the orientation of the activities within the Action Plan.

- The Inno-HEIs project conducted workshops with regional stakeholders:

- Model solutions for access and management of research infrastructures.
- Key research infrastructures European and regional dimensions.
- Challenges and expectations concerning cooperation in the field of technologies for medicine.
- Improvement of regional policy of Silesia Voivodeship in the field of research and innovation, ensuring effective and efficient use of research infrastructure.

The workshop was attended by representatives of leading institutions in the region that own research and development equipment, SORIS experts with knowledge and competencies in the field of entrepreneurship and innovation development in the region. During the workshop, discussions were held on the possibilities of creating policies related to research units, universities and regional research infrastructure in the Silesia Voivodeship. An analysis of the current state and identification of problems and challenges in accessing and managing research and innovation infrastructure in the Silesia Voivodeship was carried out. The workshop provided a good opportunity to learn about good practices in the region. The causes of low innovativeness level from the point of view of R&D units and companies were identified. According to the recommendations, it is important to create online tools for companies which will make it possible to directly reach a specific offer of R&D units/universities or a so-called technology broker in a given specialisation. Strong emphasis has been placed on the practical significance of the Network of Regional Specialized Observatories (SORIS) and the focus on cooperation and use of the synergy effect within the Network.

DESCRIPTION OF THE ACTION

The exchange of experiences within the Inno-HEIs project allowed for the development of actions addressed to the Regional Innovation Strategy of the Silesia Voivodeship for 2030. The objective of the action is **to develop and introduce solutions enabling more effective management of research and innovation infrastructure in the Silesia Voivodeship.** The action consists in developing a regional map of key research infrastructure. This activity is to allow the development of the region's innovation policy in the area of regional research infrastructure management and will be carried out by the Marshal's Office in cooperation with regional actors of the

innovation ecosystem that have research infrastructure at their disposal and/or have knowledge on the functioning infrastructure (Network of Specialised Observatories). **This action will consist in developing and testing the tool functionality in the form of a regional map of research infrastructure and developing assumptions for a digital map of research infrastructures in the Silesia Voivodeship project.**

The action will result in the preparation for the implementation of a project ensuring visibility of regional research infrastructures and services they offer for both entrepreneurs and the scientific sector. Action includes tasks related to the preparation of a tool identifying the potential of research infrastructures in the region. First of all, for the tool, it is necessary to involve stakeholders in the process of identification and positioning of research infrastructures in the region and to identify the information needs of the users of the regional research infrastructure database. It is also important to develop effective methods for cyclic updating of the database and improving it according to the reported needs of its users.

The action should contribute to increasing the use of regional research infrastructure, as well as to developing new models of cooperation in making it more accessible. The measure will also result in raising awareness of the research potential of the Voivodeship and increasing its networking level, including in international consortia. The action is necessary to launch support tools for building a modern research infrastructure characterized by greater open access.

The activity includes the implementation of the steps outlined in the table below.

No	Step	Time limit
1	Initiate the implementation of the work in the SORIS forum, meeting the partners and presenting the schedule	08.2022
2	Develop proposed rules and criteria for qualifying research infrastructures as strategic	09.2022 – 03.2023
3	Meetings with SORIS project partners (regional stakeholders) - verification of eligibility criteria	Quarterly
4	Testing the developed criteria for selected research infrastructures	02.2023 – 06.2023
5	Prepare a final report on the activities carried out	07.2023
6	Meeting with representatives of regional research infrastructures presenting the results of the action	07.2023

7	Preparation of a project to digitize the map of key regional research infrastructures	03.2023 – 07.2023

The results of the action will be used to provide input for medium and long-term policy changes. The experience of the action will be used, inter alia, in the implementation and follow-up of projects in the new financial perspective. It will be an important experience in the context of programming support measures for both ERDF (European Regional Development Fund) and ESF+ (European Social Fund).

PLAYERS INVOLVED

The action was developed in consultation with the following regional stakeholders:

- Marshal's Office of the Silesian Voivodeship (programming, monitoring and implementing institution of RIS);
- Network of Regional Specialized Observatories (SO RIS), including its constituent institutions (an advisory body for business development and opportunities for implementation of new technologies in regional technological areas, with knowledge of research infrastructures in the region):
  - Central Mining Institute
  - Science and Technology Park TECHNOPARK GLIWICE Sp. z o.o.
  - Upper Silesian Accelerator of Entrepreneurship and Development
  - Sp. z o.o.
  - Science and Technology Park "Euro-Centrum" Sp. z o.o.
  - Silesian University of Technology
  - Silesian Science and Technology Centre of Aerospace Industry Sp. z o.o.
  - The consortium consists of:
    - University of Silesia in Katowice
    - SPIN-US Sp. z o.o.
    - Foundation for Support of Nanosciences and Nanotechnologies - NANONET
    - Łukasiewicz Research Network -Institute of Non-Ferrous Metals
    - Center of Polymer and Carbon Materials, Polish Academy of Sciences.
- Centres with research infrastructure and participating in cooperation networks for research infrastructure development (entities engaged in scientific research, developing research infrastructure, actively participating in the development of infrastructure mapping),
- interested entrepreneurs.

During the meetings with regional stakeholders during the implementation of the Inno-HEIs project (Phase I), the needs of the project partners, proposals for new approaches and implementation opportunities for policy improvement activities in the area of integration and harmonization of regional research infrastructures were discussed. In this context, an action was defined and approved.

IMPROVING POLICY INSTRUMENTS

The action is in line with the assumptions of regional policy concerning the development and strengthening of research and innovation potential and the use of advanced technologies. The implementation of the planned action will allow for the implementation of strategic objective **A. The Silesian Voivodeship as a region of responsible economic transformation** foreseen in the *Development Strategy of the Silesian Voivodeship "Silesia 2030"* in the context of supporting an innovative economy. The action is also in line with the current *Regional Innovation Strategy of the Silesia Voivodeship 2030* and its objectives to strengthen the research infrastructure for the regional partnership between science and business.

The action should lead to more extensive use of existing R&D infrastructure resources and it will be important to put in place solutions to address identified performance gaps. To minimize the barriers, an international project InnoHEIs was initiated in the region to improve policies related to the support of research and development and to improve the efficiency of R&D infrastructure and services provided. Increasing the contribution of scientific institutions and their research infrastructure to regional innovation performance fosters improved business and industry engagement and collaboration among members of the quadruple helix for the benefit of the regional economy. The result of the work is this Action Plan, which presents a blueprint for improving the use of regional research infrastructures

The action described above will have an impact on the programming of the future perspective and tools for financing projects in the context of the RSO1.1 objective of Developing and strengthening research and innovation capacities and the use of advanced technologies. It will make it possible to coordinate efforts to achieve synergies in the activities of the regional Network of Specialised Observatories.

RISK ASSESSMENT

The main risks identified during the Action Plan development stage are presented below in the table, along with their assessment and mitigation measures.

Risk factor	Probability	Mitigation Plan
Lack of involvement in the process of developing criteria for qualifying research infrastructures	Medium	Involve SORIS partners in the criteria development process who are jointly pursuing an innovative regional development venture.

Delays in the process of developing criteria and testing their fulfilment by research infrastructures	Low	Continuous monitoring of the implementation of activities and intensification of meetings of partners who represent a wide group of stakeholders and ensure ongoing consultation on the directions of innovative development
No idea to develop a digital version of the infrastructure map	Medium	SORIS representatives come from a variety of groups, including those related to ICT and with experience in developing visualization tools

COSTS (IF RELEVANT)

The Action will be implemented within the project "Network of Regional Specialized Observatories in the Entrepreneurial Discovery Process in the Silesian Voivodeship (SO RIS in PPO II)", which is co-financed by the European Regional Development Fund as part of the Regional Operational Programme of the Silesian Voivodeship for 2014-2020 under Priority Axis I Modern Economy, Measure 1.4. Support for the innovation ecosystem, Sub-measure 1.4.1. Management and implementation of the regional innovation ecosystem. This project is implemented from July 2019 to July 2023.

TIME FRAME

August 2022 - July 2023.

However, it is expected that full implementation of this activity will take longer than the project period and will cover the 2021-2027 financial perspective.