



**Regional Innovation Strategy
of the Moravian-Silesian Region
2021–2027**

Update 07/2024



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List of abbreviations

AI	Artificial intelligence
CEETe	Centre for Energy and Environmental Technologies
CRM	Customer Relationship Management
EBN	European Business Network
EDIH	European Digital Innovation Hub
EDP	Entrepreneurial Discovery Process
IT4I	IT4Innovations
SMR	South Moravian Region
LERCO	Life & Environment Research Centre Ostrava
MDR	Medical Device Regulation
MSIC	Moravian-Silesian Innovation Centre
MSR	Moravian-Silesian Region
SMEs	Small and medium-sized enterprises
MTA	Moravian-Silesian Technological Academy
OEC	Ostrava Expat Centre
UO	University of Ostrava
WG	Working Group
RIS	Regional Innovation Strategy
SCO	Statutory City of Ostrava
DS MSR	Development Strategy of the Moravian-Silesian Region
SO	Strategic objective
SAC	Strategic area of change
SU	Silesian University in Opava
TACR	Technology Agency of the Czech Republic
R&D	Research and development
VSB-TUO	VSB – Technical University of Ostrava



Introduction

The Regional Innovation Strategy of the Moravian-Silesian Region 2021–2027 forms an Annex to "#hrajemskrajem – Development Strategy of the Moravian-Silesian Region 2019-2027" (DS MSR), which was approved by the MSR Council in December 2019.

RIS MSR follows and develops horizontal topics of the DS MSR. At the same time, it draws on the Strategic Development Plan of the City of Ostrava for the period 2017-2023 (FAJNOVA) and reflects the priorities from the updated version of FAJNOVA for the period 2024+. The RIS MSR as a process and document defines areas that are necessary to meet the definition of "smart specialisation", i.e. it defines the vision of the regional innovation ecosystem, describes the setting of the EDP ("Entrepreneurial Discovery Process"), identifies the domains of strategic specialisation of the MSR, presents the direction in the field of international cooperation, and describes the system of monitoring and evaluation of implemented activities.

The objectives of the RIS MSR specify priority changes in two horizontal areas of the DS MSR "More Entrepreneurial and Innovative Region" and "More Educated and Employed Region" and in two horizontal areas of FAJNOVA "To improve the environment for business development" and "To be a centre of first-class education".

The core of the MSR knowledge economy development process is a functional partnership reflected in the current setup of the RIS implementation structure. This consists of a regularly updated vision, priorities for the development of the innovation ecosystem, an action plan for their implementation, the MSR Innovation Council, permanent and temporary working groups. The Moravian-Silesian Innovation Centre Ostrava, a.s. (MSIC) is responsible for the coordination of all actors involved in the implementation of projects in the RIS MSR Action Plan.

The content of the vision, current priorities and the action plan are the result of the consensus of the Moravian-Silesian Region and the Statutory City of Ostrava as initiators and main stakeholders investing their own resources into the implementation of the regional innovation policy. As the bearers of the political mandate to create favourable conditions for the future economic prosperity of the region, the MSR and SCO have entrusted Moravian-Silesian Innovation Centre Ostrava (MSIC) with ensuring coordination. With this mandate, MSIC systematically develops relationships and cooperation with relevant actors in the corporate, academic, public, and civic spheres.

An important prerequisite for the fulfilment of the RIS MSR objectives is a quality team for the coordination of relevant regional actors, which initiates and facilitates their effective involvement in the implementation structure, and at the same time the involvement of active local partners in international cooperation in the field of innovation, research and education. By obtaining the European Business Network (EBN) certification and an expanding network of international partnerships, MSIC confirms that it has the necessary capacities and competences to develop innovation ecosystems.



The world economy is increasingly interconnected, intensifying competition between cities and regions. At the same time, new technologies are accelerating the processes of change. The need to find a workable relationship between economic prosperity and the environmental sustainability of modern society is becoming ever stronger. The combination of these trends brings new challenges for adaptation at the level of individuals, local communities and regions. The size and quality of a region's innovation ecosystem has a direct impact on:

- Prosperity of the local economy, as it supports growth and innovation in local firms,
- motivation of local people to learn and do business,
- willingness of investors to undertake high value-added activities in the region,
- ability of the local economy to create new attractive jobs.

Mission of the RIS MSR 2021+

„MSR 2030+ = smart and green region“

Vision of the RIS MSR 2021+

The implementation of the Regional Innovation Strategy projects will place the Moravian-Silesian Region among the TOP 3 fastest growing regions in the Czech Republic in the following parameters (measured by the difference in absolute values between 2019-2027):

- a) number of entrepreneurs per 1000 economically active population,
- b) number of employees in corporate R&D per 1000 economically active population,
- c) average wage in the corporate sector.



Thematic priorities

The economy in the MS region has changed significantly over the past 20 years. The driver of change has been and continues to be the industrial sector. The significant transformation of its sectoral structure has been associated in particular with the inflow of foreign direct investment. Strong growth in productivity and export performance has led to a sharp decline in unemployment. At the same time, there has been some reduction in entrepreneurial and decision-making autonomy as foreign-controlled firms meet the objectives set by the parent corporations. The service sector is growing continuously, but still falls short of the importance and productivity of comparable regions.

The Regional Innovation Strategy and its thematic specialisation therefore takes into account that the **MSR still needs to devote a lot of effort to the so-called horizontal priorities** in the development of the local innovation ecosystem. Talent management, development of entrepreneurship, cultivating the environment for start-ups, strengthening cooperation between the corporate and academic sectors, or changing the image of the region remain priorities even after the update of the RIS MSR. At the same time, MSIC, in cooperation with companies and universities, is mapping new opportunities for more thematically focused activities to support innovation.

The regional domains of specialization formulated below are based on ongoing communication and cooperation between MSIC and local companies that perform in-house R&D. At the same time, available aggregate statistics and information from founders of successful startups and SMEs are taken into account along with the focus of the universities. In terms of EDP¹, the thematic priorities are the intersection of three interrelated perspectives:

1. **the end market perspective** shows in which sectors customers' demand most influences the economy in the MSR,
2. **the technology perspective** shows which areas of technical and technological competence drive the local economy and help local firms to establish themselves in global markets and/or as subcontractors in global value chains,
3. **the global trends perspective** places the two previous perspectives in the context of ongoing changes in the global economy. Particularly important are long-term trends that strongly influence (positively and negatively) the local economy.

By combining the above perspectives and considering the focus of companies and the specialisation of local universities, the following areas of smart specialisation have been

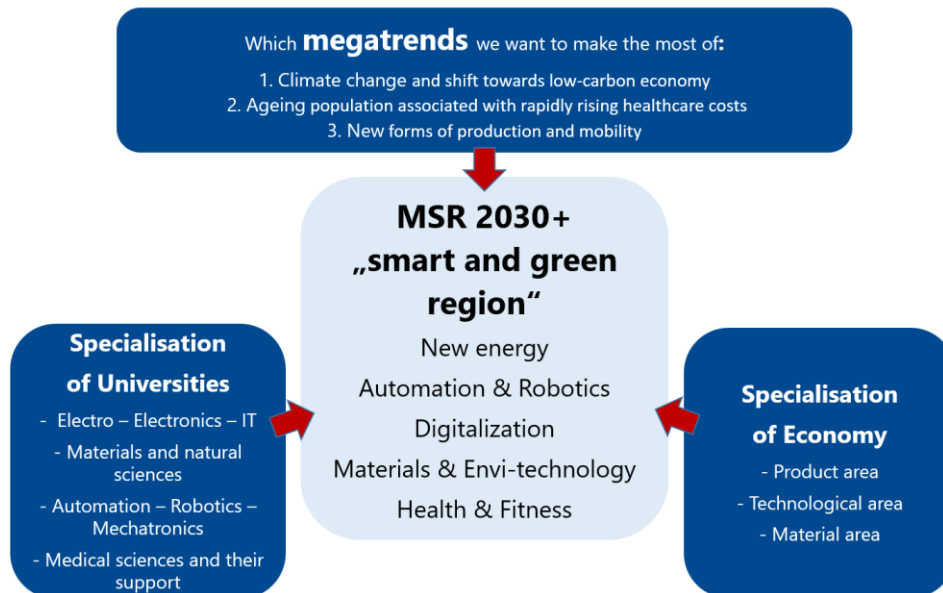
¹ EDP – Entrepreneurial Discovery Process (refers to how entrepreneurs in a given economy work with the future and how this translates into their ability to proactively find new business opportunities in an ever-changing global economy; how firms then share this strategic knowledge with other stakeholders to jointly shape the local environment for entrepreneurship and innovation is important for RIS implementation).



prioritised. These areas of smart specialisation were discussed by the Innovation Council of the Moravian-Silesian Region in September 2024.

The validity of the smart specialisation domains is continuously evaluated and modified, primarily based on the visions and strategies of local technology companies.

Domains of specialisation: continuous process



The summary presented in this diagram is further elaborated in the individual regional domains of smart specialisation.

In terms of end markets, the following four priority domains of specialisation have been formulated in the MSR

1. Name of the regional domain of specialisation: Automotive and Future Mobility

Domain focus:

There are many institutions in the MSR that develop and manufacture components for automobiles and other types of vehicles. Companies in this area are facing a unique confluence of global trends that will profoundly change the future form of passenger and goods transport. Foremost among these is the shift from fossil fuel combustion to new types of alternative fuels and propulsion. Furthermore, the emergence of partially (eventually fully) autonomous driving systems or the growing demand for new forms of micro-mobility, car sharing and the reduction of their use in city centres. Related to this is the need to collect and use spatial and other data of all objects on the transport infrastructure.

Examples of companies: Porsche Engineering, Forvia – Hella, Vitesco Technologies, Omnium plastic, Brose, Dura, Hyundai, Brano Group, Škoda Vagonka, Bonatrans, Borcad, Magna Lighting, Tatra, Cromodora Wheels, Brembo, Erich Jaeger, Maxion Wheels, Lightworks, Remante Group

2. Name of the regional domain of specialisation: Metal Production and Processing

Domain focus:

The production and development of metal materials, especially steel, is a traditional specialisation of the MSR. Metallurgy, foundry and related heavy engineering have largely shaped the local economy. In terms of innovation and new business opportunities, it is important for the local ecosystem that global demand for metals (not just steel) will grow as the global population grows and as most countries in the world strive to bring their level of prosperity closer to that of developed economies. At the same time, there will be an even greater demand for know-how related to how to produce and process metals in new ways that are both cost-effective and environmentally friendly and sustainable. This specialisation is closely linked to the global theme of the transition from a linear to a circular economy. Steel is a fundamental material that modern civilisation cannot do without and at the same time offers opportunities for the development of the circular economy. The challenge is to decarbonise the production process.

Examples of companies: Třinecké železářny, Tawesco, Cylinders holding, Witkowitz, VUHŽ, Vítkovice Steel, Bekaert Bohumín, Bekaert Karviná, AllInvest, JC Kovovýroba, Arcimpex, Technomont, Technotron

3. Name of the regional domain of specialisation: Industrial Automation and Robotics

Domain focus:

The future of manufacturing will be marked by a further reduction of human labour and the use of new technologies, which will further increase the productivity of industrial production. New forms of industrial automation and ever more advanced robots will be promoted across all industries. Individual production facilities and entire production lines will be increasingly interconnected by digital technologies. Machine learning and with it autonomous decision-making based on data from advanced sensors will become increasingly prevalent. Given the strong position and know-how from the previous domain (No. 2), a strategic opportunity for the MSR is to gain an edge in industrial automation and robotics, particularly in material and energy intensive metal and new metal-based materials manufacturing, with a link to the future shift from linearity to circularity in these value chains. However, it is important to develop automation and robotics widely in all areas and sectors.

Examples of companies: ABB, Vyncke, Witkowitz Envi, Ferrit, Mepac CZ, Innomatics, Ostroj, Prestar, EPO Machinery, Elvac, Elcom, Ingeteam, ElektroMAR, SprayVision, 24Vision, ATE System, MS Technik



4. Name of the regional domain of specialisation: Medical Devices and Digital Technologies for Healthcare

Domain focus: This domain of specialisation is significantly smaller than the previous ones in terms of size and number of companies in the region. However, it includes inspiring innovative ventures that demonstrate the region's innovation potential. One of the main societal challenges of developed economies is to ensure the accessibility and economic sustainability of healthcare. As populations in developed countries age and life expectancy increases, the cost of healthcare and all that goes with it is also rising. In response, the trend towards longer healthy life expectancy is gradually gaining ground. With this, the importance of healthy lifestyles, prevention and early diagnosis is growing so that treatment can begin before the disease fully manifests itself. The basis of this comprehensive transformation in the approach to health lies in medical devices and the use of digital technologies in relation to monitoring and caring for people's health. The LERCO project is an important element in the development of this domain.

Examples of companies: Invent Medical, Stimvia, Mebster, Ergona, VR Life, Clinitek, Bonmedix, ING Corporation, 4MEDI

In terms of technological areas, the following five domains of specialisation have been formulated in the MSR:

5. Name of the regional domain of specialisation: Information Technologies

Domain focus:

Digitalisation is a global megatrend that has disruptive effects on many economic activities and entire industries (see, for example, the way music is reproduced or new ways of selling and delivering goods). The Ostrava region is the third most important region in terms of concentration of IT specialists in the Czech Republic. In the last 20 years, many successful companies have grown up here and have taken full advantage of the new business opportunities that are arising thanks to the advancing digitalization. The trend of digitalization will intensify not only in relation to the growth of computing power and the decrease in its unit price, but also in relation to the newly emerging, especially legislative requirements aimed at effective data integration in the context of information management. AI will become more and more prevalent, although the current optimism associated with these technologies often proves to be exaggerated. The European Digital Innovation Hub created around the VSB-TUO has made a significant contribution to the development of this domain of specialisation. A large number of companies in the region are engaged in the digitalisation of business processes with an emphasis on manufacturing, creating new opportunities for synergies with the above domains in the innovation ecosystem. In the context of the development of AI, high-performance (and quantum) supercomputing, and the link to the VSB-TUO, especially to IT4I, new opportunities in the field of neural network learning are emerging. These opportunities



include the creation of specific datasets for training neural networks, which can accelerate and cheapen many applications of these technologies across different disciplines. The implementation of cutting-edge research advancing information technology and its use by MSR universities also contributes to stabilizing the region's necessary personnel base in the field over the long term.

Examples of companies: Tieto Evry, K2 Atmitec, Kvados, Skladon, ATE System, Vitesco technologies, Porsche Engineering, Forvia – Hella, CGI, Brain computers, Argutec, Invent medical, CAD service, Dytron, TINT, Tasty Air

6. Name of the regional domain of specialisation: Technologies for Energy Production, Transmission and Storage

Domain focus:

Energy production, transmission and storage technologies can be seen as critical infrastructure for both continued digitisation and future forms of mobility and production. The availability of cheap and sustainable energy that can be efficiently transmitted, stored and converted from electricity to other useful forms is a prerequisite for a sustainable economy. Energy has always been an integral part of the MSR economy, as local industry has always been extremely energy intensive. This is why there is also a significant concentration of experts and know-how in topics that are important for finding pathways to a modern, low-carbon and advanced energy sector. An important part of the ecosystem is the new testbed CEETe and specialised teams at VSB-TUO, which is the coordinator of the national competence centre for energy. Within VSB-TUO, new generations of specialists are also being trained, without whom the transition to new forms of energy would not be possible. An important impetus for the further development of this domain is the REFRESH project. Another important project that can help the development of this domain is the upcoming EDEN project.

Examples of companies: ČEZ Esko, Veolia, BorsodChem MCHZ, Witkowitz Envi, ElektroMAR, VAE Systems, VAE ProSys, Ingeteam, Vyncke, Innomatics, Třinecké železářny, Smolo, Magna energy storage

7. Name of the regional domain of specialisation: New Materials

Domain focus:

Another critical requirement for a sustainable economy is not only the availability of cheap energy, but also new materials whose production has the lowest possible negative impact on the environment. This, together with the scarcity or limited availability of certain rare elements or raw materials, generates the need to move from a linear to a circular economy. This transition will be slow and extremely demanding, both in terms of financial resources and the coordination of the conflicting interests of powerful interest groups. Given the accumulation of the necessary know-how and the presence of energy and material-intensive industries in the



region, this creates significant new opportunities. The exploitation of these opportunities will be very demanding in terms of capital. On the other hand, this will limit competition in the emerging industries associated with the civilisational transition described above. There are already many companies in the region that are involved in the analysis of emerging opportunities. Some of them have come together in the new strategic project CirkArena, which, among other things, creates a functional platform for collaboration and experimental innovation in sub-topics of the circular economy (e.g. the use of construction or metallurgical waste in accordance with the "waste2material" principle or a new generation of packaging materials) or in the REFRESH project, which deals with the development of a new generation of materials for the 21st century through unique atomic engineering methods tailored to the requirements of industrial transformation.

Examples of companies: Třinecké železářny, Smolo, MMV, Witkowitz, Vítkovice Steel, Cylinder holding, Magna energy storage, BorschodChem MCHZ, Invent medical, Gamin, Bonatrans, AllInvest, Karla, NIL textile

8. Name of the regional domain of specialisation: Cultural and Creative Industry

Domain focus:

Cultural and creative industries are considered to be one of the engines of socio-economic growth in developed countries and regions and a source of inspiration and new approaches that can be used across diverse economic activities in business, education, tourism, science and research, international marketing and branding of the region and its cities.

Intensifying competition in global markets is leading local companies to an increasing need to focus on customer preferences and motivations. It is inspiration from cultural and creative industries that can contribute to the search for innovative solutions and original design of products and services where technology and cost optimisation have reached their limits. The close link between modern technology, digitalisation and original design is being used by an increasing number of young, successful companies. In the case of the MSR, Invent Medical with its emphasis on industrial design and aesthetics is a case in point.

Examples of companies: Invent Medical, SprayVision, Tasty Air, Perun Creative, BeeWooden, Lumitrix

9. Name of the regional domain of specialisation: New Solutions for Societal Challenges or Human Resilience in Times of Turbulent Change

Domain focus:

Socio-scientific research and especially the experimental application of new conceptual solutions can significantly stimulate innovation. Accelerating changes due to the diffusion of new technologies and the deepening interconnectedness of the global economy are putting strong pressure on people as individuals, local communities, and public institutions. There are



also new demands on public policies, which need to respond quickly to a range of risks. People across economically developed countries are increasingly feeling the declining functionality of some public services. In parallel, there is growing support among some social groups for populist policies that offer appealing slogans but not workable solutions to new societal challenges. In a context of eroded trust in public institutions and reduced life satisfaction and mental well-being, some emotive issues, such as migration, are used for political mobilisation. All of this takes place in a digital technology environment where the creation and sharing of content facilitates the spread of misinformation and mass manipulation. In this social climate, new technologies can also be used by authoritarian regimes to influence the outcome of elections in states with liberal democratic set-ups. Last but not least, a major challenge in the field of innovation is the acceptance of new technologies, products and services, as often the main obstacle to their diffusion among users is lack of interest combined with an inability to understand their benefits.

For this specific RIS MSR domain, the partners and users will be mainly public organisations and local governments, as well as educational and non-profit organisations from local to national level.

Emerging Domains of Specialization: Quantum Technologies and Computing

Domain focus:

Quantum technologies and computing represent a key innovation of the future that has the potential to revolutionise computing power, data security and modelling of complex systems. These technologies, using the principles of quantum physics, enable the solution of problems that are virtually intractable for classical computers or would require extremely long computation times. The MSR can develop intensively in this area, and can already boast of the success of IT4Innovations, where the first quantum computer in the Czech Republic will be installed thanks to the HE LUMI-Q project. In addition, there has been created a dedicated quantum computing laboratory, which serves as a key point for research and application of these technologies. This development provides a solid foundation for further innovation and provides new opportunities in industry, science and education, thereby significantly strengthening the region's innovation ecosystem. Quantum computing can provide breakthrough applications in many areas, including optimisation of industrial processes, simulation of materials with new properties, or the development of advanced cryptographic methods. With these advances, the MSR can become an important player in the field of quantum technologies and contribute to a sustainable and competitive economy not only in the region, but also in the wider national and international context.

The horizontal principles that support for the social sciences include:



- participation of residents in the development of their region and community,
- dialogue between all the players and communities concerned, fostering effective cooperation and an interdisciplinary approach,
- finding workable pathways to environmentally sustainable economic prosperity, raising awareness and dispelling myths associated with the transition from a carbon economy to a decarbonised economy,
- building and developing regional capacities,
- identifying and developing talent and regionally specific skills,
- strengthening the knowledge base for a successful transition,
- thoughtful strategic planning and evaluation,
- improving the quality of life in the region and preventing out-migration.

Implementation Structure

The process of "entrepreneurial discovery process" (EDP) has specifics that are also reflected in the management and implementation structure of the RIS MSR. The participation of all relevant players in the process is crucial – in addition to public administration, also entrepreneurs, researchers, and other socio-economic groups are strongly represented, including civil society as users of innovation (the so-called quadruple helix). These participants are involved in the process continuously, i.e. they participate not only in defining the objectives of the strategy, but also in verifying the outcome of implemented interventions, formulating new themes, adapting projects under preparation in order to target them in line with the current needs in the region, or further profiling the areas of specialisation. The composition of the RIS MSR implementation structures is in accordance with the recommendation of the so-called S3 Guide of the European Commission².

Management and implementation of the RIS MSR is carried out on two levels:

- a. **Strategic management** is provided through the Innovation Council. It discusses the vision, strategy targeting, and proposed projects that are prepared within the RIS MSR individual working groups. It selects key strategic projects for implementation and meets at least 3 times a year.

The Innovation Council has 9 members:

- Governor of the Moravian-Silesian Region or the deputy responsible for regional development,
- Mayor of the Statutory City of Ostrava or the deputy responsible for education, innovation and digitalisation,
- Rector of the VSB - Technical University of Ostrava,
- Rector of the University of Ostrava,
- Rector of the Silesian University in Opava,
- as well as 4 representatives of companies operating in key regional domains of specialisation:
 - o Mobility,
 - o Information Technologies,
 - o Metal Production and Processing,
 - o Medical Devices.

The selection of company representatives is made so that the perspectives of large companies as well as young technology scaleups are represented.

- b. The **executive management** of the strategy is entrusted to the **Moravian-Silesian Innovation Centre Ostrava, a.s.** (MSIC), which coordinates implementation of the strategy and selected activities. The responsibility of its **RIS3 manager** is to ensure the

² Guide on Research and Innovation Strategies for Smart Specialisation (RIS3 Guide), <http://s3platform.jrc.ec.europa.eu/>, p. 38



preparation and discussion of project plans and to supervise the functioning of the implementation structure of the strategy.

As part of the executive management, the MSIC coordinates and ensures the activities of the working groups. Working Groups (WGs) have been established to gather the necessary information, discuss different perspectives and interests, and develop cooperation across stakeholders:

1. Entrepreneurial Region

This working group addresses cross-cutting themes such as (i) innovation in small and medium-sized enterprises in the MSR, (ii) startup creation and acceleration, and (iii) collaboration and coordination across the MSR on business start-up support services. Its agenda also frequently addresses issues related to promoting entrepreneurship in schools. Within the cooperation mentioned in (iii) above, there is the **MSR Startup Community** sub-group.

2. Talent Management

The main focus of this WG is (i) education and (ii) mobility of talented people to strengthen the attractiveness of the MSR as a place for highly skilled people to work and live. Within education, the WG focuses on both initial and lifelong learning with an emphasis on innovation and leadership in public education organizations. In the area of talent mobility, place branding of the region is a growing theme. Long-term projects such as the **Ostrava Expat Centre** or new purpose-built organisations such as the **Moravian-Silesian Technological Academy** (MTA) have gradually emerged from this WG.

3. MSR Digital

This working group coordinates many entities that are developing new activities in the field of digitisation. Representatives of the business sector are very interested in participating in this WG. There are valuable discussions, focusing on the design of larger grant projects (e.g. for the long-term cross-sectoral cooperation programme). The European Digital Innovation Hub Ostrava, with the **VSB-TUO** at its core, is a key topic for further deepening cooperation between companies and universities. Due to the relatively rapid development of new challenges and topics related to the advancing digitalisation, sub-groups focusing on (i) cyber security (ii), "artificial intelligence", or (iii) "quantum computing" are being established.

4. MedTech

The MSIC conceives this WG as a regular roundtable for companies and research organizations focusing on medical technology. It was initiated by local companies. It has gradually expanded to include dozens of entities from all over the country. The main topics are (i) issues related to meeting MDR requirements, (ii) international expansion, (iii) sharing of experiences, and (iv) more effective collaboration between companies and public organizations. As more and more companies are interested in participating in this WG, there is a growing number of companies



developing the idea of a MedTech cluster. At the same time, there is a growing demand for services aimed at incubating and accelerating MedTech business projects.

5. EnviTech

In relation to the vision, objectives and partnership for the Life Coala project, a WG has been established as part of the RIS MSR implementation structure under the name EnviTech. The main topics are (i) functional pathways for the transition to a circular economy, (ii) cooperation on the preparation and implementation of experimental innovation projects, (iii) exchange of experiences, (iv) waste and packaging management, (v) new regulation shaping pathways to an environmentally sustainable economy.

Newly established and upcoming RIS MSR working groups:

- future of mobility
- social innovation and social cohesion

The working groups formulate new plans for the implementation of the RIS objectives and participate in the preparation of projects. They include companies, universities and scientific institutions, regional agencies, the public sector, and others. Membership in the working groups is open and members meet at least 3 times a year. In the case of piloting new activities, ad-hoc working sub-groups are formed.

From the level of the Moravian-Silesian Region, the following entities enter the process:

- **The Commission for Research, Development and Innovative Entrepreneurship**, which submits opinions and proposals to the Regional Council in accordance with the RIS MSR, recommends to the Regional Council proposals for the announcement of subsidy programmes, or discusses applications for funding from these programmes.
- The working groups for the preparation and implementation of the Development Strategy of the Moravian-Silesian Region 2019-2027 built on the existing structure of the ITI Strategy of the Ostrava agglomeration, where the topics of the RIS MSR are mainly related to the activities of the **working group More Entrepreneurial and Innovative Region** and the **working group More Educated and Employed Region**.

In order to analyse the innovation potential within the EDP process, the RIS MSR implementation structure uses the results of key surveys of the innovation capacity mapping INKA in cooperation with TACR.

The RIS MSR is implemented through the **Action Plan**, which includes a portfolio of all key project plans. The MSIC is responsible for updating the Action Plan and its evaluation. A project



plan can only be included in the RIS MSR Action Plan draft if it meets the objectives of either the Strategic Development Plan of the City of Ostrava for the period 2017-2023 (www.fajnova.cz) or the Development Strategy of the Moravian-Silesian Region 2019-2027 (www.hrajemskrajem.cz) or if it is a strategic project of one of the three public universities of the Moravian-Silesian Region. The final decision on the inclusion of a project plan in the Action Plan is made by the Innovation Council. The discussion and approval of the Action Plan for a given year takes place always at the first meeting of the Innovation Council of that year or at the last meeting of the previous year.

International Cooperation

Numerous measures of the Development Strategy of the Moravian-Silesian Region 2019-2027 are aimed at strengthening international activities. Their overview in relation to the strategic objectives is presented in the table below:

Measure	Strategic area of change (SAC)	Strategic objective (SO)
More Entrepreneurial and Innovative Region		
To increase the internationalisation of small and medium-sized enterprises	1.2 Establishment and growth of enterprises	Increasing the number of enterprises based in the region under 10 years of age with 25 or more employees
To support international research excellence in thematic areas with an already existing critical mass of researchers and results	1.4 Research and development	Increasing the share of the region in public expenditure on research and development in the Czech Republic to at least 6% in the period 2022-2027
More Educated and Employed Region		
To improve the study offer of universities and strengthen internationalisation	2.2 Attractive universities	Increasing the share of the region's population with a university degree
To provide top experts for the regional labour market, to create good conditions	2.4 Quality jobs	Increasing productivity, average wages, and the well-paid jobs offer
To utilise qualified foreign workforce in the regional labour market, to promote integration of foreign workers	2.4 Quality jobs	Increasing productivity, average wages, and well-paid jobs offer



Other planned measures, the implementation of which has primarily a local or national dimension, will consequently significantly improve the conditions for the development of international cooperation. These include in particular:

- To **achieve international excellence in the practical implementation of regional innovation policy**, as the *quality of the local innovation ecosystem is becoming an increasingly important factor in the attractiveness of cities and regions for investing companies and the highly mobile class of "global experts"* (SAC 1.3 Entrepreneurial and innovation ecosystem, SO Ranking the region among the TOP 10 regions in the Central and Eastern Europe region according to the growth dynamics of the knowledge intensity of the economy).
- To **create strategic research alliances** and for this purpose develop *Professional services for companies aimed at the development of international research and technological cooperation of leading innovative companies from the region* (SAC 1.5 Large companies, SO Export growth of large companies from the region).
- To **co-create the brand and environment of an attractive region for work and starting entrepreneurs** and involve *Successful large companies representing major exporters as key partners of the local government and universities in their joint efforts to develop a functioning innovation ecosystem in the region* (SAC 1.5 Large companies, SO Export growth of large companies from the region).

The specific activities to be mainly developed are as follows:

- development of activities within the EBN (European Business Network) initiative or Vanguard initiative (follow-up to the strategic change area "to increase the intensity of entrepreneurship in the MSR"),
- preparation and implementation of activities of the Global Experts postdocs project – vouchers for researchers (follow-up to the strategic change area "to facilitate the arrival and long-term stay of talent in the MSR"),
- strengthening involvement in European initiatives such as "PRACE - Partnership for Advanced Computing in Europe" and "Joint Undertaking - EuroHPC", through IT4Innovations (follow-up to the strategic change area "to support growth in small and medium-sized enterprises in the MSR"),
- involvement and development of activities and programmes within the so-called European Universities Alliances - U!REKA (partner is VSB-TUO), NEOLAiA (partner is UO) and STARS-EU (partner is SU).



Monitoring and Evaluation

Monitoring of the RIS MSR is based on a combination of three interlinked levels of information:

1. Microeconomic – the level of individual persons and entities of the MSR innovation ecosystem

The monitoring system works with two main categories - (i) supported companies and (ii) supported change projects of companies. At the level of individual supported companies, information is collected on the services and programmes through which the company has received support for its change projects. As part of the customer care process, information of a qualitative nature on individual supported companies as well as potential candidates for the RIS MSR services and programmes is collected simultaneously. To store and work with this data, CRM is gradually developed to meet the needs of the MSIC as the company responsible for managing the implementation of the RIS MSR.

This level of information also serves as a continuous source of feedback from the target groups of the RIS MSR activities. For the MSIC, it serves as a key source of learning and development of cumulative know-how for effective management of the RIS MSR implementation.

2. Microeconomic - level of aggregation for individual programmes and services of the MSR innovation ecosystem development

Primary data at the level of individual companies and their change projects that have been supported by RIS MSR services and programmes allow the creation of purposeful aggregations for monitoring and trend analysis. This data is used for internal and external (towards RIS shareholders and stakeholders) reporting. At the same time, they are a key input for evaluation analyses. At this level, surveys are also regularly conducted among specific segments of companies and individuals using RIS MSR services and programmes.

An important prerequisite for information aggregation and generalisation is the possibility of discussion with experts in the fields to which the aggregation relates. This discussion takes place at the above-mentioned thematic WGs of the RIS MSR, or within the framework of interim working groups organised for this purpose.

3. Macroeconomic - structural characteristics of the MSR innovation ecosystem

Microeconomic data must be regularly analysed within evaluations in relation to relevant indicators at the level of the whole self-governing region. The following three have been identified primarily as impact indicators:

- i. Entrepreneurship intensity - number of entrepreneurs per 1000 economically active population
- ii. Knowledge intensity of the economy - number of employees in corporate research and development per 1000 economically active population



iii. Average wage in the MSR expressed by the median wage

The system of data collection and its subsequent use for evaluations reflects the fact that the aggregate impacts of RIS MSR interventions can be realistically monitored in the economy with a delay of at least 3 years, especially after 5 years from the implementation of the evaluated interventions. As the current RIS MSR started to be implemented with the establishment of the MSIC in July 2017, the datasets and analyses for the impact evaluation are still in the expert drafting phase. An external independent evaluation of the overall impacts of MSIC programs will take place in 2024. The results will be discussed within the implementation structure during 2025 with a goal of improving the effectiveness of the activities implemented or revising their focus if such a need arises.

In order to ensure an objective assessment of the shift in the innovation ecosystem of the MSR, compared to the innovation ecosystem of Prague and the South Moravian Region, a base-line analysis of the amount of public investment in R&D support in the mentioned regions (MSR, SMR, Prague) will be prepared.

The above mentioned monitoring system is used for three different types of evaluation. The RIS MSR evaluation plan is being developed gradually with the evolution of the services and programmes of the strategy itself implemented since mid-2017.

1. Ex-ante evaluation

In the period 2017-2020, intensive work was carried out on piloting completely new services and programmes in the MSR that had never been implemented in the region before. Within the pilot testing, emphasis was placed on qualitative methods of working with information from individual subjects directly involved in the piloting. Since 2021, broader data for a larger number of subjects has gradually been used. This is made possible, among other things, by the substantial expansion of the number of companies supported by the newly developed services and programmes.

2. Interim evaluation

Work at this level of evaluation started at the end of 2020 and is gradually expanding. The main emphasis is on services and programmes that a sufficient number of companies have already been through. The ongoing programme evaluation focuses on verifying the effectiveness of processes at the level of the individual companies involved. Two years later, the impact assessment of the programmes and services used has begun. So far, this mainly involves the collection of methodologically relevant data for subsequent interim and ex-post evaluation analyses. Each programme has a framework evaluation plan in the following form:

- i. Verification of the relevance of the target group
- ii. Verification of process effectiveness
- iii. Verification of benefits and methodology for measuring overall impact

All outputs of the evaluation work serve the continuous process of improvement of RIS MSR services and programmes.

3. Ex-post evaluation



This level of evaluation is being prepared by the MSIC. It will be launched in the second half of 2027. The monitoring and the first two levels of evaluations are setting up the preconditions for a quality impact assessment. For the ex-post evaluation analyses, external subjects will be used to gain the necessary perspective as well as the neutrality of the evaluators.



Areas of Strategic Change

In accordance with the vision of the DS MSR "With NEW ENERGY WE CHANGE LIFE IN THE REGION, i.e. a unique culture and openness to cooperation - #hrajeMSKrajem; a region attracting talents and offering competent workers; the most significant technical and technological pole of growth in the Czech Republic; intensive innovation and high added value of business; attractive and well-paid jobs; clean air and healthy environment; higher dynamics of new companies establishment; low-emission economy; a region of top services and simply a new image"; and in accordance with the vision of FAJNOVA, i.e. Ostrava is a city that attracts young, hardworking and talented residents; Ostrava develops and uses innovative technologies, friendly to nature and the environment; Ostrava is a self-confident European city charged with the energy of active people; Ostrava offers a high quality of life for all generations; and Ostrava honours its industrial tradition, **6 change areas with their own objectives** have been defined, which will contribute to the fulfilment of the priorities of the overarching strategic documents of the Moravian-Silesian Region and the City of Ostrava:

1. Increasing the intensity of entrepreneurship in the MSR

Measurement method: number of supported business launches (including startups)

Target: 1100 (2027); 1800 (2030)

Sub-activities leading to fulfilment: Startovárna (StartFactory), pilot testing of the Entrepreneurship in 40+ programme (targeted counselling and creation of a community for aspiring entrepreneurs 40+), Entrepreneurship vouchers, incubation/acceleration programmes and services of the MSIC (including MedTech Hub) and other partners, GreenLight accelerator, Lab Zero, CEPIS project, Innovative Entrepreneurship SU, ImpactHUB Ostrava services.

Target group: people considering entrepreneurship, including people aged 40+³, aspiring entrepreneurs

Role of the MSIC: (i) coordinator of the cooperation, (ii) service provider

2. Supporting growth in small and medium-sized enterprises in the MSR

³ First-time entrepreneurs aged 40+ may be motivated by the need to change their current career and work habits, to start something new, to find in entrepreneurship an opportunity for self-fulfilment, or to reconcile work and personal life. According to one year's data, approximately 16% of aspiring entrepreneurs are over 40. Important is the high proportion of women (over 49%) and the high survival rate of 88% - see Dvouletý, O., Svobodová, I., Bočková, N., & Šebestová, J. D. (2024). Becoming a First-time Entrepreneur in 40s and Older: Lessons from Survival Analysis. *Working Paper in Interdisciplinary Economics and Business Research no. 76*. Silesian University in Opava, School of Business Administration in Karviná., Online: https://www.iivopf.cz/wp-content/uploads/2024/06/WPIEBRS_76_Dvoulety_Svobodova_Bockova_Duhacek-Sebestova.pdf



Measurement method: number of companies repeatedly using the services (min. 2x)

Target: 700 (2027); 1000 (2030)

Sub-activities leading to fulfilment: MSIC coaching programmes, MSIC programmes focused on the adoption of new technologies by SMEs in the field of digitalization including AI, sustainability, med-tech etc., new study programmes at universities (e.g. sustainability, environmental fields), innovation infrastructure services (creation of specialized competence centres), EDIH Ostrava including awareness and training activities

Target group: innovative SMEs (MSIC coaching programmes), SMEs (not just technology leaders) for digitalisation and sustainability areas

Role of the MSIC: (i) service provider, (ii) partner of other service providers

3. Facilitating the arrival and long-term stay of talents in the MSR

Measurement method: number of people using the services

Target: 1000 (2027); 1600 (2030)

Sub-activities leading to fulfilment: soft-landing services of the OEC, interim stays of startup founders using MSIC services, researchers supported by programmes such as Global experts/Global experts-post-docs, Ambassador Programme, Leadership Programme for Kindergartens, Elementary Schools, Secondary Schools

Target group: pupils and students, R&D workers, high-skilled workers

Role of the MSIC: (i) service provider, (ii) initiator and designer of new activities, (iii) coordinator of cooperation

4. Strengthening cooperation between companies and universities in the MSR

Measurement method: volume of contractual R&D paid for by companies at universities in the MSR

Target: to set measurement by 2026; to further quantify target by 2030

Sub-activities leading to fulfilment: REFRESH, LERCO, CEPIS, innovation infrastructure services managed by the MSIC, RIS MSR WG, events of the MSIC and partner universities, targeted matchmaking, Demola

Role of the MSIC: (i) service provider, (ii) partner of other service providers

5. Strengthening cooperation of partners within the Ostrava Technology Park

Measurement method: space for rent to companies and other actors of the MSR innovation ecosystem



Target: 50 000 m² (2027); 70 000 m² (2030)

Sub-activities leading to fulfilment: creation of the Ostrava Technology Park association, operation of selected MSIC innovation infrastructure capacities, construction and operation of new capacities in the area (e.g. CT Park, Elektromar)

Role of the MSIC: (i) provider of innovation infrastructure operation services, (ii) partner of the Technology Park Ostrava association, (iii) coordinator of cooperation in the operation of innovation infrastructure in the MSR

6. Creating and strengthening the reputation of the MSR as a dynamic innovation region

Measurement method: creating a brand of the MSR innovation ecosystem and measuring the level of brand awareness

Target: (i) to create brand and launch targeted marketing communication (2025), (ii) to further quantify target brand awareness in 2030.

Sub-activities leading to fulfilment: targeted marketing communication of the MSIC and selected partners, events of the MSIC and partners organised under the RIS MSR brand, promotion of services and programmes of the MSIC and other ecosystem actors, active coordination of cooperation with selected partners

Role of the MSIC: (i) coordinator of cooperation, (ii) implementer of targeted communication strategy, (iii) brand builder and manager

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