

REGIONAL  
INNOVATION STRATEGY  
FOR MAZOVIA

# REGIONAL INNOVATION STRATEGY FOR MAZOVIA UNTIL 2030

Strategic framework for the regional  
innovation ecosystem and smart  
specialisation of the Mazowieckie voivodeship

Warsaw 2021





Dear Sirs,

We are handing over to you the publication, the aim of which is to present the Regional Innovation Strategy for Mazovia until 2030 (RIS 2030), including the concept of smart specialisation of our region. The development of RIS 2030 makes it possible to direct the Mazowieckie Voivodeship Self-government's activities towards improvement of the quality of life of Mazovia's residents.



The main objective of RIS 2030, the detailed objectives, as well as the smart specialisation areas of Mazovia described in the document constitute not only a response to the needs of the region's inhabitants, but also to the challenges the modern world poses to the society and economy. RIS 2030 constitutes a kind of a signpost along the paths of regional innovation development, as it enables a better use of the region's resources in the area of research, innovation development or cooperation of entrepreneurs and scientific entities, business support institutions and administration. Strengthening the innovativeness of companies from our region is a necessary condition for meeting the challenge of growing competitiveness on national and international markets. The areas of smart specialisation identified together with the stakeholders areas of smart specialisation discerned along side with its stakeholders are some of the main tools for creating favourable conditions for the development of the Mazowieckie Voivodeship, as well as targeting the public support in line with in the financial perspective 2021-2027.

Implementing smart specialisation requires involvement at many levels: both on the part of the Mazowieckie Voivodeship Self-government, scientific and academic centres, and above all, the entrepreneurs at whom the actions are addressed. The participation of representatives of business, science, administration and non-governmental organisations allows to take into account different points of view, as well as to use the knowledge and experience of these sectors. Areas of smart specialisation: Safe Food, Smart Systems in Industry and Infrastructure, Modern Business Ecosystem and High Quality of Life indicate directions conducive to Mazovia's development and respond to key challenges at the European level.

I hope that the potential for development of innovativeness which lies in the Mazowieckie Voivodeship will be fully used, and reading this brochure will bring closer the vision of the Regional Innovation Strategy for Mazowsze until 2030 and regional smart specialisation, and will be an inspiration for other ideas that will contribute to the growth of prosperity and development of our region.

I would like to sincerely thank the representatives of business, scientific units, business environment institutions and local administration for their involvement and significant contribution to the updating of Regional Innovation Strategy for Mazowsze until 2030. I am counting on your further co-operation with the Mazowieckie voivodeship.

I wish You inspiring reading.

A handwritten signature in black ink, appearing to read 'Adam Struzik', written in a cursive style.

Adam Struzik  
Marshal of the Mazowieckie Voivodeship

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# 1. Introduction

The Regional Innovation Strategy for Mazovia until 2030 (RIS) defines a strategic framework for the creation of an environment conducive to increasing enterprise innovativeness.

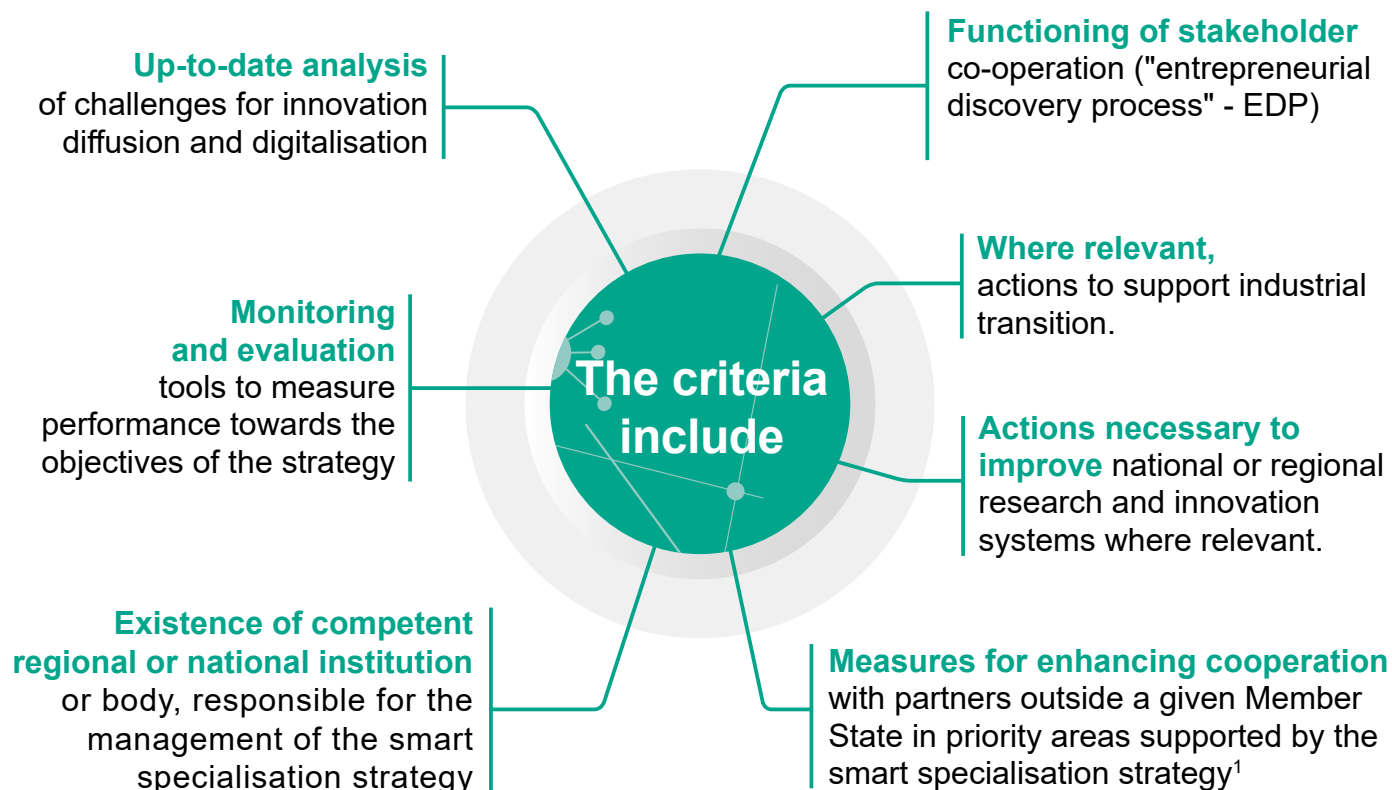
The works on the Regional Innovation Strategy for Mazovia until 2030 took into account the recommendations developed during the sub-regional workshops, strategic workshops, internet consultations, meetings of the Regional Stakeholder Groups within the Interreg Europe projects: SMARTY, Cohes3ion and AgriRenaissance, as well as public consultations of the RIS.

Conducting strategic activities in favour of increasing innovativeness and competitiveness of the Mazowieckie Voivodeship requires taking into account both conditions resulting from the EU cohesion policy and the development policy implemented by national authorities. Such an approach, ensuring complementarity of actions allows for strengthening the impact of the policy on the region's development.

In the current financial perspective, the importance of smart specialisation has increased due to the conditions set by the European Commission for the use of European funds, as well as in the context of recovering from the socio-economic crisis caused by the COVID-19 epidemic.

A prerequisite for the post - 2020 EU policy objective 1 - A more competitive and smarter Europe by promoting innovative and smart economic transformation and regional ICT connectivity) is good governance of the regional strategy of smart specialisation. Criteria have been defined for it, the fulfilment of which is necessary to start the implementation of operational programmes.



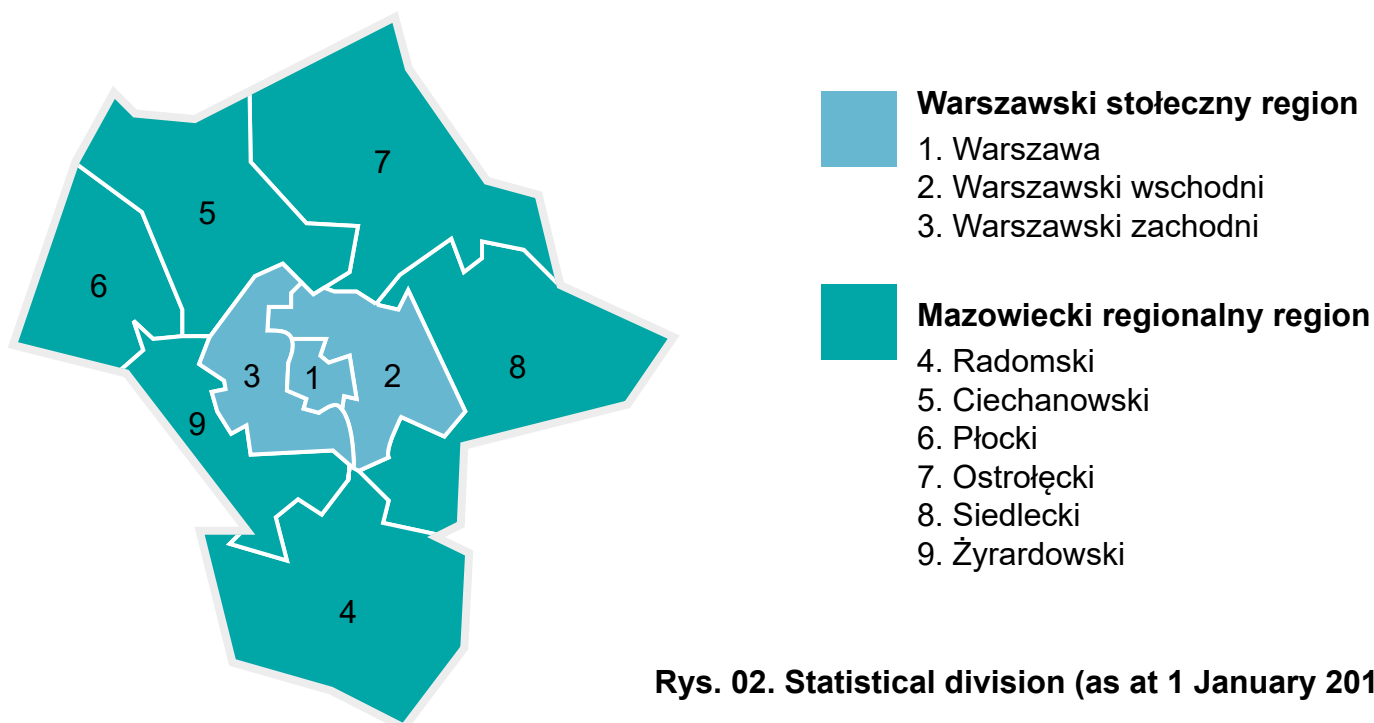


## Rys. 01. Essential criteria for operational programmes.

The conditions for the implementation of RIS Mazovia until 2030 are also outlined by the Agenda for sustainable development 2030 (Agenda 2030) and European strategies - *European Green Deal*<sup>2</sup> and *European Industrial Strategy*<sup>3</sup>.

The works on RIS for Mazovia until 2030 have taken into account provisions of strategic documents orienting development actions in Poland, i.e. Strategy for Responsible Development until 2020 (with an outlook until 2030), horizontal integrated strategies<sup>4</sup> and the Development Strategy for the Mazowieckie Voivodeship.

Among the important determinants for the RIS Mazovia 2030 is the new statistical division of the Mazowieckie Voivodeship. **Since 1 January 2018, the Mazowieckie Voivodeship consists of two NUTS 2 statistical units** („regions" according to the systematics used by Eurostat).



**Rys. 02. Statistical division (as at 1 January 2018).**

The change is aimed at detecting by public statistics the development disproportions existing within the voivodeship between the central part, dominated by Warsaw, and the peripheral subregions with different social and economic conditions.

<sup>1</sup> Annex IV page 163 of Regulation (EU) 2021/1060 of the European Parliament and of the Council of 24 June 2021.

<sup>2</sup> Communication from the Commission to the European Parliament, the European Council, the Council, the Economic and Social Committee, the Committee of the Regions The European Green Deal, COM (2019) 640 final, <https://eur-lex.europa.eu/legal-content/PL/TXT/?uri=CELEX:52019DC0640>, accessed on 4 September 2020.

<sup>3</sup> Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, COM (2020) 102 final, <https://eur-lex.europa.eu/legal-content/PL/TXT/?uri=CELEX:52020DC0102>, accessed on 4 September 2020.

<sup>4</sup> Due to the fact that some strategic documents are coming to an end or may need to be adjusted to the amended Act on the Principles of Development Policy -, the provisions of which became applicable in November 2020, the RIS for Mazovia until 2030 refers to the existing strategic documents or available projects.

## **RIS Mazovia 2030 addresses the territorial determinants through:**

- including the current statistical division in the vision and SWOT analysis,
- counteracting the negative effects of developmental disproportions as one of the priorities for smart specialisation,
- measures dedicated to Mazowiecki regionalny region - increasing activity of Business Environment Institutions (BEI) in terms of providing professional services supporting innovativeness,
- emphasising in the measures the need for the development of cooperative relations between entities from Warszawski stołeczny region and Mazowiecki regionalny region as well as implementing new solutions in conventional branches of industry and agriculture,
- implementing measures activating regional/subregional animators of economic development in the process of entrepreneurial discovery,
- enacting activities involving representatives of territorial self-government units (first of all, regional implementation of activities involving representatives of territorial self-government units at various levels.



## 2. The RIS vision

A path to excellence

## 2. The RIS vision

The RIS 2030 vision presents Mazovia as an innovative region characterised by high economic growth. In order to meet these expectations, the Regional Innovation Strategy for Mazovia until 2030 assumes that:



**The vision of voivodeship development will be accomplished through the implementation of the main objective, by means of strategic objectives.** The selection of objectives was made on the basis of a diagnosis socio-economic diagnosis of the Mazowieckie Voivodeship via, SWOT analysis, in a bottom-up process within strategic workshops with stakeholders.

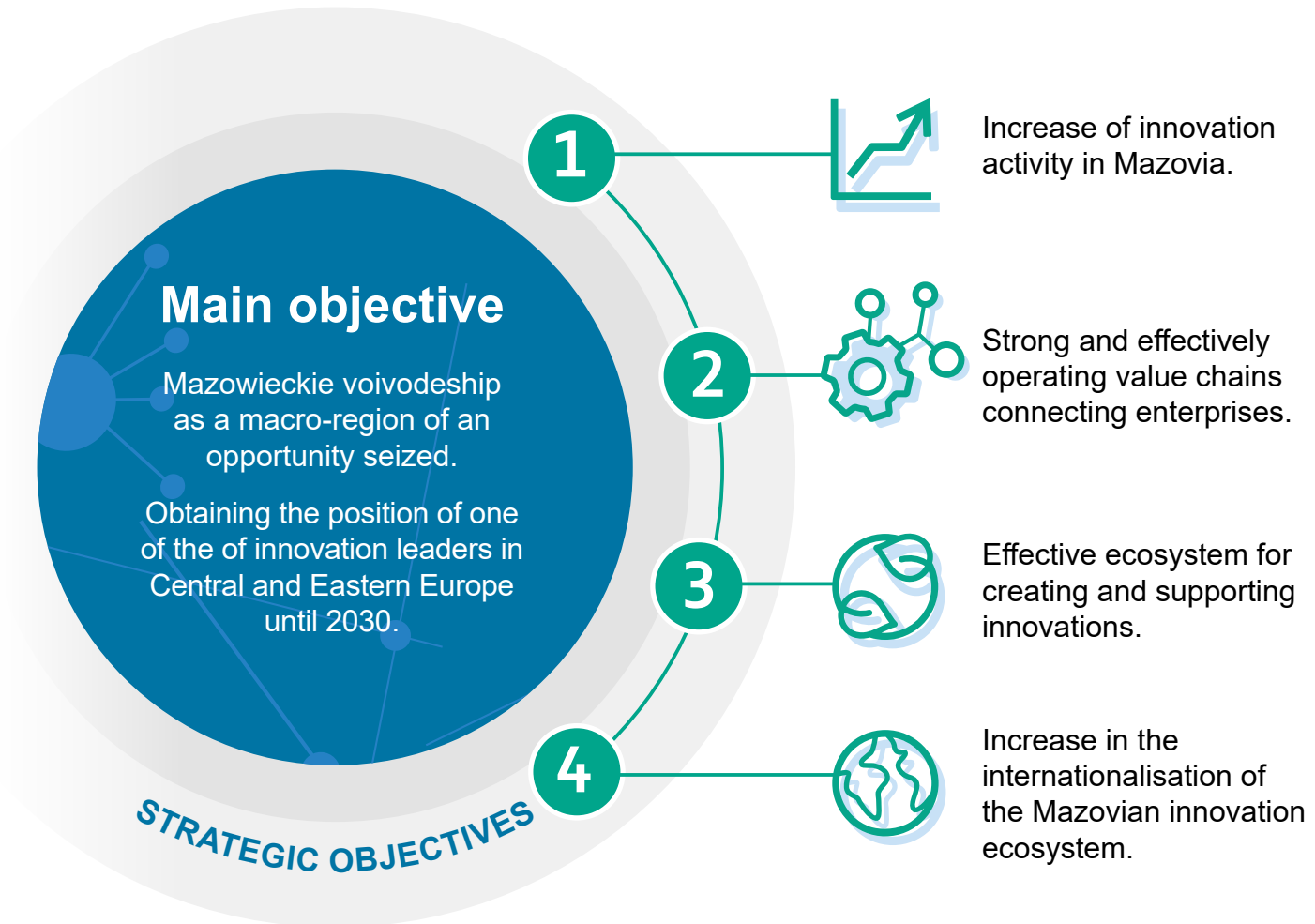


# 3. RIS objectives

Priorities for Mazovia

### 3. RIS objectives

The main objective will be accomplished through the implementation of four strategic objectives.



**For each strategic objective, a set of recommended actions has been defined,** which constitute the basis for constructing support instruments within the framework of RIS for Mazovia until 2030.

The catalogue of actions is open and may be modified on the level of Implementation Programmes depending on the external conditions, available policy instruments, the actual scenario of the Mazowieckie Voivodeship development and new opportunities, challenges and trends in the economy.

## 3.1. Strategic objective 1

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### **Increase of innovation activity in Mazovia:**

- Supporting the creation and implementation of innovations as part of regional smart specialisation, among others, through knowledge and technology transfer from the science sphere to enterprises.
- Support for R&D works of enterprises in areas of smart specialisation.
- Support for the implementation of digital solutions and Industry 4.0 technologies in enterprises and scientific entities.
- Promotion of cooperation between employees of the scientific sphere and enterprises in the area of R&D&I.
- Support for the protection of intellectual property created in scientific units and enterprises from Mazovia.
- Promotion of projects based on open innovation.



## 3.2. Strategic objective 2

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### **Strong and effectively operating value chains connecting enterprises:**

- Support for the creation and development of cooperative relations between entities from Warszawski stołeczny region and Mazowiecki regionalny region.
- Development of technology integrators to move Mazovian companies within the value chains.
- Support of undertakings resulting in the implementation of new solutions in conventional branches of industry and agriculture.
- Promotion of cooperation within the innovative projects.
- Promotion of implementation of innovative solutions in public administration units and scientific institutions.

## 3.3. Strategic objective 3

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### **Effective ecosystem for creating and supporting innovations:**

- Creation of support instruments for enterprises and scientific units introducing innovations within the smart specialisation of Mazovia, including, inter alia, Industry 4.0, low-emission economy and circular economy.
- Supporting the inflow of highly qualified employees (including immigrants) through incentives for enterprises and scientific units.
- Development of human resources training for a modern economy at various levels of education, based on regional smart specialisation and increasing involvement of enterprises in the development of vocational education in Mazovia.

- Building and supporting cooperation networks with the participation of innovative companies, among others, through clusters, sectoral organisations, centres of excellence and other animators of economic development.
- Supporting the creation of infrastructure facilitating the creation and development of innovations, including support for development and maintenance of research infrastructure.
- Supporting the creation and development of innovative enterprises.
- Actively promoting pro-innovative attitudes addressed to various social groups, including, among others, promotion of remote forms of work.
- Increasing activity of BEI in terms of providing professional services supporting innovation in the Mazowiecki regionalny region, including, inter alia, the development of a system of accreditation of BEI.
- Continuous monitoring and analysis of trends in the area of new technologies, business models and industrial transformation of the Mazowieckie Voivodeship for the needs of the process of entrepreneurial discovery.

### 3.4. Strategic objective 4

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#### **Increase in the internationalisation of the Mazovian innovation ecosystem:**

- Supporting the export of products and services based on innovative solutions.
- Building competitive advantages through support for the implementation of business models oriented on internationalisation.
- Building a Mazovia's brand in Europe and in the world.
- Supporting Mazovian entities in applying for and participating in international R&D&I projects.

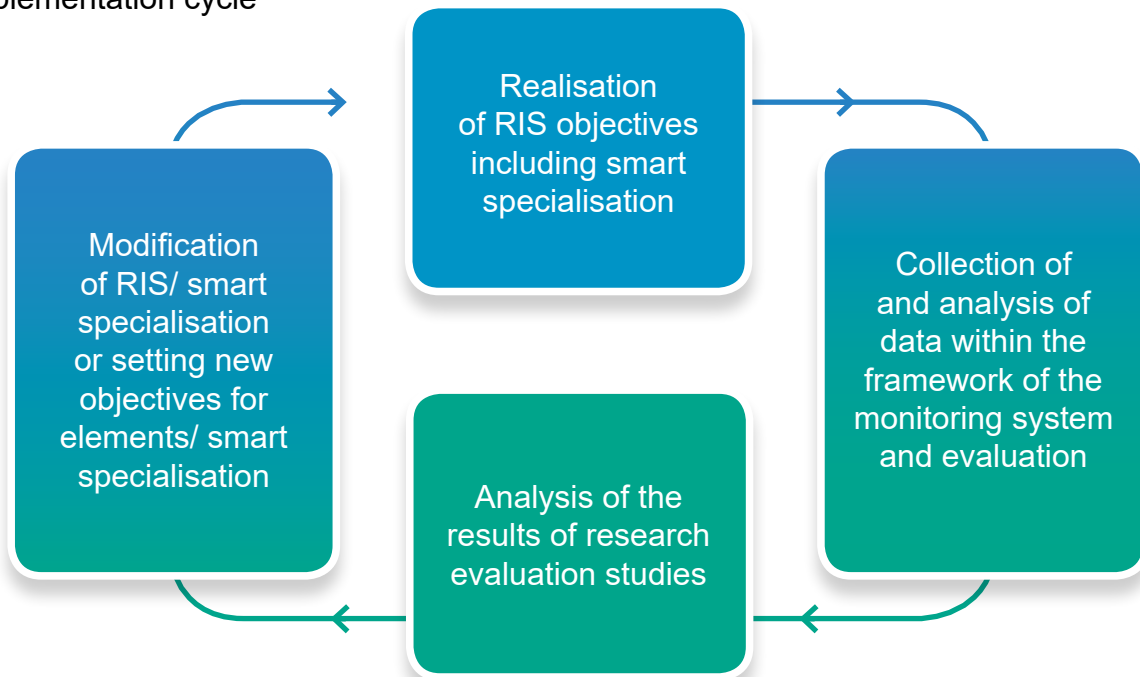
# 4. Implementation of the strategy

Operating model

## 4. Implementation of the strategy

The implementation of the RIS Mazovia 2030 takes place in a closed cycle. The implementation of RIS objectives is accompanied by data collection within the monitoring system. The analysis of these data and the assessment of the results of evaluation studies will allow an initial understanding of the implementation of RIS so far, which in turn will lead to the formulation of conclusions on further actions. In practice, this may mean making modifications to the provisions of the strategy, the description of areas of smart specialisation or setting new objectives or defining new areas of smart specialisation.

RIS implementation cycle



## The key documents included in the RIS implementation system:

- Implementation Programmes (IP),
- IP implementation reports,
- Evaluation plan,
- Communication plan,
- Risk analysis,
- Directional documents, specifying the areas of smart specialisation.



# 5. Concept of smart specialisation

Concept, fields and mechanism of operations

## 5. The concept of smart specialisation

Smart specialisation was introduced into EU cohesion policy in 2010 with the adoption of the Strategy for smart, sustainable and inclusive growth (Europe 2020 Strategy). The adoption of a strategy for smart specialisation was, in the financial perspective 2014-2020 an ex ante condition for the implementation of support under Thematic Objective 1: Supporting research, technological development and innovation.

Smart specialisation can be understood as a specific approach to programming and implementation of innovation support policy. It is based on the assumption that, thanks to concentration and targeting of knowledge resources to a limited number of priorities in the economy of a country/region, that entity can gain - and maintain - a competitive advantage.

### **The benefits of smart specialisation result from, among other issues:**

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- economies of scale associated with concentration on the implementation of a large number of thematically related undertakings,
- extending the market offer as a result of implementing innovations,
- spillover effect connected with using knowledge in economic activity, but also with interactions between entities through cooperative relations or imitation.

A strategy for smart specialisation is also defined as a national or regional innovation strategy aimed at building a competitive advantage by developing research and innovation capacities and combining them with business aspirations, in order to exploit emerging market opportunities and solutions in a coherent way, avoiding duplication and fragmentation. The strategy may take the form of a national or regional strategic framework for research and innovation.

The implementation of the concept of smart specialisation is aimed, among other targets at building relationships between the research and innovation sphere and economic activity. It favours the pooling of resources and potentials, as well as the inclusion of local advantages into global value chains. It is closely related to the concentration of **knowledge** - including tacit knowledge, resulting from e.g. personal experience, know-how, practical knowledge of a given market or trade secrets. Therefore, it is crucial to involve stakeholders (including entrepreneurs) as broadly as possible directly in the process of creating, implementing, monitoring, evaluating and updating the strategy for smart specialisation, understood as **a process of entrepreneurial discovery**. This process requires from the Authority Managing RIS, an ambitious yet realistic approach to setting priorities, as well as active cooperating with the key players in the regional economic ecosystem and, experimenting with new types of activities, communication channels and forms of support.



## 5.1. Structure of smart specialisation

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The smart specialisation of the Mazowieckie voivodeship is open - it assumes the possibility of identifying new development niches at any time of the smart specialisation strategy implementation. Four main thematic areas were adopted as the basis for the specialisation, on the foundation of which the entrepreneurial discovery process is organised. For each area of smart specialisation, the assumed economic effects and expected project results were defined, as well as sample technologies supporting the area. The above elements may be used to formulate project assessment criteria in the instruments as built upon smart specialisation.

The entrepreneurial discovery process leads to the clarification of areas of specialisation through the identification of development niches - detailed topics of projects that require support. Depending on the type of activities undertaken, development niches may take the form of e.g. a list of priority research directions, a list of key competencies or directions of vocational education, a map of needs in the area of research infrastructure, a map of needs in the area of foreign in the scope of foreign investments or similar directional documents.

## 5.2. Smart specialisation areas

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### I. Safe food

The area focuses on ensuring high quality agri-food products that are safe for consumers and the environment. This can be achieved, by among other ways through improving products and processes related to their production, processing, storage, distribution and disposal.

## **The area includes solutions affecting food quality and safety, among others, in the field of:**

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- farming and breeding techniques (including precision farming),
- fertilisers, plant protection products, feedingstuffs, veterinary medicines,
- machinery, equipment and tools for agriculture and agri-food processing,
- formulation of food products and improvement of technological processes,
- quality testing of agri-food products,
- food storage and distribution (including packaging).

**Name of area:** Safe food.

**Acronym:** BEZY

**Assumed economic effects:** Increase in the availability of high quality agricultural and food products, safe for consumers and the environment.

**Expected results of the projects:** Direct or indirect impact on improving the quality and safety of food products.

### **Examples of technologies supporting the area of specialisation:**

- Agritech - technologies dedicated to agriculture, both plant and animal production up to the first processing stage.
- Biotech - technologies using biological processes on an industrial scale.
- Foodtech - technologies dedicated to food production from the first processing of agricultural products.
- Qualitytech - technologies and solutions used in quality control.





## II. Smart systems in industry and infrastructure

This area focuses on technological solutions leading to optimisation, automation, adaptation or autonomisation, and ensuring the security of processes related to the functioning of enterprises and infrastructure.

**The area includes, among others, the implementation of innovations in the field of:**

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- management, control and monitoring of technological processes (e.g. pre-fault diagnostics and maintenance),
- applications of artificial intelligence and the Internet of Things in industry and infrastructure (e.g. management of relations between devices, machines or infrastructure objects),
- material and energy resource efficiency (e.g. smart grids, energy storage),
- improvement of decision-making processes related to the functioning of enterprises,
- transformation of the economy towards Industry 4.0,
- smart buildings and smart cities.

**Area title:** Smart systems in industry and infrastructure.

**Acronym:** INSPI

**Assumed economic effects:** Increase in the number of innovations contributing to the improvement of functioning of enterprises and infrastructure.

**Expected project results:** To increase the level of efficiency, automation, adaptability, autonomisation and security of processes related to the functioning of enterprises and infrastructure.

### Examples of technologies supporting the area of specialisation:

- Budtech - technologies dedicated to residential and industrial buildings, including smart buildings.
- Photonics - technologies combining optics, fibre optics, electronics and computer science to develop techniques and devices (including distributed sensing and sensors) that use electromagnetic radiation (other than radio) to perform measurement and information transmission and processing.
- Hardware - electronic and electrotechnical devices, including those using optical technologies.
- Logistech - technologies dedicated to logistics and transport.
- Softtech - algorithms, computer programmes, management support systems, e-services.
- Maintenance - products and services in the field of production automation, pre-failure predictive modelling in the production process.
- Internet of Things - solutions for autonomous data exchange and processing between devices and systems.



### III. Modern business ecosystem

This area focuses on technological solutions, processes and services of business environment institutions that positively influence the interaction between business and its environment.

#### The area includes, among others:

- reducing the negative impact of economic activity on the environment (e.g. by reducing the amount of waste and pollutants emitted, managing waste and by-products, striving for a transition to a circular economy, using renewable energy sources).

- providing a comprehensive offer of development services (e.g. provided by regional economic development animators or business environment institutions acting for the development of entrepreneurship and innovativeness), facilitating access to funds, infrastructure and knowledge resources necessary for the development and growth of innovative activity of enterprises,
- developing services of the creative sector in the area of creative activity of a utilitarian character,
- improving access to R&D infrastructure and developing the offer of research and development works implemented for the needs of entrepreneurs.

**Name of the area:** Modern business ecosystem.

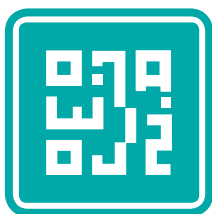
**Acronym:** NEKO

**Assumed economic effect:** Formation of an environment friendly to conducting innovative activity in Mazovia and positive interactions between business and its environment.

**Expected project results:** Improvement of conditions for conducting business and innovative activity, improvement of access to complex business support services, reduction of the negative impact of economic activity on the environment.

#### **Examples of technologies supporting the area of specialisation:**

- Biotech - technologies that use biological processes on an industrial scale.
- Cleantech - solutions that contribute to achieving the desired effect using less resources, waste management, elimination of pollution and waste sources, recycling and upcycling, biodegradable materials, blue-green infrastructure.
- Designtech - solutions and services based on creative activities, including industrial design.
- Fintech - technologies supporting the provision of financial and insurance services.
- Photovoltaics and other renewable energy technologies.
- Retailtech - technologies used in commerce and services.
- Softtech - algorithms, computer programmes, management support systems, e-services.



## IV. High quality of life

The area focuses on technological and organisational solutions aimed at developing social and human capital, providing access to individualised medicine and preventing diseases, enhancing, social inclusion and counteracting the negative effects of developmental polarisation of the region and implementation of social innovations. It includes innovations contributing to the improvement of the quality of life of Mazovia's residents.

### The area includes innovations in:

- education,
- health,
- safety,
- working environment,
- leisure activities.

**Name of the area:** High quality of life.

**Acronym:** WOJAŻ

**Assumed economic effects:** Increase in the attractiveness of the voivodeship as a place for living and for the social education and professional development of residents, reduction of negative effects of developmental polarisation in the voivodship, increase in social and human capital.

**Expected project result:** Increased quality and availability of products and services in the area of education, health, safety, working or leisure environment that are, in particular aimed at satisfying the specific needs of certain social groups, social inclusion activity.



## Examples of technologies supporting the area of specialisation:

- Biotech - technologies using biological processes on an industrial scale.
- Chemtech - technologies of the chemical industry.
- Edutech - technologies used in the education of both children and young adults in various forms of education.
- Securtech - technologies dedicated to improving safety, both in the workplace and in products offered on the market.
- Medtech - medical drugs and technologies (including, among others: devices, biosensors, flexible sensors, personal electronics, advanced materials and nanotechnologies for medical and health care purposes).
- Healthtech - solutions having a positive impact on human health, including cosmetics and dietary supplements, sports and rehabilitation equipment, diagnostic tests and devices, as well as IT solutions for health care.



## 5.3. Assessment of compliance with smart specialisation

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One of the ways of translating smart specialisation into concrete measures are project assessment criteria under various support instruments. Criteria may refer directly to the description of areas of smart specialisation or to appropriate implementation documents (e.g. a policy document for smart specialisation or an implementation programme), and take the form of access criteria or scoring criteria, depending on the purpose pursued by a given instrument. RIS proposes how different types of projects can be assessed for compliance with smart specialisation. It is also possible to differentiate between high and low compliance.

**It is advisable to distinguish at least two levels of compliance with smart specialisation when assessing projects:**

- **high compliance** occurs in the case of undertakings whose main part is directed at the goal, the expected economic result indicated in the description of the smart specialisation area or the goal specified in the directional documents for smart specialisation (if such a document was prepared for the given type of undertakings); for example, R&D works realised in order to put in place a specific solution included in the smart specialisation area.
- **low compliance** (or incidental compliance) occurs in the case of undertakings the results of which may find various applications, partly also in the areas of smart specialisation of the Mazowieckie voivodeship; an example may be the development of research infrastructure without a clear focus on research works included in the areas of smart specialisation.

The decision on how to assess the compliance of projects with smart specialisation belongs to the institution responsible for the policy instrument. When linking smart specialisation with access criteria, it is advisable to require a high degree of smart specialisation compliance.

# 6. Entrepreneurial discovery process in Mazovia

Shared leadership

## 6. Entrepreneurial discovery process in Mazovia

**Entrepreneurial discovery process (EDP)** is an activity aimed at involving stakeholders (including entrepreneurs, representatives of science and Business Environment Institutions, as well as representatives of scientific entities and local government units) in the process of designing, implementing, monitoring, evaluating and updating the smart specialisation strategy. Thanks to the direct involvement of stakeholders in the EDP, it is possible to use personal knowledge and, experience, as well as knowledge of markets, current trends and competitive conditions. EDP enables the verification of areas of smart specialisation, allows synchronisation of the flow of knowledge about development opportunities for enterprises in the region with the process of creating regional policy (strategy) and its priorities identified in terms of shaping the regional innovation ecosystem. The EDP leads to the clarification of areas of specialisation through the identification of development niches - detailed topics of projects requiring support.

A Platform to implement the process of entrepreneurial discovery is provided by, among others, **Working Groups for smart specialisation of the Mazowieckie Voivodeship**. Working Groups are groups composed of RIS stakeholders - representatives of entrepreneurs, research units, local government units and their organisational units and BEIs.

They are assigned to four areas of smart specialisation of Mazowieckie Voivodeship: safe food, smart systems in industry and infrastructure, modern business ecosystem, high quality of life. The functioning of the groups enables the implementation of the entrepreneurial discovery process - a key element of the smart specialisation concept implementation. Within the groups, it is possible to create research teams focusing on selected issues.



### **Mazovian Innovation Council (MRI)**

is an institution of consultative and advisory character for the Board of Mazowieckie Voivodeship.

It is an advisory body composed of representatives of the regional environment: entities associating entrepreneurs, science institutions and public administration (including representatives of territorial self-government units from the Warszawski stołeczny region and Mazowiecki regionalny region).

The MRI's tasks are: evaluation and assessment of the innovation policy of the region, including RIS; assessment of the status of RIS implementation on the basis of data on innovation from the strategy monitoring and evaluation system; participation in the elaboration of RIS implementation programmes; the provision of opinion on the risk analysis and the RIS evaluation plan.

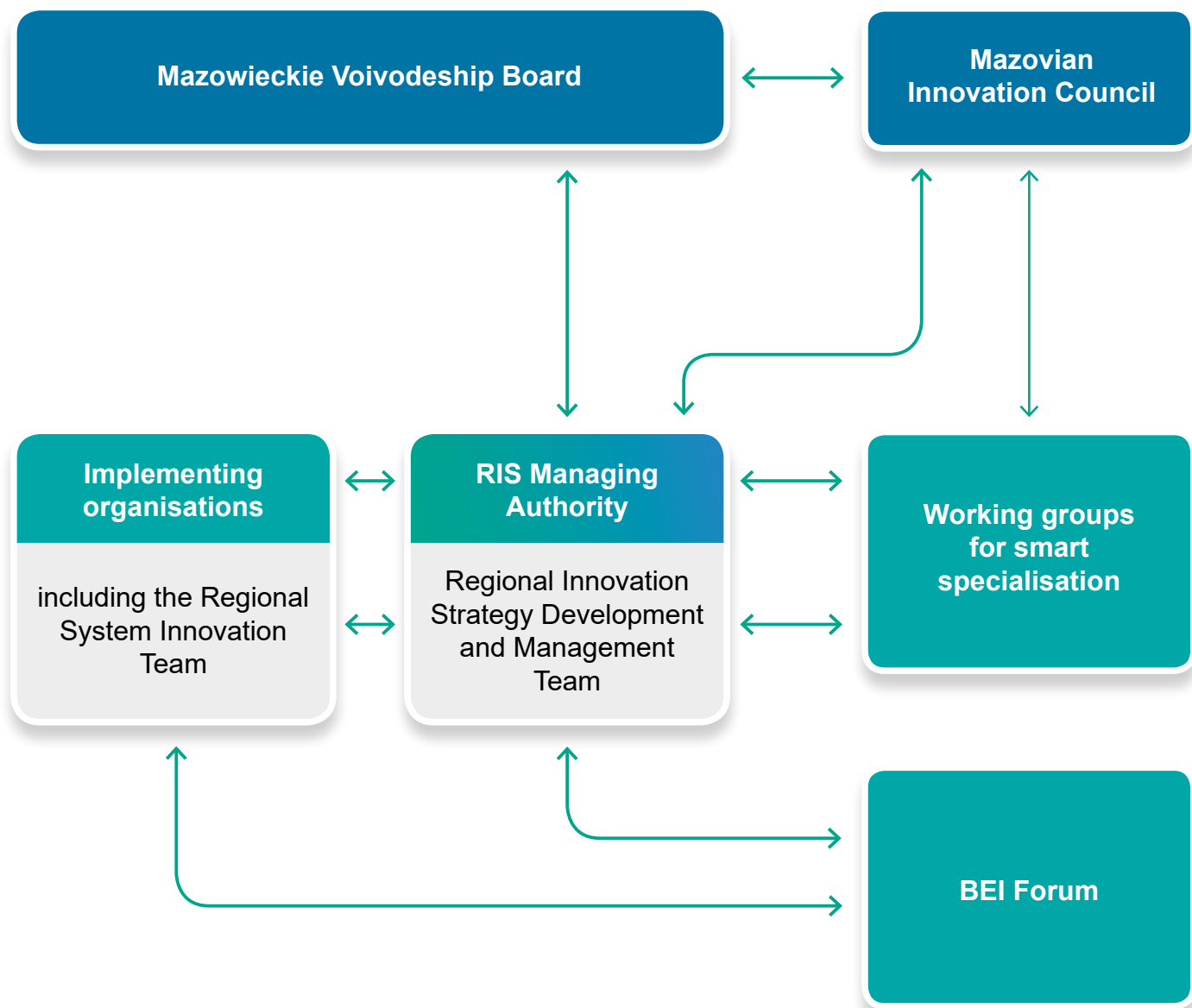


### **The Business Environment Institutions Forum (BEI Forum)**

is a body gathering representatives of business environment institutions operating in Mazovia.

The BEI Forum is a place where an exchange of information on the functioning of the innovation ecosystem in Mazovia and the creation of support directed to SMEs takes place.

The tasks of the BEI Forum include: giving an opinion on solutions within the system of accreditation of business environment institutions and initiating activities and projects, the implementation of which will use the potential of the existing networks of business environment institutions.



**Rys. 03. Structure of implementation of the Regional Innovation Strategy for Mazovia.**





