



# S3 Couple Net

## Abstract of S3 strategies – South Bohemia

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## Main objective

The main objective of this document is to create an abstract of the regional RIS3 strategy of the South Bohemian Region, which bears a unified structure as a mirror document on the Upper Austrian side so that an effective comparative analysis of both documents can be carried out.

When designing the methodology for this comparison, emphasis was placed on a thorough study of both strategies in order not to leave out any important aspects and at the same time to prepare a meaningful and clear abstract.

Elaboration of S3 strategies' abstracts following given structure to perform crossborder comparison as for the basis of A.T1.12.

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## Chapter 1: The process

*Objective:* To describe the process of S3 strategy development

### 1.1 The length of strategy development, length of program Framework

#### **Programming period**

The current RIS3 strategy of the South Bohemian Region is prepared for the programming period covering the years 2021-2027, the same as the National RIS3 strategy.

The period of creating / updating a new RIS3 strategy is a long-term process. Usually it takes about 0.5 - 1 year.

#### **The structure and content of the strategy**

The RIS3 strategy of the South Bohemian Region set the goals in the field of R&D&I environment on the regional level. The RIS3 strategy describes in basic terms the research and economic environment of the region. In the national and international context, it identifies important segments of the regional economy, for which research, development and innovation are a key parameter of their further development and competitiveness. This determines the existing or potential regional S3 specialization.

**The first part** of the Regional Annex to the RIS3 Strategy, the analytical part, briefly summarizes the position of the South Bohemian Region in terms of economic importance, representation of R&D capacities and other aspects related to the innovation potential of the region. It also describes the regional innovation system and regional application sectors (high performance sectors and R&D expenditures). The results of the analytical part are then summarized in a matrix of SWOT analysis.

**The second part**, the proposal part, then presents a summary of horizontal measures and vertical measures (represented by the so-called regional domains of specialization). Regional domains of specialization defined within EDP (Entrepreneurial Discovery Process) at the level of regional innovation platforms. Other economy and R&D specifics of the region are also considered.

**The third part** of the strategy then describes the ways of implementing its content and indicates the possibilities of co-financing the included objectives and measures. This section also describes the basic features related to monitoring, evaluation and updating the strategy.

And finally, **the last part** of the RIS3 strategy are the so-called cards of regional domains of specialization (vertical measures), which include a more detailed description of them.

### 1.2 The structure of the entities involved and their role

Representatives of all relevant levels of stakeholders play an important role in the preparation and updating of the RIS3 strategy of the South Bohemian Region:

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- scientific research and application sphere,
  - the business community,
  - municipal sphere (cities, municipalities)
  - regional management (Regional Authority)
  - non-profit sector and other partners involved in various forms in the eco-innovation environment (service and support organizations, etc.).

During the preparation and implementation of the strategy, the triple / quadruple helix principles are thus continuously fulfilled.

Because the goal of RIS3 is to ensure the appropriate allocation of European, national, regional, and private resources in areas that will be found to be the most promising for the use of knowledge and innovation potential of the region (and thus the entire Czech Republic). The key representatives of the business sector, research and educational institutions, public administration and other partners, e.g., from the non-profit sector (the so-called bottom-up system through the EDP), must therefore be involved in identifying these priority areas.

Representatives of these areas of activity are also members of the Committee for Innovation of the South Bohemian Region and Regional Innovation Platforms (RIPs). These structures continuously work on topics falling within their thematic areas and, using the principles of the EDP, they participate in the fulfillment of individual parts of the Regional RIS3 Strategy. The following platforms respecting the principles of triple / quadruple helix exist in the South Bohemian Region:

#### **Committee for Innovation of the South Bohemian Region**

The South Bohemian Regional Innovation Committee was established by the South Bohemian Regional Council on 27 March 2014. The Commission is an advisory body to the South Bohemian Regional Council in the field of supporting innovative business, science, and research in the South Bohemian Region. The members of the Committee are appointed from among the representatives of the South Bohemian Region, major public entities, major business entities of innovative business, universities and R&D institutions, and representatives of supporting organizations managing innovation infrastructure in the South Bohemian Region. The Committee meets at least twice a year.

Role and main tasks of the Committee for Innovation of the South Bohemian Region:

- a) coordinates the preparation, implementation and fulfillment of the regional innovation strategy (the so-called RIS3 strategy of the South Bohemian Region - smart specialization strategy);
- b) proposes and coordinates the preparation, implementation and evaluation of individual system measures of direct and indirect support for innovative business and science, R&D in the territory of the South Bohemian Region;

- c) monitors and evaluates the achievement of the expected outputs and results defined in the RIS3 Strategy Action Plan;
- d) discusses the implementation of the activities of the RIS3 Action Plan and their compliance with the approved objectives of the RIS3 strategy document;
- e) proposes possible changes in the implementation of the activities of the RIS3 Action Plan with regard to the development of the business environment in the South Bohemian Region and the development of possibilities for financing these activities;
- f) proposes updates of the RIS3 Strategy Action Plan (new activities and projects, changes in existing ones) based on the identified needs in the area of support for innovative entrepreneurship in the South Bohemian Region;
- g) comment on the proposed update of the RIS3 strategy document;
- h) helps to achieve agreement in the region among key actors in activities related to the support of innovative entrepreneurship.

### **Regional Innovation Platforms**

- RIP for the topic “Quality human resources” - South Bohemian Employment Pact;
- RIP for the topic “Cooperation and Technology Transfer” - Smart Region South Bohemia Committee;
- RIP for the topic “Business Development” - Board of Consultants at South Bohemian Agency for Innovation Support;
- RIP for the topic “Digital Transformation” - South Bohemian Digi Hub;
- RIP for the topic “Bioeconomics and circular economy”

### **1.3 The role of regional government**

The main role of the South Bohemian Region lies in the political and institutional coverage of the area (establishment of the Committee for Innovation of the South Bohemian Region as the main body in the area, appointment of its members and a representative of the regional management to this committee).

The role of the South Bohemian Region is also absolutely crucial in the area of providing secondary education. A professional technically oriented workforce (ie high school graduates) is a prerequisite for successfully ensuring most of the goals and measures of the RIS3 strategy of the South Bohemian Region. However, their long-term lack is one of the important limits for the realization of these goals.

The South Bohemian Region also certainly spends funds directly or indirectly on R&D&I support areas.

Summary of the role of the South Bohemian Region:

- Subsidy programs with a direct or indirect link to the area of R&D&I (support in the order of units of millions of CZK)

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- Support for business missions, support for preferential regional loans
  - Support for preferential regional loans (in cooperation with the National Development Bank)
  - Subsidy programs implemented through South Bohemian Science and Technology Park (JVTP)
    - o South Bohemian Business vouchers
    - o South Bohemian Creative vouchers
    - o Start-up competition Jihoczech
  - Direct financial support of selected support schemes / institutions involved in the creation and development of a regional R&D&I support system (eg South Bohemian Chamber of Commerce, South Bohemian Society for Human Resources Development, Regional Agrarian Chamber, etc.)
  - Implementation and co-financing of the activities of the projects *Smart Accelerator in the South Bohemian Region* and *Smart Accelerator 2 in the South Bohemian Region*
  - Interventions in the field of secondary education (response to labor market needs), financing of investment and non-investment measures in the field of secondary education - South Bohemian Region ensures interconnection and cooperation with secondary vocational schools (new educational programs with modifications for new trends within the RIS3 strategy).
  - Co-financing of selected projects and activities in the field of R&D&I, in which the South Bohemian Region participates directly

#### 1.4 Preparation process – working groups, other structures / platforms, what analytical work / documents were carried out etc.

The preparation of the RIS3 strategy traditionally takes place under the coordination of the *Smart accelerator* project team. The team members carry out (using their own resources or external services) the surveys and analyzes needed to draw up the strategy and coordinate the involvement of other actors in the regional innovation ecosystem.

All established regional innovation platforms, which also discuss the process of elaborating the RIS3 strategy at their meetings, also participate in the preparation through their suggestions, comments and suggestions. The materials are sent to representatives of all entities of the innovation ecosystem in the region for comments and insights. The proposal may also be discussed in the working groups they set up.

The creation of a regional RIS3 strategy is continuously consulted and also reviewed by the Minister of Industry and Trade of the Czech Republic. The resulting proposal is discussed and approved by the South Bohemian Regional Innovation Committee and subsequently finally approved by the South Bohemian Regional Authority.

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## Chapter 2: The content

*Objective: To describe the S3 strategy content in detail*

### 2.1 What horizontal and vertical themes it contains and what are the connections between the two regions

The proposal part of the RIS3 strategy of the South Bohemian Region is divided into two levels:

- A. Key areas for change (horizontal level)
- B. Domains of specialization (vertical level)

A similar breakdown is also applied in the National RIS3 Strategy.

### 2.2 How are the vertical thematic priorities (domains of specialization) defined and what are the links between the two regions

The proposal part of the RIS3 strategy of the South Bohemian Region currently defines the following vertical domains of specialization:

#### *Engineering and mechatronics*

- Manufacture of machinery and equipment
- Production of metal structures and metal products

Link to CZ-NACE: main links: 28, 25, linked: 29, 26, 27, 72, 24, 32, 33, 62, 18, 43, 81, 33, 13

#### *Electronics, electrical engineering and IT*

- Manufacture of electrical equipment
- Manufacture of computers, electronic and optical products
- Information technology activities

Link to CZ-NACE: main links: 27, 26, 62, linked: 72, 29, 28, 86, 88, 80, 95, 18, 70

#### *Biotechnology for the sustainable development of society*

- Health care
- Production of rubber and plastic products
- Crop and animal production, hunting and related activities
- Production of food products
- Architectural and engineering activities; technical testing and analysis
- Manufacture of basic pharmaceutical products and pharmaceutical preparations
- Manufacture of chemicals and chemical products
- Circulating economy
- Sustainable food production

Link to CZ-NACE: main links: 86, 22, 01, 10, 71, 21, 72, 20, linked: 11, 03, 74, 26, 45, 38, 39, 24, 17, 46, 47, 27



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### *Automotive*

- Manufacture of motor vehicles, trailers and semi-trailers
- Manufacture of other transport equipment
- Architectural and engineering activities; technical testing and analysis

Link to CZ-NACE: main links: 29,30, 71, linked: 72, 28, 25, 27, 26, 13, 23, 45, 22, 49, 20

### *Textile and clothing industry*

- Manufacture of textiles
- Manufacture of clothing
- Manufacture of leather and related products

Link to CZ-NACE: main links: 13, 14, 15, linked: 20, 96, 71, 72, 85, 96, 28, 29

## 2.3 How the horizontal objectives and measures are defined and what are the links between the two regions

The design part of the RIS3 strategy of the South Bohemian Region identifies 4 key areas of change:

### **Key area of change A: Quality human resources**

- A.1.1. Increasing interest in education in technical and science-oriented fields at all levels of education
- A.1.2. Increasing the relevance of education to the needs of the regional labor market
- A.1.3. Attracting new and retaining existing top scientists
- A.1.4. Entrepreneurship development in the system of secondary, tertiary and lifelong learning
- A.1.5. Development of research and educational infrastructure

### **Key area of change B: Cooperation and technology and knowledge transfer**

- B1.1. Strengthening cooperation between companies, R&D institutions and municipalities
- B1.2. Strengthening transnational cooperation and increasing the mobility of researchers

### **Key area of change C: Business development and innovation**

- C 1.1 Improving the quality of services for start-ups
- C 1.2. Development of innovation potential in companies, including intellectual property protection
- C1.3. Increasing the internationalization of companies

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**Key Area for Change D: Development and Integration of Digitization, Smart Solutions and Industry 4.0**

- D1.1 Development and integration of digitization, smart solutions and Industry 4.0 in the business sphere
- D1.2. Development and integration of digitization, smart solutions and Industry 4.0 in public administration

## 2.4 What are the objectives included in the strategy and measures for the field of digital transformation (plus connectors)

The RIS3 strategy of the South Bohemian Region defines the following main topics in the field of industrial transformation:

- Development of the offer and services of the South Bohemian Digi Hub (JDH) - focusing mainly on the areas of Robotic Process Automation, Artificial Intelligence, Virtual and Augmented Reality and the Internet of Things;
- Implementation of the objectives of the strategy "Strategic Development Plan of the Smart Region of the South Bohemian Region" (main topics: mobility, eGovernment & digitization, energy, environment, social and health services and effective land management & innovation);
- Subsidy programs of the South Bohemian Region (support for the development of the smart cities concept, support for technical education, support for new fields at universities in the South Bohemian Region, etc.);
- Support tools and programs implemented through JVTP - business vouchers, Jihoczech start-up competition, development of acceleration programs, etc.

Persistent identified problems in the region regarding digital transformation

- Insufficient awareness of small and medium-sized enterprises (SMEs) about the possibilities of interconnection and cooperation with the R&D sector, the university, and the public sphere
- Different degree of readiness of SMEs for gradual implementation of elements and strategies of digitization - ignorance of High-Tech technologies and their use
- Insufficient qualification of employees for the implementation of new procedures (digital transformation)
- Insufficient "digi skills" of high school and university graduates, delayed reaction of inclusion of topics in high school and university educational plans

Tools that are developed to eliminate these shortcomings within the activities of the South Bohemian Digi Hub:

- selection, addressing and involvement of suitable JDH partners
  - o technological partners (experts-solvers)

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- “Best Practice” companies in the region (Czech Republic)
  - building a database of SMEs in the region - networking partners
  - Linking SMEs with R&D, universities, ...
  - identification of strong areas and topics of digitization in the region
    - VR / AR, RPA, AI, IoT technologies, - mutual synergies
    - areas - biotechnology, agriculture
  - access to financing - support of Digi Hub services:
    - Regional Authority, Digital Europe Programs (2021-2027), The Country for The Future (2020-2027), OP EIC (Infrastructure Services), OP TAK, ...
  - Gradual construction of own test background of TESTBED technologies - VR, RPA, IoT, AI, collaborative robot, ...
  - Creation of RIP for digital transformations - extension of the possibilities of the Digi Hub project
  - enlightenment, education, community building:
    - RPA internship program, AI internship program, VReduNet cross-border project, AI Social Design Thinking Lab cross-border project, Digi Hub workshops and presentations at thematic seminars
    - AI training, regular thematic trainings and workshops on new digital technologies, creation of a pilot project for education in the field of programming and robotics from kindergarten to university, ...

### Chapter 3: Regional context

*Objective: To describe the establishment of the S3 strategy within the framework of strategic documents at the regional level*

The first regional innovation strategy of South Bohemian region was developed and approved in 2009 - 2010 by the South Bohemian Agency for the Support of Innovative Entrepreneurship, and the Regional Development Agency of South Bohemia, a.s.

This was followed by another version of the document, which was already drafted as an annex to the National RIS3 Strategy and was prepared in 2013 - 2014 and approved by the South Bohemian Regional Authority in June 2014.

The current version of the RIS3 strategy of the South Bohemian Region for the period 2021-2027 was prepared in the period 01-06 / 2020 and was approved by the South Bohemian Regional Authority in June 2020. In 2022, its next update is expected. It builds on the previous document from June 2014, resp. its update carried out in May 2018. The update mainly concerns the extension and specification of regional domains of specialization, the update of prepared and implemented innovation tools and related indicators.

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### 3.1 What is the role of the RIS3 strategy in the region

#### **RIS3 strategy in a regional context**

The RIS3 strategy of the South Bohemian Region is a basic and overarching strategic document for the area of development of innovations, scientific research activities and related topics in the South Bohemian Region.

The document co-creates the basic framework for oriented and applied research, which has the potential to create an economic competitive advantage in the South Bohemian Region. An important element of the strategy is also the current consideration of current and future societal challenges (megatrends) and regional and specific conditions.

The RIS3 strategy of the South Bohemian Region supports the EDP in the region. Thanks to stakeholders involved in the implementation structures of the RIS3 strategy (regional innovation committee and regional innovation platforms, but also cooperation with national innovation platforms), it participates in the identification of hi-tech industries with competitive advantage and related new research topics in the region.

In the new programming period of the EU 2021 - 2027, the importance of the RIS3 strategy of the South Bohemian Region continues to grow (the preliminary condition of the EC in this area became a continuous condition).

#### **Link to the Development Program of the South Bohemian Region**

The links between the RIS3 strategy and the Development Program of the South Bohemian Region for the period 2021 - 2027 are very close. The most relevant links are emerging towards the first priority axis "*Smart region and competitive regional economy*". The aim of this priority axis is to "*develop the South Bohemian region in accordance with the SMART region concept and to support a competitive regional economy, which will be based on supporting the development of new and traditional industries with high added value. The intention is to create a modern and intelligent region that will be an attractive location for living and developing business activities.*"

The RIS3 strategy contains a number of elements that will contribute to the fulfillment of the content of the given priority axis and its strategic goals:

- Strategic objective No. 1: Support and development of smart solutions in public administration
- Strategic objective No. 2: Regional competitiveness and support of business activities
- Strategic objective No. 3: Creating conditions for the educational economy, science, research and innovation
- Strategic objective 4: Territorially balanced development and support for traditional industries

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## Strategic development plan of the Smart region of the South Bohemian region

The Strategic Development Plan of the Smart Region of the South Bohemian Region for the period 2019–2023, the main bearer of which is the South Bohemian Region, is a strategic document that defines activities aimed at improving competitiveness, developing innovations, protecting the environment and streamlining public administration. All areas addressed in this document are in accordance with the focus of the Regional Annex to the RIS3 Strategy. The key links can be traced mainly to the priority "*Increasing the competitiveness of the region*" and its strategic axes (6.1 Support for Smart City initiatives, 6.2 Support for Industry 4.0, 6.3 Cooperation between cities and universities, 6.4 Support for small and medium-sized enterprises).

### 3.2 What is its significance and use

A significant benefit of the RIS3 strategy on a regional scale is the definition of intersections and compliance with objectives and measures set at the national level (National RIS3 strategy). These intersections play and will continue to play an important role in the system of R&D&I funding (especially) from EU and national sources.

The RIS3 strategy identifies objectives and measures aimed at contributing to the main identified problems of the region:

- Quality and availability of human resources, their structure and quantity in relation to the requirements of the regional labor market;
- Cooperation and technology / knowledge transfer and their further development, strengthening internationalization;
- Creating conditions and removing barriers to the development of innovative business;
- Insufficient response of the region to global megatrends, in particular to the development and integration of digitization, smart solutions and Industry 4.0.

Specific projects or supporting instruments are being prepared and implemented to address these issues and meet the objectives of the regional RIS3 strategy. Most of them are captured within the RIS3 Strategy Action Plan. These are projects and instruments that meet the strategicity criteria and that demonstrably contribute to the objectives of the regional RIS3 strategy.

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## Chapter 4: National context

*Objective: To describe the importance and use of the S3 strategy in the framework of strategic documents at the national level*

### 4.1 The levels at which the S3 strategies are developed and their interconnection at the national level

The National RIS3 Strategy (National Research and Innovation Strategy for Intelligent Specialization of the Czech Republic 2021 - 2027) covers the RIS3 strategy of all regions of the Czech Republic, the abstracts of which form an appendix to the national strategy. The National RIS3 Strategy ensures the effective targeting of European, national and regional resources designed to support oriented and applied research and innovation. The National RIS3 Strategy directs support to selected priority areas that have a high potential for creating a long-term competitive advantage in the Czech Republic based on the use of knowledge and innovation. The identification and development of these promising areas, ie "smart specialization", is based on the development of the strengths of the Czech Republic and individual regions. It strives for targeted ("smart") use of the unique combination of opportunities offered by our economic background and research and innovation capacities. At the same time, the strategy identifies and addresses the weaknesses of the innovation system, which in turn represent barriers to the development of smart specialization and the innovation environment.

In the individual regions of the Czech Republic, work teams are set up to coordinate work related to the preparation, updating and implementation of RIS strategies, the activities of which are usually supported through Smart Accelerator projects.

The National RIS3 Strategy of the Czech Republic defines the following horizontal priorities (Key areas for change):

#### **Research, development, and innovation for business**

- Strategic goal A. Increasing the innovative performance of companies
  - o Specific objective A.1 Strengthening the innovative performance of existing companies and the response to industrial transformation, technological and societal change
  - o Specific objective A.2 Establishment and growth of new companies and use of new opportunities
  - o Specific objective A.3 Improving the functioning of innovation ecosystems at national and regional level

#### **Public research and development**

- Strategic goal B. Improving the quality of public research

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- Specific objective B.1 Improving the quality and social relevance of public research
  - Specific objective B.2 Improving the quality of the environment for the implementation of public research

### **People and smart skills**

- Strategic objective C. Increasing the availability of qualified people for research, development, and innovation
  - Specific objective C.1 Improving the capacity of the education system to prepare people for research, development, and innovation
  - Specific objective C.2 Skills development for smart specialization, industrial transformation, and entrepreneurship
  - Specific objective C.3 Increasing the potential and motivation of staff in research organizations

### **Digital agenda**

- Strategic goal D. Increasing the use of new technologies and digitization
  - Specific objective D.1 Support for digitization and use of new technologies in business
  - Specific objective D.2 Support for digitization and use of new technologies in the public sphere

Furthermore, the following domains of research and innovation specialization are defined at the national level (vertical level):

- Advanced materials, technologies, and systems,
- Digitization and automation of production technologies,
- Sustainable transport,
- Technologically advanced and safe transport,
- Electronics and digital technologies,
- Cultural and creative industries as a tool for accelerating the socio-economic development of the Czech Republic,
- Advanced medicine and medicines,
- Green technologies, the bioeconomy and sustainable food resources,
- Smart residences.

## **4.2 Funding of the RIS3 strategy**

The main instrument for the implementation of the objectives of the National RIS3 Strategy, and thus also the South Bohemian RIS3 Strategy, are the financial resources included in the

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budgets of the EU operational programmes and public tenders of the Czech national support programmes.

In the current EU programming period, the existence and implementation of a smart specialisation strategy (RIS3 strategy) is a basic condition for the implementation of EU cohesion policy interventions in the field of research, development, and innovation. To this end, calls for proposals (EU programmes) and calls for tenders (national sources) are prepared in the relevant fields to respond to the support of the priorities for oriented and applied research and innovation set out in the RIS3 strategies at national and regional level. In practice, the implemented projects will then focus on supporting the horizontal objectives, domains of specialisation and R&D&I themes defined in the National and Regional RIS3 strategies. The allocations of financial support earmarked for supporting the priorities of the RIS3 strategies in the operational programmes are quantified in Annex 3 of the National RIS3 Strategy.

#### 4.2.1 Funding from the EU sources

##### *Operational Programme Technologies and Applications for Competitiveness*

The main objective of the Operational Programme Technology and Applications for Competitiveness for the programming period 2021-2027 is to increase the added value and productivity of SMEs, as well as to develop new innovative companies or facilitate the transition to a sustainable and digital economy. The programme focuses on strengthening business performance in research, development, and innovation, developing entrepreneurship and digital infrastructure, as well as moving towards a low-carbon economy or more efficient use of resources.

The programme is divided into 6 priorities. Interventions to meet the objectives of RIS3 will be provided from Priority 1 (Strengthening the performance of enterprises in the field of research, development and innovation and their digital transformation), Priority 2 (Development of entrepreneurship and competitiveness of SMEs) and Priority 3 (Development of digital infrastructure), and a total of about 38.5 billion CZK is allocated from EU funds.

##### *Operational Programme Jan Amos Komenský*

The main objective of the OP JAK for the programming period 2021-2027 is to support the development of an open and educated society based on knowledge and skills, equal opportunities and developing the potential of everyone.

The programme structure includes 4 priorities. Interventions to meet the objectives of RIS3 will be provided mainly from Priority 1 (Research and Development), where approximately 42 billion CZK is allocated from EU funds for this purpose. A contribution to the development of



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the R&D&I environment in the region can also be expected from interventions under Priority 2 (Education).

#### *Integrated Regional Operational Programme*

The main objective of the interventions is to strengthen regional competitiveness and the quality of life of the population with a view to a balanced development of the territory and considering the diversity of needs. The IROP will support 7 core areas. IROP will finance a range of activities, of which Priority 1 (Improving public administration performance) is particularly linked to RIS3, as this is the area where support will be provided for cyber security and the provision of new digital state services for citizens (eGovernment). Approximately CZK 13 billion is allocated from EU funds for this purpose.

#### 4.2.2 Funding from national resources

National support programmes managed by the Technology Agency of the Czech Republic

The main source of funding for national and regional activities aimed at supporting the objectives of the RIS3 strategies are national support programmes managed by the Technology Agency of the Czech Republic. These programmes are implemented in the form of public competitions.

##### National Centres of Competence Programme (2018 - 2022)

The National Centres of Competence programme is aimed at supporting long-term cooperation between the research and application spheres and strengthening the institutional base of applied research. The aim is to increase the efficiency and quality of applied research and technology transfer results in key fields with growth prospects, to increase the competitiveness of enterprises and to strengthen the excellence and application relevance of research organisations. The state budget of the Czech Republic allocates CZK 5.07 billion for interventions in favour of RIS3 objectives.

##### EPSILON programme (2015-2023)

The programme is aimed mainly at improving the position of Czech and, in the global context, European industry by supporting projects falling under the category of applied research (includes industrial research, experimental development or a combination of both). The aim of the programme is to support projects whose results have a high potential for rapid market application in new products, production processes and services. The state budget of the Czech Republic allocates CZK 1.06 billion for interventions in favour of RIS3 objectives.

##### DELTA 2 programme (2020 - 2025)

The programme is aimed at bilateral international cooperation in applied research, experimental development and innovation between Czech enterprises and research organisations and their foreign partners. The aim is to acquire knowledge and skills leading to

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new products, processes and services or their substantial improvement. The programme focuses on cooperation with partners mainly from non-EU countries (Asia, South and North America), and to receive a grant from TA CR, projects must be supported by both the Czech (TA CR) and foreign parties (foreign organisations in the given location). The state budget of the Czech Republic allocates CZK 1.13 billion for interventions in favour of RIS3 objectives.

#### ÉTA Programme (2019 - 2023)

The aim of the programme is to strengthen the social and humanitarian dimension in applied research, experimental development, and innovation activities and to apply the outputs of these activities in the form of new or substantially improved existing products, procedures, processes or services.

The state budget of the Czech Republic allocates CZK 1.06 billion for interventions in favour of RIS3 objectives.

#### THETA Programme (2018 - 2025)

The focus of the programme is based on the updated State Energy Concept of the Czech Republic, which was approved by the Government of the Czech Republic in May 2015. The aim of the programme is to contribute in the medium and long term to the fulfilment of the vision of transformation and modernisation of the energy sector through the outputs, results and impacts of the supported projects. The state budget of the Czech Republic allocates CZK 3.10 billion for interventions in favour of the RIS3 objectives.

#### ZÉTA Programme (2017 - 2025)

The programme is aimed at supporting cooperation between academia and business through the involvement of students of higher education programmes, and in justified cases also students of secondary education programmes and students of higher vocational education programmes (hereinafter referred to as "students") and young researchers (hereinafter referred to as "young researchers") up to and including 35 years of age. The aim is to involve learners and young researchers in research and development activities aimed at applying the results in practice and to increase their interest in projects with a concrete practical impact on the economic sphere. The state budget of the Czech Republic allocates CZK 0.25 billion for interventions in favour of RIS3 objectives.

#### Support from the Czech Republic's departmental programmes

These programmes under the responsibility of individual ministries are also implemented in the form of public tenders.

#### TREND (2020 - 2027)

The Ministry of Industry and Trade is the guarantor of the programme, and the Technology Agency of the Czech Republic is the support provider and implementer. The main objective of

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the programme is to increase the international competitiveness of enterprises, especially by expanding their markets abroad, penetrating new markets or moving up in global value chains. It foresees an increase in the number of enterprises carrying out their own research and development activities and strengthening the orientation of research organisations towards internationally competitive applied research with benefits for industry and society. Research projects aimed at increasing the use of modern methods of production, its planning, management and distribution of products according to the principles of the Industry 4.0 initiative in key application sectors identified by strategic documents and initiatives of the Czech Republic and the European Union, especially the National RIS3 strategy, are supported. CZK 9.19 billion is allocated from the state budget of the Czech Republic for interventions in favour of RIS3 objectives.

#### The Country for the Future (2020-2027)

The provider of support is the Ministry of Industry and Trade. The programme is aimed at supporting the creation of innovative companies, the development of digital services and the introduction of innovations into practice. The programme is divided into three sub-programmes:

- "Start-ups" (system project "Technological Incubation of Start-ups")
- "Digital Leaders" (support for the development of infrastructure for the development of digital innovation and services)
- 'Innovation into Practice' (support for the introduction of product and process innovation in SMEs)

The state budget of the Czech Republic allocates CZK 5.45 billion for interventions in favour of the RIS3 objectives.

#### Security Research Programme of the Czech Republic 2015 - 2022

The provider of support is the Ministry of the Interior. The programme is aimed at supporting research and development activities in the field of security of the state and its citizens in accordance with the strategy of prevention, minimisation, and suppression of security threats, as set out in the Security Strategy of the Czech Republic, the National Priorities of Oriented Research, Experimental Development and Innovation and the priorities of the Interministerial Concept of Security Research and Development of the Czech Republic until 2015. The state budget of the Czech Republic allocates CZK 0.30 billion for interventions in favour of the RIS3 objectives.

#### Programme for the support of health applied research and development for the period 2015 - 2022

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The provider of support is the Ministry of Health. The aim of the programme is to contribute to the improvement of the health of the Czech population in the medium and long term and to continue to provide for the current needs in the health sector in the Czech Republic. Projects are supported in order to achieve new findings that will bring improvements in clinical procedures in diagnosis, treatment and prevention in dealing with the most common, but also rare or completely new diseases. The aim of the Programme is also to contribute to making the level of medical research in the Czech Republic comparable to that of the developed countries of the European Union. The Czech state budget allocates CZK 0.30 billion for interventions in favour of the RIS3 objectives.

Applied Research Programme of the Ministry of Agriculture for the period 2017 - 2025 EARTH

The managing authority is the Ministry of Agriculture. The programme is aimed at supporting applied research projects in the field of agriculture, food, water management and forestry, with expected results of high innovative potential, leading to the strengthening of stability, volume and quality of production, applicable in new products, technologies and production processes. The development of existing disciplines and technologies as well as the emergence of new knowledge, methods and practices is supported, which will allow to strengthen the competitiveness of the Czech agrarian sector and the development and use of renewable resources for society. The state budget of the Czech Republic allocates CZK 1.40 billion for interventions in favour of RIS3 objectives.

Programme to support applied research, experimental development and innovation in the field of transport - TRANSPORT 2020+ (2020 - 2026)

The programme is sponsored by the Ministry of Transport and implemented by the Technology Agency of the Czech Republic. The programme is aimed at supporting applied research and experimental development projects whose results have a high potential for further application in new approaches, technological procedures and services leading to the enhancement of social and economic benefits of transport. Emphasis is placed on strengthening cooperation between the research, academic and private sectors and creating appropriate conditions for commercialisation of research results and their use for the needs of society. The state budget of the Czech Republic allocates CZK 1.95 billion for interventions in favour of RIS3 objectives.

Programme to support applied research, experimental development, and innovation in the field of environment - Environment for Life (2020 - 2026)

The Ministry of the Environment is the guarantor, the Technology Agency of the Czech Republic is the provider of support and the implementer of the programme. The programme is aimed at supporting projects in the public interest, new processes, environmental technologies, and eco-innovations with high potential for rapid application in practice, supporting more time and knowledge-intensive solutions based on longer-term monitoring of

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social, natural, and climatic changes. The state budget of the Czech Republic allocates CZK 3.58 billion for interventions in favour of RIS3 objectives.

Security Research Programme of the Czech Republic 2021 - 2026: development, testing, and evaluation of new security technologies (SECTECH)

The provider of public support is the Ministry of the Interior. The main objective of SECTECH is to support the achievement of a technological and technical level that will enable the individual components of the Czech security system to acquire, acquire, maintain, and develop specific capabilities to ensure the security of the state and its citizens by mobilising the potential of the corporate sector, especially start-ups, small and medium-sized enterprises, to participate in the development and transfer of new security technologies. The state budget of the Czech Republic allocates CZK 0.50 billion for interventions in favour of the RIS3 objectives.

#### 4.2.3 EU programmes

The implementation of the RIS3 strategies is also indirectly supported through some EU programmes, notably Horizon Europe and others. The specific use of these resources depends on the success of individual entities from the Czech Republic in the competition for support funds.

##### Horizon Europe

Horizon Europe is the EU Framework Programme for Research and Innovation (2021-2027), which aims to contribute to:

- strengthening the EU's science and technology base and the European Research Area (ERA/ERA)
- increase innovation capacity, competitiveness, and job creation in Europe,
- meeting citizens' priorities and maintaining our socio-economic model and values.

The vision of the programme is a sustainable, fair, and prosperous future for people and planet based on European values. The €100 billion budget is divided into 3 pillars (Excellent Science, Global Challenges and Competitiveness of European Industry, Innovative Europe). The National Contact Point is the Technology Centre of the CAS.

#### 4.2.4 New EU instruments

In the period 2021-2027 there is an opportunity to support some of the interventions fulfilling the objectives of the RIS3 strategy through new EU instruments. These instruments can strengthen complementarity with other interventions aimed at achieving RIS3 objectives or missions. These are the following programmes and instruments:

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Recovery and Resilience Facility (2021-2027) - immediate economic and social assistance (loans and grants) to address the damage caused by the coronavirus pandemic. In the Czech Republic, a National Recovery Plan is being drawn up to benefit from this facility.

Mechanism for a Just Transition (2021-2027) - includes, among other things, the Green Deal for Europe plan, which aims to make Europe a climate neutral continent. A key instrument is the 'Just Transition Mechanism', which aims to ensure that the transition to a climate-neutral economy is fair and that no one is left behind. It will offer targeted support in the regions most affected, mobilising at least €150 billion between 2021 and 2027 to mitigate the socio-economic impacts of the transition. In the Czech Republic, the Just Transition Operational Programme has been created to use this mechanism for the structurally affected regions (Moravian-Silesian, Ústí nad Karlovy Vary).

The Modernisation Fund (2021-2030) - is also implemented under the Green Deal for Europe package. It focuses on climate and energy, which will contribute to the EU's transition to a more sustainable economy. Investments of at least CZK 150 billion over the next ten years will go towards projects that will significantly reduce the Czech Republic's dependence on coal combustion and accelerate the transition to clean energy sources. The aim of the investments is to help reduce harmful air emissions. The link to RIS3 is only indirect, but the projects may be complementary to those directly targeted by RIS3.

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## Chapter 5: Implementation

*Objective: To describe the implementation process of the S3 strategy*

### 5.1 What are the specific steps implemented in the region to fulfill the content of the S3 strategy

The RIS3 implementation structure in the South Bohemian Region follows the implementation structure set at the national level (this includes the RIS3 Steering Committee, the national RIS3 manager, support analytical teams and the National Innovation Platforms, or other articles).

The structure for the implementation of the content of the regional RIS3 strategy in the environment of the South Bohemian Region was established in connection with the transformation of the original Regional Innovation Strategy into the RIS3 strategy and the establishment of the South Bohemian Regional Innovation Committee. The team of the project "Smart Accelerator in the South Bohemian Region" (SA) took over the facilitation and organizational role, stating that its key activities consisted in the following areas:

- Implementation of the Regional Annex to the National RIS3 Strategy;
- Creation of an expert team mapping activities in the field of innovative entrepreneurship and support for the creation of new innovative tools;
- Update of the RIS3 Action Plan.

The task of the SA team is to provide comprehensive support for the development of the innovation environment in the region using the RIS3 strategy, in particular through the following activities:

- Support for communication between key stakeholders in the region,
- Networking of actors in the innovation environment and support for the creation of new contacts and cooperation projects,
- Update and discussion of the regional RIS3 strategy and the Action Plan of the regional RIS3 strategy,
- Ensuring the functioning of regional innovation platforms and the Innovation Committee of the South Bohemian Region,
- Preparation of strategic projects / interventions and search for resources for their implementation,
- Communication and information service of the regional RIS3 strategy towards the national manager of the National RIS3 strategy.

Reports submitted to the national level (six-month frequency) are prepared on the development of the content of the RIS3 strategy of the South Bohemian Region. At the level of the action plan, a list of projects / project intentions is maintained that fulfill or may fulfill individual parts of the regional annex.

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The Regional RIS3 Coordinator and the Regional RIS3 Manager ensure in this form the transfer of information and possible recommendations between the regional and national level. Information from the regional level of the National RIS3 Strategy includes in particular:

- information on relevant projects and interventions, broken down by strategic and specific objectives and sources of funding,
- information on the implementation of the regional RIS3 strategy towards the structure of the regional office, regional innovation councils, regional innovation platforms etc.,
- information on activities aimed at developing the innovation environment in the region,
- other related strategic activities and plans.

### **Strategic projects – RIS3 strategy action plan**

The fulfillment of strategic goals and activities, which have been identified in the Regional Innovation Strategy as key, takes place, among other things, through the implementation of strategic tools / projects. The supported projects are listed in the RIS3 Action Plan, for which an update is approved once a year by the Commission for Innovation of the South Bohemian Region.

To include the project in the Action Plan, it is necessary to meet the following strategic criteria:

1. The strategic project demonstrably and significantly contributes to the achievement of the specific objective of the regional RIS3 or the strategic objective of the national RIS3.
2. The strategic project strengthens cooperation between the subjects of the innovation system in the region or outside the region.
3. The strategic project shows demonstrable benefits / impacts for the private sector in the region / in the Czech Republic or serves to strengthen the intelligent specialization of selected regional domains of specialization or the Czech Republic.

### **Smart accelerator 2 in the South Bohemian region**

A specific tool for fulfilling the goals of the regional RIS3 strategy is the implementation of the Smart Accelerator 2 project. Through it, RIS3 is updated and subsequently implemented and the regional innovation ecosystem is created and stimulated. The aim of the project is to strengthen existing links and use the outputs in individual projects for further development in the identified strategic interventions:

- Digital region
- Smart solutions for the region
- Promoting higher innovation performance in the region



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## 5.2 What structures are established for implementation and what are their roles

The institutions with the main executive responsibility for managing the implementation of the regional RIS3 strategy are:

- South Bohemian Region ([www.kraj-jihocesky.cz](http://www.kraj-jihocesky.cz)) - position of RIS3 coordinator.
- South Bohemian Science and Technology Park ([www.jvtp.cz](http://www.jvtp.cz)) - position of RIS3 manager.

The South Bohemian Regional Innovation Committee (South Bohemian Regional Authority) holds a strategic role within the implementation structure. Regional domains of specialization and key areas of changes in the RIS3 strategy of the South Bohemian Region are further covered by the activities of the following established Regional Innovation Platforms (RIP):

- RIP for Quality Human Resources - South Bohemian Employment Pact.
- RIP for Cooperation and Technology Transfer - Smart Region South Bohemia Committee.
- RIP for Business Development - Board of Consultants at South Bohemian Agency for Innovation Support
- RIP for digital transformation - South Bohemian Digi Hub
- RIP for Bioeconomics and the Circulating Economy.

Regional Innovation Platforms (RIPs) have a supporting role in shaping the specific focus of the RIS3 strategy. RIPs are an advisory and consulting body of the The South Bohemian Regional Innovation Committee in fields in which regional specialization is directed and in the area of horizontal measures (i.e., Key Areas of Change), on which the RIS3 strategy in the South Bohemian Region is focused.

The Regional RIS3 Manager is responsible for coordinating the preparation and updating of the Regional Annex to the National RIS3 Strategy, as well as its implementation. Its role is to support regional structures, to build regional partnerships and to support cooperation at the regional level. The regional RIS3 manager acts as the secretary of the The South Bohemian Regional Innovation Committee. Institutionally, the position of regional RIS3 manager has long been associated with the South Bohemian Science and Technology Park. Maintaining the position at this institution is expected even after the completion of the Smart Accelerator 2 project in the South Bohemian Region.

The regional RIS3 coordinator is responsible for communication between the national and regional levels of the RIS3 strategy. It provides information and analytical services from the level of the Regional Office of the South Bohemian Region.

The topic of PR and marketing of the regional innovation brand is under the auspices of the South Bohemian Regional Innovation Committee, the implementation is coordinated by a marketing manager (employee of the Regional Office of the South Bohemian Region).

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The topics common to RIS3 and the labor market are discussed within the framework of the South Bohemian Employment Pact.

### 5.3 What funds and from what sources are spent on the implementation of the S3 strategy (regular X one-off, regional X external, etc.)

The RIS3 strategy of the South Bohemia Region is the basic strategic document for R&D&I in the conditions of the South Bohemia Region. It is not directly linked to financial resources that would be allocated, for example, through grants. To meet the objectives of the regional RIS3 strategy, mainly supporting instruments and programmes are used, the financing of which is ensured from EU and national resources of the Czech Republic (see chapter 6.2 Funding of the RIS3 strategy). To a limited extent, regional funds are also used to meet the objectives of the RIS3 strategy (e.g. the South Bohemian Business Vouchers, the South Bohemian Business Ideas Competition Jihoczech).

### 5.4 How the development of implementation is monitored (if any)

To monitor the fulfillment of the objectives of the Regional Annex to the RIS3 strategy, a range of the following indicators was set. These can be periodically monitored and evaluated. The aim is not to set the widest possible range of indicators, but rather to narrow their number and thus improve the efficiency of their reporting and monitoring.

#### **Key area of change A: Quality human resources**

- A1.1 Proportion of the number of pupils and students of technical fields at the level of secondary and higher education in the region
- A1.1 Number of regular regional activities leading to increased interest in the study of technical and natural sciences
- A1.2 Number of retraining courses of a technical nature offered by educational institutions and the Labor Office in the South Bohemian Region.
- A1.3 Number of R&D employees in the business sector in the region
- A1.3 Number of newly implemented international scientific projects in JČK
- A1.3 Number of R&D employees in VO at the university in JČK

#### **Key area of change B: Cooperation and technology and knowledge transfer**

- B1.1 Expenditure on R&D in the business sector in the South Bohemian Region
- B1.1 Number of marketing activities for newly created joint research and development results
- B1.2 Number of projects and financial volume of drawing funds from community sources (Horizon) from projects implemented in JČK.
- B1.2 Number of successful PhD students

#### **Key area of change C: Business development and innovation**

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- C1.1 Number of start-ups supported by the acceleration program in the South Bohemian Region
  - C1.1 Number of companies in the VTP incubation program in the South Bohemian Region
  - C1.2 Number of companies with non-capital R&D expenditures of min. CZK 1 million each year in the South Bohemian Region
  - C1.2 Number of new patent applications at companies
  - C1.3 Number of companies involved in cross-border and international projects

#### **Key Area for Change D: Development and Integration of Digitization, Smart Solutions, and Industry 4.0**

- D1.1 Number of SMEs that used Digi Hub services to address digitization issues and issues
- D1.2 Number of public institutions operating in the region that have implemented the digital transformation project
- D1.1 and D1.2 Number of projects and financial volume of drawing funds from Community sources (Digital Europe) from projects implemented in the region.

#### **RIS3 strategy update**

The RIS3 strategy of the South Bohemian Region is usually updated once every 2 years. The procedures and the course of the update follow similar procedures as the actual preparation of the regional annex. The updated RIS3 strategy of the South Bohemian Region is the input for updating the National RIS3 Strategy. The RIS3 strategy of the South Bohemian Region is always updated 6 months before the update of the National RIS3 Strategy (updating the National RIS3 Strategy is not an aggregation of updates to the regional annexes of the RIS3 Strategy but uses their information to edit its own document).

The update is not required in the following cases:

- clarification of the content of the application sector,
- partial completion of the application sector,
- changes or additions to indicators, etc.

On the contrary, the update is necessary in case of fundamental changes in the focus and content of the regional RIS3 strategy, major changes in the focus of application sectors (addition of a new application sector, abolition of the existing application sector).

The decision not to update the strategy is in the competence of the South Bohemian Regional Innovation Committee. The approval of the update itself then falls within the competence of the body that approved the original regional RIS3, i.e., the South Bohemian Regional Council.