

Regional Innovation Strategy of the Central Bohemian Region

2023-2028



Approved By The Central Bohemian Regional Assembly
On 18 September 2023



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Central Bohemian Innovation Center

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(No. 009-27/2023/ZK)



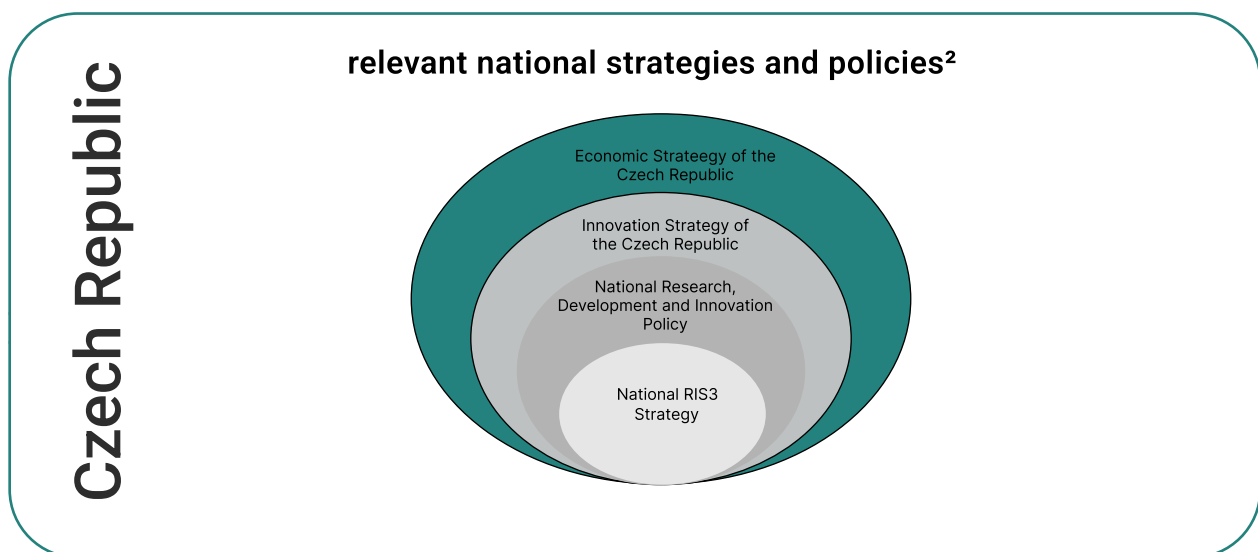
Contents

| | |
|---|----|
| 1. Introduction and strategic context..... | 4 |
| 2. Methodology underlying the elaboration of the CB RIS | 5 |
| 3. Regional profile and current trends..... | 6 |
| 3.1 Regional profile..... | 6 |
| 3.2 Trends affecting the innovation landscape in the Central Bohemian Region..... | 7 |
| 4. RIS domains of specialisation | 9 |
| 5. Summary SWOT analysis..... | 13 |
| 6. Problem analysis..... | 15 |
| 7. Strategy section..... | 18 |
| 7.1 Principles of regional innovation policy..... | 18 |
| 7.2 Vision of the Central Bohemian RIS..... | 19 |
| 7.3 Strategic objectives..... | 22 |
| Objective A: Established and internationally successful companies built on unique in-house know-how | 23 |
| Objective B: More new entrepreneurs and companies with international aspirations..... | 25 |
| Objective C: Practical application of quality research results in society..... | 27 |
| Objective D: Active community of stakeholders in the Central Bohemian Region's innovation ecosystem | 29 |
| Objective E: Enough skilled people to boost the knowledge economy..... | 31 |
| 8. Implementation of the RIS in the Central Bohemia Region..... | 33 |
| 9. The international dimension of implementing the strategy..... | 35 |
| 10. Financial resources for the implementation of the strategy..... | 36 |
| 11. Monitoring and evaluation of the RIS in the Central Bohemian Region..... | 37 |

1. Introduction and strategic context

The Regional Innovation Strategy of the Central Bohemian Region (where appropriate also the Regional Research and Innovation Strategy for Smart Specialisation of the Central Bohemian Region;¹ hereinafter also referred to as the CBRIS or the CB RIS3) is a strategy document aimed at pursuing an innovation policy that supports the region's development towards an advanced economy based on the use and development of economic and knowledge-based specialisation and on the consideration of the needs and challenges facing the region. In the future, this should be based primarily on all kinds of innovation in all areas of society, advanced technologies and services, high-value-added production, skilled and creative people, and small and medium-sized enterprises that are thriving and ambitious.

The CB RIS exists alongside other strategies at various levels (see the diagram below) and seeks to synergise with them and make a tangible contribution to them in the form of a coordinated effort at the level of the Central Bohemian Region.



¹ - Strategy for Smart Specialisation” is abbreviated to S3, hence RIS3 (not RISSS).

² - The Economic Strategy currently exists only in the form of tenets; the Innovation Strategy of the Czech Republic has not yet been assigned a coordinator (this was originally the Office of the Government of the Czech Republic).

The purpose of the closest national strategy – the National Research and Innovation Strategy for Smart Specialisation of the Czech Republic (hereinafter also referred to as the “National RIS3”) – is to boost economic growth and the transition towards a knowledge-based economy with the vision of a “Resilient knowledge- and innovation-based economy”.

Regional innovation strategies take into account factors specific to the local innovation ecosystem and the economic specialisations in individual regions and define priority areas from the perspective of regional government and regional stakeholders. To achieve this goal, i.e. to transform the economy into a knowledge-based economy, support instruments financed nationally, regionally, from the European Structural and Investment Funds, and from other foreign sources, are deployed. It is for this reason that the CB RIS also serves as a regional strategy for smart specialisation (RIS3) and satisfies the so-called “enabling condition”³ for research and innovation to be financed from European funds for the 2021–2027 period.

This CB RIS also responds to the **Central Bohemian Regional Development Strategy for 2019–2024 and Outlook to 2030**, which was approved by the Central Bohemian Regional Assembly in November 2019 and is the region’s principal conceptual and development document.

Besides pursuing the purpose described above, the CB RIS mainly frames the region’s own activities related to innovation policy. It provides a meaningful account of how the region has developed in recent years, based on a problem analysis of the regional innovation landscape, while also taking into account trends – especially in technology and society – around the world. Its objectives are built on this groundwork.

2. Methodology underlying the elaboration of the CB RIS

This version of the CB RIS was prepared between autumn 2022 and June 2023. It was conceived as a major update in response to an external evaluation of the current progress in 2022, which yielded numerous recommendations. Besides secondary statistical data on the macroeconomic development of the region, the performance indicators of individual economic sectors, and research and development activities, the update primarily covered a number of working groups with innovation ecosystem stakeholders in order to discuss the revised problem analysis, the main trends influencing the innovation environment, the vision and objectives proposed for the strategy, and possible activities to achieve the objectives.

The strategy was updated by the Central Bohemian Innovation Center. Ahead of its approval by regional bodies, the strategy was discussed by the Central Bohemian Competitiveness Council, which is a coordinating and partnership body for the region’s innovation policy that brings together organisations from the research, public and corporate spheres.

This approach to the update of the CB RIS is also based on the way the “entrepreneurial discovery process” has worked to date. This is the process where the region, or more precisely its RIS team, involves entrepreneurs, researchers and representatives of other triple/quadruple helix entities in the activities of the region’s innovation platforms, educational and other events, and support programmes.

³ - see Regulation (EU) 2021/1060 of the European Parliament and of the Council

The experience gained and the conclusions of the external evaluation confirm the correctness of the current concept behind the strategy and its objectives. In this respect, it is preferable to focus efforts on achieving the set objectives. The strategy therefore pursues a “bottom-up” principle, where activities and objectives are formulated with contributions from and in accordance with the views of stakeholders from the region’s innovation landscape.

The strategy was initially drawn up as a regional annex to the National RIS3 in 2014. It was approved as a fully-fledged concept by the region in June 2018. Subsequently, in 2020, it had to be partially updated in response to processes in the preparation of the European Union’s 2021–2027 cohesion policy. The conditions were revised. The original “ex-ante conditionality” of the existence of innovative strategies to obtain support for research, technological development and innovation was changed to an “essential condition”. Specific substantive and formal requirements concerning the content of the innovative strategies of Member States and regions were associated with this.

However, the CB RIS is primarily rooted in the region’s interest in pursuing a conceptual approach to innovation policy with the goal of having a positive impact on its innovation landscape and economic development.

3. Regional profile and current trends

3.1 Regional profile

The Central Bohemian Region is the largest and most populous region in the Czech Republic. It is also the region with the youngest population. It has the third highest proportion of degree holders. It has the second highest average wage and the third highest net income per household member. The region also has the largest number of municipalities (1,144) and the lowest proportion of urban population (50.9%). The region’s economic performance, measured as GDP per capita, ranks it fifth in the Czech Republic, but in terms of total GDP it is second only to the City of Prague.

From the perspective of research, development and innovation, the Central Bohemian Region is the third most prominent region in the Czech Republic after Prague and the South Moravian Region. It is the proximity of Prague as the capital and the very close socio-economic ties between these two regions that make the Central Bohemian Region unique among all regions.



Basic regional indicators

| indicator | Central Bohemian Region | national share, or index/figure for the Czech Republic |
|---|-------------------------|--|
| area (km ²) | 10,928 km ² | 13.9% |
| population (1 Jan 2023) | 1,439,391 | 12.5% |
| live births per 1,000 population (2022) | 9.4 | 9.6 |
| GDP at current prices (2021) | CZK 688.8 billion | 11.3% |
| GDP per capita in purchasing power parity (EU27 average = 100) (2021) | 79.4 | 91.6 |
| net disposable household income per capita (2021) | CZK 295,852 | 100.2 (CR = 100) |
| number of economic entities (2022) | 362,031 | 12.1% |
| employed (Q4 2022) | 689,800 | 13.3% |
| unemployment rate (Q1 2023) | 2.0% | 2.7% |
| share of workers employed in industry and construction (2021) | 34.1% | 12.4% (CR = 100%) |
| average gross monthly wage (Q4 2022) | CZK 43,730 | 100.7 (CR = 100) |

Research, development and innovation indicators

| indicator | Central Bohemian Region | national share, or figure for the Czech Republic |
|--|-------------------------|--|
| total R&D expenditure (2021) | CZK 15,700 million | 12.9% |
| R&D expenditure in the business sector (2021) | CZK 12,105 million | 15.8% |
| R&D intensity (as a percentage of GDP) | 2.3% | 2.0% |
| R&D personnel (FTE, 2021) | 8,385 | 9.9% |
| researchers (FTE, 2021) | 4,020 | 8.4% |
| R&D facilities (2021) | 316 | 9.4% |
| proportion of innovating enterprises (2018–2020) | 55.7% | 56.3% |

Source (both tables): Czech Statistical Office

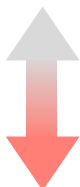
3.2 Trends affecting the innovation landscape in the Central Bohemian Region

Drawing on studies by the World Economic Forum (WEF) and the Organisation of Economic Cooperation and Development (OECD), stakeholders in the Central Bohemian innovation landscape discussed the following trends, from the standpoint of how significant a positive or negative impact they would have in the next five or so years, when updating the strategy. The trends are grouped into those that present an opportunity for further development and should be harnessed to achieve a better quality of life or greater economic performance, and those that pose a threat and need to be prepared for or adapted to so that they do not cause damage or hinder development in the future. Collectively, the ability to cope with the consequences of the trends can be referred to as “resilience”.

The trends are ranked in order of the importance accorded to them by working groups participants.

DEMOGRAPHIC CHANGE

(Prevailing perception: **THREAT**)



The ageing workforce and shifting demographics will force businesses to adapt their HR policies and approaches in order to attract and retain skilled workers. In tandem with this, the demands and expectations that workers have in relation to their employers and working conditions are evolving, especially among the younger generation, who often expect to spend less time at work while enjoying a higher standard of living. This results in pressures on two fronts: an interest in replacing human labour with machinery, and in creating new jobs that accommodate workers' requirements. Customer needs will also change, and companies will have both the task and the opportunity to respond to them by developing new products, changing their business models, etc.

SKILLS AND TALENT

(Prevailing perception: **OPPORTUNITY**)



Small and medium-sized enterprises, along with other types of organisations active in areas where high demands are placed on the skills of the workforce, need to attract and retain skilled staff and invest in their training and development in order to raise productivity and remain competitive. In this respect, they are engaging in global competition for talent, which will continue to intensify. If we want to propel the region to the ranks of innovation leaders, as stakeholders in the innovation ecosystem we should work together to strive for success in this competition. By cultivating the region's strengths as a place to live and work and promoting them effectively, this collaboration can shape the image of an appealing region where people will flock. Long-discussed reforms to the education system will also be needed if this opportunity is to be seized.

TECHNOLOGICAL CHANGE

(Prevailing perception: **OPPORTUNITY**)



The accelerating pace of technological change (AI, blockchain, IoT) will force businesses into embracing new technologies as a means of remaining competitive. Despite the competition posed by regions beyond Europe, technological change is perceived as an opportunity because it means that new markets (market niches) are more likely to arise faster than before. The WEF study indicates that, in the Czech Republic, this can be expected primarily in the field of energy-related technologies and technical infrastructure and in the sphere of advanced manufacturing processes.

REGULATION

(Prevailing perception: **THREAT**)



The increasing complexity and diversity of regulatory frameworks will require organisations to adapt to new regulations and standards in their cost and risk management. It limits the freedom of choice that companies have in their business activities and, compared to non-European regions, often imposes an additional burden that inhibits innovation and thus hampers the ability to compete. However, given the right approach, the state can also act as a strategic co-creator of new trends and as an investor in new knowledge and technologies.

SUSTAINABILITY

(Prevailing perception: **OPPORTUNITY**)



The urgency of innovation is amplified by the rising demand for sustainable products and services and the need to counter the implications of climate change, to continue decarbonising the economy, and to tap into other sustainability-enhancing trends. This process will require the development of new technologies, business models, and manufacturing processes that respond to this demand and are deployed at an even faster pace than before. Potentially, these trends could be new market opportunities for companies, provided they are prepared and able to work with them and capitalise on them.

GEOPOLITICAL UNCERTAINTY

(Prevailing perception: **THREAT**)



Geopolitical uncertainty and instability will require businesses (and other types of organisations) to manage the implications that unforeseen events have for them and to put plans in place to adapt to such events. This also involves a process of building up flexibility with respect to sources of raw materials, suppliers, customers, etc., in order to reduce their exposure to unpredictable events.

4. RIS domains of specialisation

In the Central Bohemian Region, the RIS is a tool used to create and improve conditions in the creation and use of knowledge and innovation with the aim of strengthening the competitive advantage that those entities established or doing business in the region enjoy in the global economy. The strategy aims to concentrate on capacities, knowledge and skills that draw on the region's existing and emerging economic and social potential, and to leverage the current knowledge base so as to develop new areas of application that reflect fresh challenges in the region's economy and society.

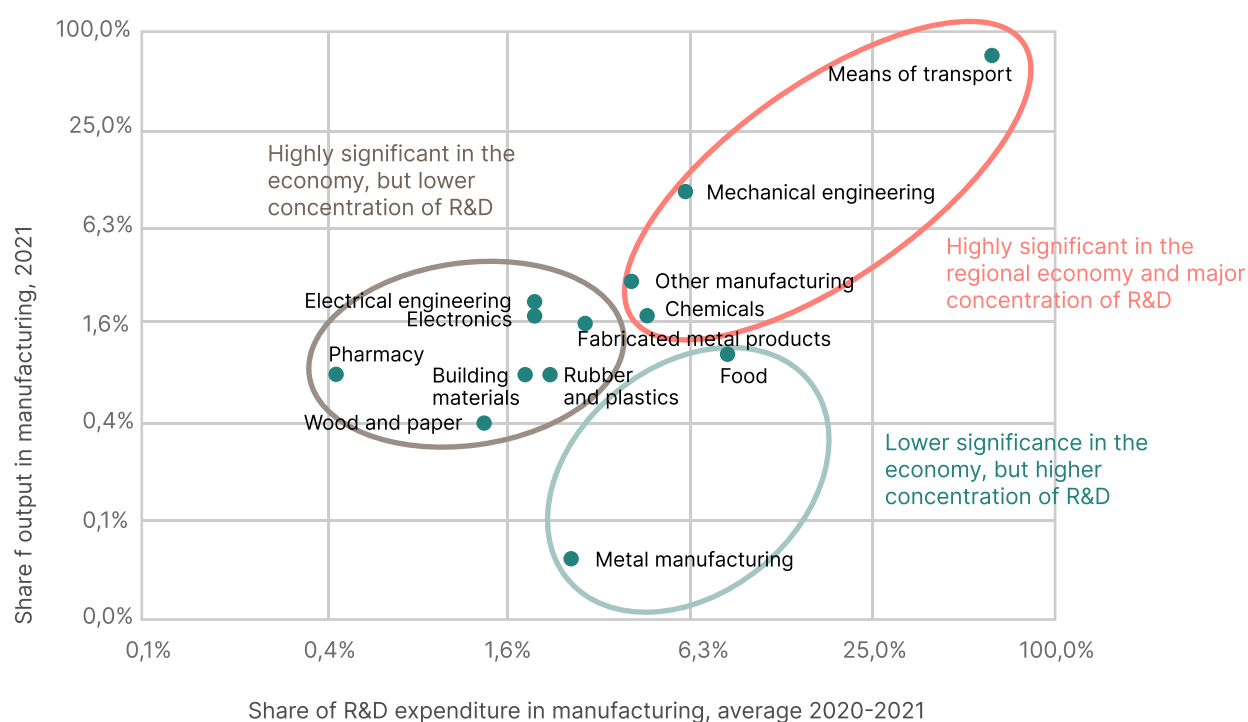
The RIS is framed by investments in both public research and the business sector. A prerequisite for the successful implementation of the strategy is the involvement of stakeholders that have insight into the potential market application of new knowledge and innovations, i.e. actors able to identify new opportunities for business activity.

Against this background, it is necessary to look at the selection of areas of specialisation in the context of the Central Bohemian Region's existing competitive advantages, while being aware of new societal and technological challenges that will affect the region in the future. The economy must accelerate and expand the shift from cost-effectiveness to knowledge-based competition, which will build on unique know-how, knowledge and products anchored in the Central Bohemian Region's specialisation and capacities. There is a need for the greater development of endogenously based entrepreneurship, and for companies to move more from subcontracted activities towards final products that deliver high value added and draw on research and development activities (both internally developed and public).

For the requirements of smart specialisation in the Central Bohemian Region, knowledge (“vertical”) domains of specialisation are defined mainly on the basis of specific knowledge of regional conditions and the needs of regional actors acquired in the entrepreneurial discovery process⁴, but also on the basis of statistical data reflecting the structure of the regional economy and the importance and potential of individual sectors (see the figure below). **The domains of specialisation in the Central Bohemian Region reflect not only the concentration and dynamics of economic performance, accumulated skills and competencies, and emerging trends in individual branches, but also the rapidly developing and changing knowledge base at research organisations.**

It should also be stressed that, given what stage of development the Central Bohemian innovation ecosystem is at and the potential for regional policy to influence the regional economy (see also section 7.1), the domains of specialisation do not restrict or limit innovation policy; instead, they primarily represent growth opportunities for local research and business stakeholders and their activities.

Branches of manufacturing by share in output and expenditure on R&D, 2020–2021



Note: A logarithmic scale is used in the graph due to the extreme values of the vehicle industry. Modified NACE names: Food (NACE 10-12), Wood and paper (16-17, 31), Chemicals (19-20), Pharmacy (21), Rubber and plastics (22), Building materials (23), Manufacture of metals (24), Fabricated metal products (25), Electronics (26), Electrical engineering (27), Mechanical engineering (28), Means of transport (29-30), Other manufacturing (13-15, 18, 32-33).



The Central Bohemian Region's domains of specialisation:

- **High-tech and sustainable mobility**

This is the most important branch of the Central Bohemian economy. In addition to end-product (vehicle) manufacturers, the region is home to a very broad value chain of diversely oriented suppliers of assemblies and components, as well as emerging specialisations such as shared mobility and downstream IT fields. The aerospace sector and its applications offering major research potential are also included here. Although a large proportion of companies are still on the lower rungs and in positions of dependency, the number of higher-tier suppliers who are also involved in development is gradually increasing. This puts the industry on a good footing for the future.

- **Advanced materials, machinery, and technology**

This area is the second most important regional specialisation after mobility. It has a broad focus of activities and is very heterogeneous internally. Most production is concentrated on cooling and ventilation equipment. Much of this is linked to manufacture in the automotive industry and to the surface treatment/forging/pressing and manufacture of structural metal products that are used mainly in construction, but also in other industries. Industrial automation and robotics, additive technologies and advanced instrumentation are developing at a rapid pace. There are a number of collaborative and contract research projects, as well as quite a lot of patent activity, in this area.

- **Electronics and electrical engineering**

While this sector is largely connected with the development of the automotive industry in the region, it is also successfully developing outside this segment – especially in the areas of general instrumentation, electric motors and generators. This specialisation also includes the production of electrical equipment (batteries, cables, wires), which is the most important area in terms of its share in the output of this branch in the Central Bohemian economy. Research potential is mostly concentrated on sensors, measuring and regulation. This is also where cooperation in contract research is most common. In this domain, the region also makes a significant contribution to research and development in the field of photonics (lasers), light sources and their applications, and digital technologies – especially high-performance computing (HPC) and complex numerical simulations.

- **Efficient industrial chemistry**

Chemistry is a traditional and strongly represented discipline in the region. There are a number of prominent manufacturing companies here that mainly focus on the production of primary chemicals and raw materials. Some of them are among the region's major employers. Pressure on innovation (not only technological, but also procedural, etc.) in this sector is exerted particularly in connection with the rise of international competition, predominantly from lower-cost countries. Another important impetus for the future development of this branch is the effective introduction of more environmentally friendly and sustainable technological processes and inputs into production. As most large companies in the sector are foreign-owned, their strategic decisions on what direction to

take going forward will be pivotal to their future development. Companies' research efforts are focused primarily on industrial chemistry and chemical engineering.

- **Sustainable food production**

The food industry is another of the region's traditional sectors. In terms of employment and sales, it is one of the strongest. Unlike other key branches, it is focused more on the domestic market and less on exports, with smaller and medium-sized enterprises playing a greater role here. It covers a wide range of sub-specialisations, the most important of which are meat products, bakers' wares, confectionery and beverages. The bulk of food production is geared towards end products for consumers. Looking ahead, the key trends are to achieve the energy- and resource-sustainable production of food and primary raw materials (smart farming) and to exploit modern production technologies and the principles of the circular economy.

- **Biotechnology and health technologies**

This is evidently the most progressively developing knowledge-intensive sector in the region. In recent years, it has been characterised by many investments in both production and R&D. The main vehicle for this specialisation is biological and medical (pharmaceutical) technology, including the production of health technology and medical equipment. Since this is a rapidly growing field globally, future prospects look bright, especially in the context of an ageing population and the escalating requirements being placed on health care in both developed and emerging economies. R&D capacities are concentrated more on collaborative projects between companies and research organisations. There is also relatively strong patent activity here. The region also has numerous research institutions that can be potential partners to companies in development, testing and subsequent high-value-added production.

The defined domains of specialisation also include the region's very strong and internationally competitive potential for research, both basic and – especially – applied, which is concentrated in public and increasingly also in private research infrastructure. For this reason, it is necessary to underline the following roles played by the research sector beyond those described in section 7 below. The strategy's authors consider such roles to be very important, and in this sense they view research organisations as valuable regional "assets" and endorse their following roles:

- The Central Bohemian Region is home to some facilities of national and international importance, which is due to the unique research infrastructure and the role of the national project or programme coordinator (ELI, BIOCEV, HiLase, the Astronomical Institute, the Research Institute of Geodesy, Topography and Cartography).
- Research organisations (including those engaged in basic research) have a demand-side function, i.e. they seek products that serve as inputs for research activities (instruments, laboratory and testing materials, components for the production of models and prototypes, etc.). In this respect, research organisations are a specific customer segment and represent potential market opportunities.



5. Summary SWOT analysis

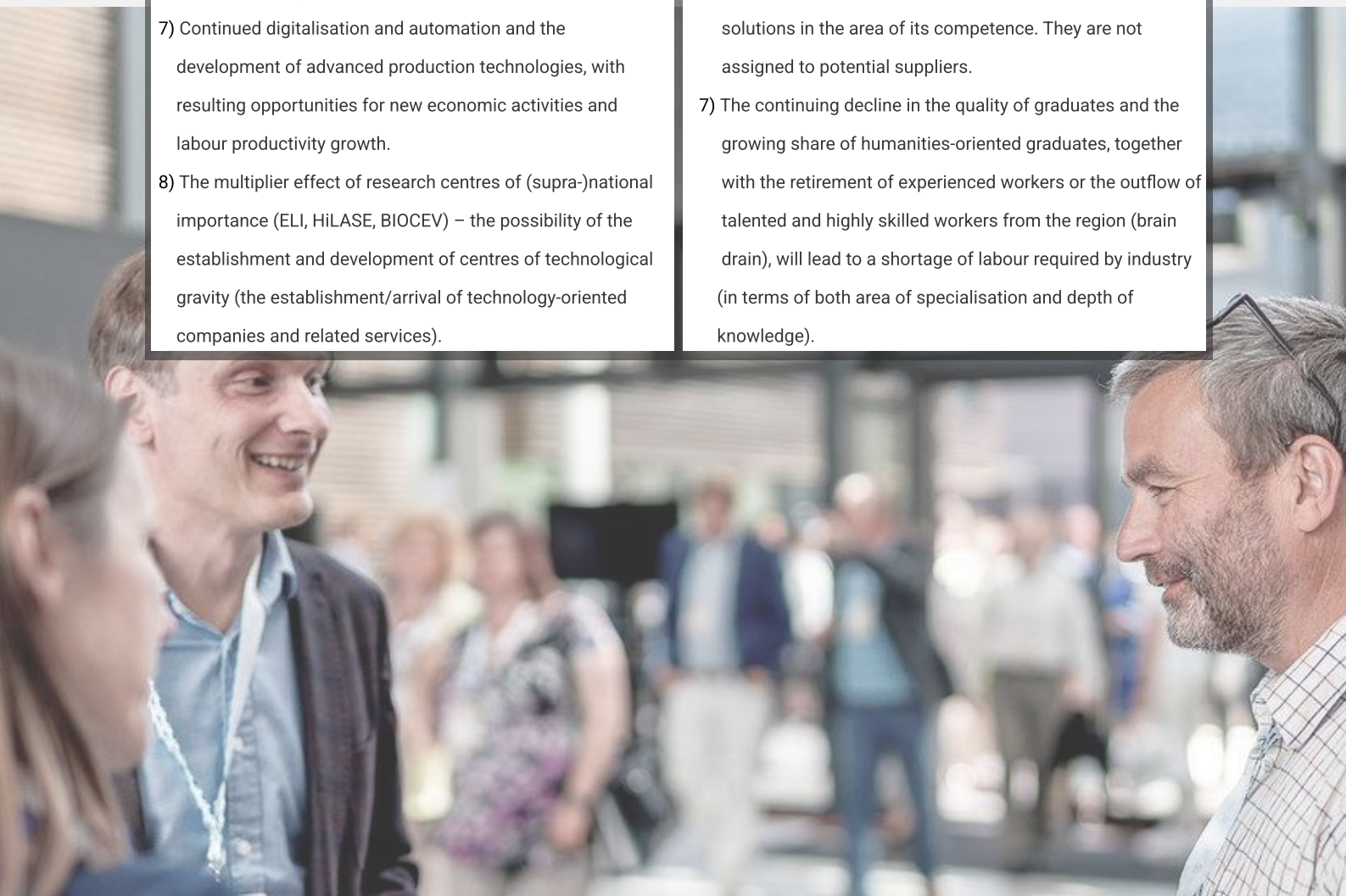
The following SWOT analysis is a summary of key findings and conclusions from the analyses that describe the current state of the Central Bohemian Region's innovation landscape and the influences that affect, or will likely affect, it in the future.

INTERNAL ANALYSIS

| Strengths | Weaknesses |
|---|---|
| <ol style="list-style-type: none"> 1) The Central Bohemian Region is one of the Czech Republic's most economically developed regions. 2) The region's position in the geographical centre of Europe, providing good access to strong markets where the population has high purchasing power. 3) A relatively young population and, consequently, high employment/participation in economic performance. 4) A developed manufacturing industry is of key importance for the regional economy. It is headed by the automotive industry. Other significant branches are engineering and the food industry. 5) Of the top 100 EU companies measured by R&D expenditure, 14 operate in the region. 6) High R&D expenditure, almost 80% of which is in the business sector. 7) The presence of Škoda Auto, the largest private investor in R&D, and approximately 50 other companies that invest more than CZK 10 million in R&D per year. 8) The share of value added in output is higher for domestic companies than foreign companies and is also continuing to grow at a faster pace. This indicates the faster implementation of more knowledge-intensive activities among domestic companies. 9) The specialisations of Prague and the Central Bohemian Region are complementary – Prague is a centre of academic and public research capacities, while corporate R&D activities predominate in the Central Bohemian Region. 10) The evolving state-of-the-art research infrastructures, which are important from a research point of view not only within the Czech Republic, but also in an international context. 11) A high number of researchers in the region – measured by number of researchers, the region is just behind Prague and the South Moravian Region. | <ol style="list-style-type: none"> 1. The economy's weaker resilience to trans-regional effects on the business cycle due to its sectoral and ownership structure (e.g. the high share of the automotive sector and foreign-controlled firms with a relatively lower degree of autonomy in strategic decision-making). 2) The region's natural centre (the capital city) is actually outside its own territory. The very highest functions in terms of quality, such as innovation and R&D activities, universities, corporate headquarters, etc., are largely concentrated in the capital. 3) The connectivity of the core area with the region itself is constrained by the inadequate transport infrastructure. 4) Large differences in the economic maturity and potential of individual areas within the Central Bohemian Region. Economic development is concentrated in the environs of Prague and strong regional centres. 5) Domestic companies are much less productive than foreign companies. 6) In the last five years in particular, the economic performance growth rate among domestic companies has been considerably weaker than at foreign companies. 7) A low level of business activity – the number of smaller companies with up to 10 employees in the region has stalled (compared to the Czech Republic as a whole). 8) The relatively weak link between the research and business sectors. For example, according to the indicator of the volume of business expenditure on research and development in the public and higher education sectors, the Central Bohemian Region is among those regions that are average to below average. 9) The often limited relevance of research at public research organisations compared to the needs of society and the economy, and their insufficient readiness to cooperate with the application sphere. 10) The often insufficient level of managerial and strategic competence and inefficient management structure at public research organisations. 11) A lack of high-quality, creative human resources for business, R&D and innovation activities. |

EXTERNAL ANALYSIS – FACTORS INFLUENCING THE DEVELOPMENT OF THE REGION

| Opportunities | Threats |
|---|--|
| <ol style="list-style-type: none"> 1) Changes supporting a more flexible labour market, greater employment flexibility, including flexible hours. 2) Change in the system of government incentives for foreign investors, geared towards the support of more knowledge-intensive activities. 3) Investments anticipated in selected fields related to the global security situation (defence, cybersecurity, health protection) as an opportunity for research and innovation activities. 4) Interest among foreign companies in investing in activities with higher value added. 5) Interest among talented people from abroad in working in the region. 6) Growth in the number of people seeking self-realisation beyond material security (as a result of the development of entrepreneurship and the social benefits of the activities they engage in). 7) Continued digitalisation and automation and the development of advanced production technologies, with resulting opportunities for new economic activities and labour productivity growth. 8) The multiplier effect of research centres of (supra-)national importance (ELI, HiLASE, BIOCEV) – the possibility of the establishment and development of centres of technological gravity (the establishment/arrival of technology-oriented companies and related services). | <ol style="list-style-type: none"> 1) The instability of the political scene, reducing credibility in the eyes of foreign partners, investors and domestic companies. 2) The lingering heavy influence of “crony capitalism” – a large proportion of business activity predicated not on success in free enterprise, but on prosperity derived from non-transparent agreements between business and politics. 3) The frequency and unpredictability of regulatory and legislative changes, including the tax system for entrepreneurs and research organisations. 4) Insufficient funding for public higher education, with adverse effects on the quality of graduates. 5) Growing competition from countries in Eastern Europe and Asia in industries based not only on cheap labour, but also on knowledge- and technology-intensive activities. 6) Weak innovation demand in the public sector – state administration does not sufficiently support innovative solutions in the area of its competence. They are not assigned to potential suppliers. 7) The continuing decline in the quality of graduates and the growing share of humanities-oriented graduates, together with the retirement of experienced workers or the outflow of talented and highly skilled workers from the region (brain drain), will lead to a shortage of labour required by industry (in terms of both area of specialisation and depth of knowledge). |

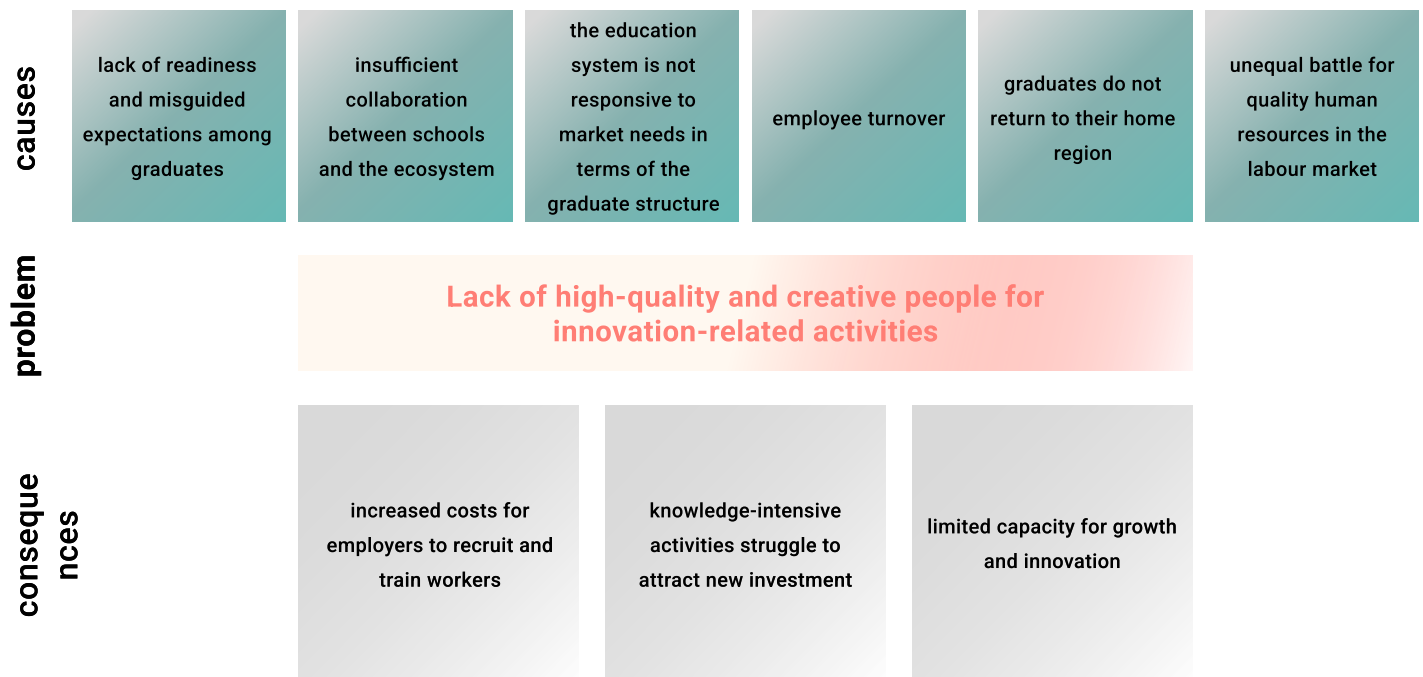




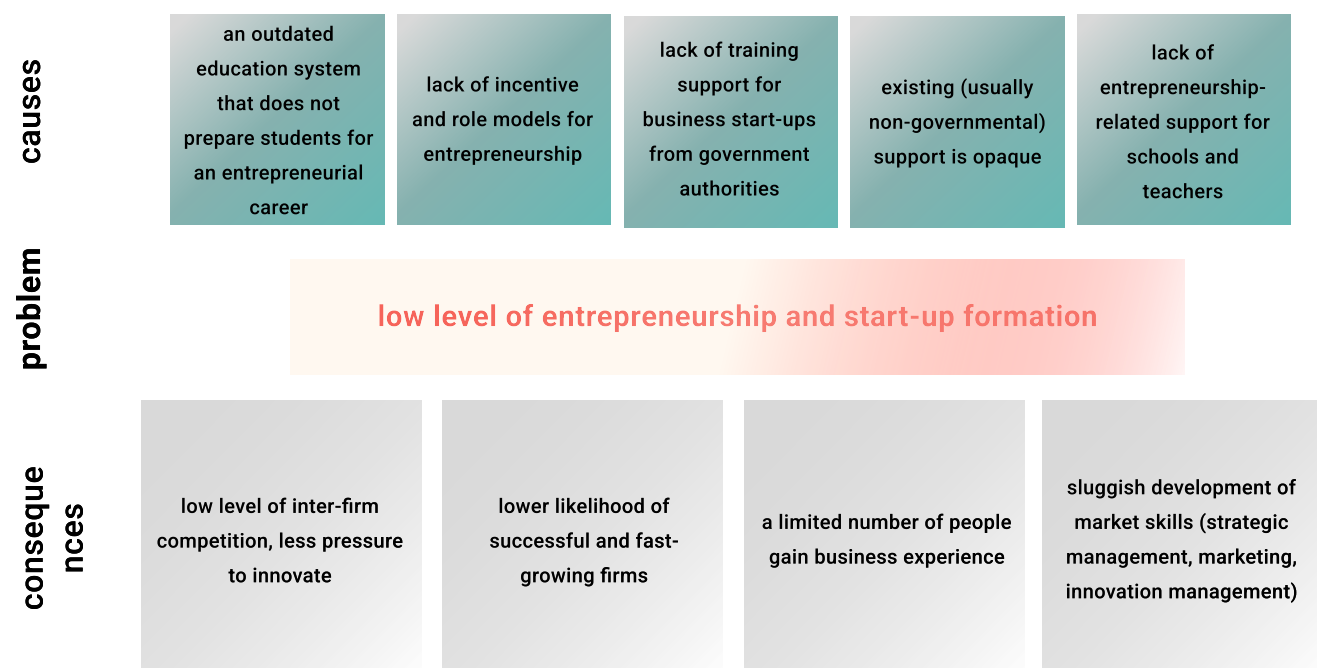
6. Problem analysis

The problem analysis describes the principal problems facing the innovation landscape (and often other areas) in the Central Bohemian Region. They serve as the basis for the strategy design and development section, which responds directly to this analysis by trying to counteract the root causes of the problems or mitigate their consequences.

PROBLEM 1

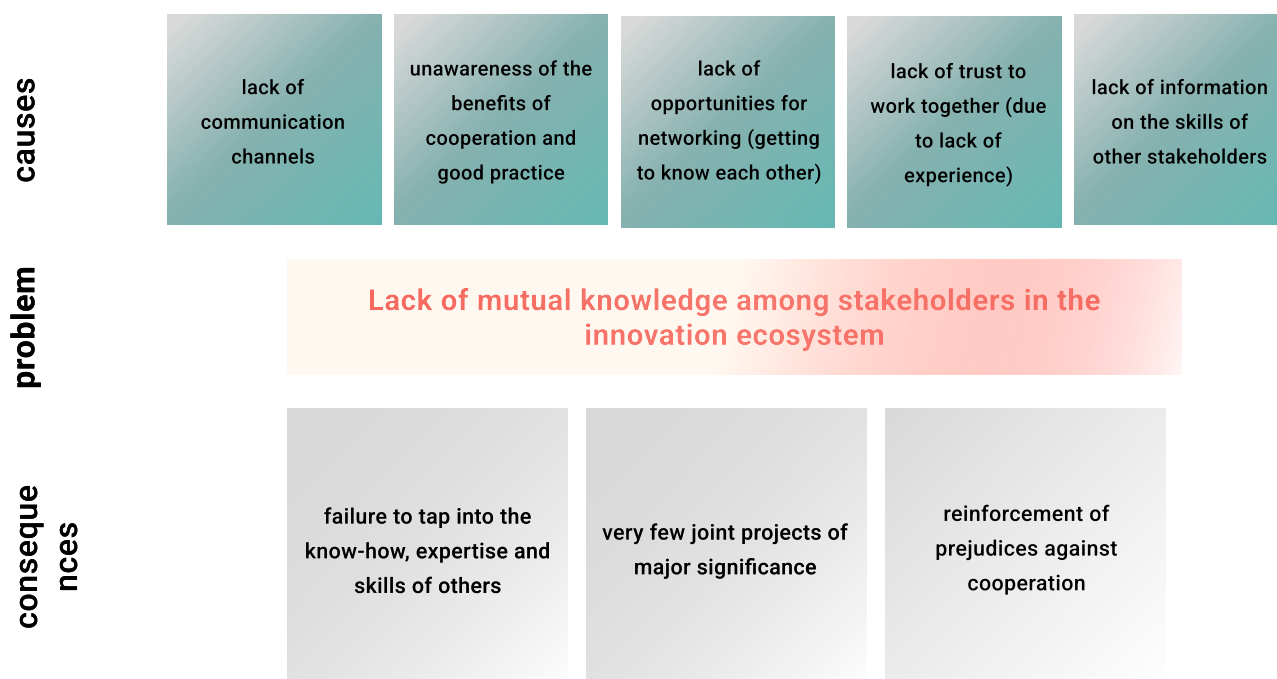


PROBLEM 2

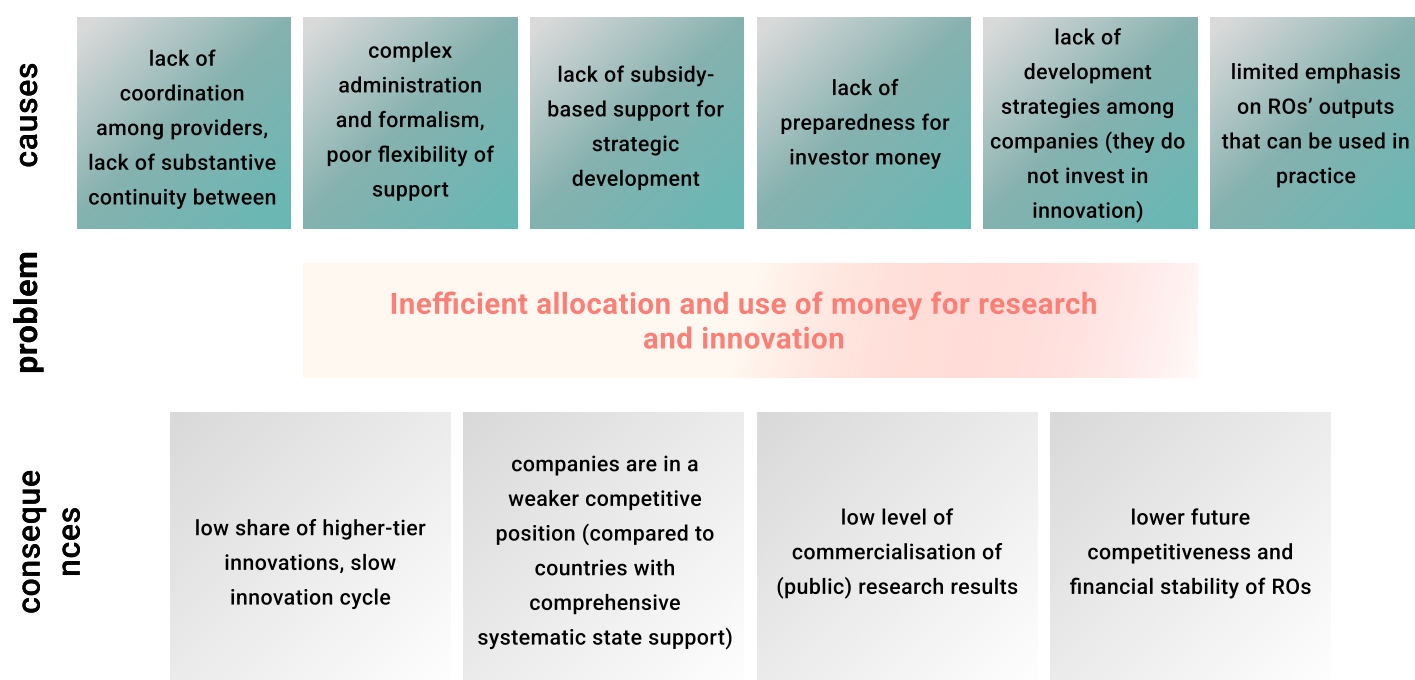




PROBLEM 3



PROBLEM 4





PROBLEM 5

causes

corporate conservatism

slow-paced benefits of structural change

lack of courage to alter business in response to new trends

lack of people needed for change/innovation

companies are on the lower rungs of value chains

problem

Sluggish transformation from a manufacturing to a knowledge-based economy

consequences

dependence on mature foreign markets and on the phase of the economic cycle

underdeveloped market skills among companies and little capacity to compete globally

threat of losing attractiveness for investment

stagnation of the region's economy and prosperity

threat that low-value-added activities will shift to lower-cost countries

PROBLEM 6

causes

cooperation is demanding in terms of time, money and processes

lack of managerial competence to enable cooperation

lack of models of successful cooperation

inability of companies to formulate enquiries and ROs to make offers properly

different motives for cooperation on the part of companies and ROs

ROs do not function as a knowledge network in relation to companies

problem

Insufficiently developed cooperation between companies and research organisations

consequences

limited transposition of research results into practice

stimuli from practice and the market do not feed into the RO environment

low level of demand-driven financing of ROs by companies

underutilisation of ROs' capacities and know-how for companies' innovation needs

higher innovation costs instead of efficient outsourcing

7. Strategy section

The wording of this section is based not only on the problem analysis, but also on a number of suggestions derived from the evaluation of how the strategy has been implemented to date, from the results produced by the working groups relating to the update of the CB RIS, and from the experience gained by the Central Bohemian Innovation Center's team over the course of the strategy's implementation so far.

The design and development section is structured as follows:

- The **design section is premised** on the principles of the regional innovation policy (section 7.1), which provide a framework for its mission and legitimate expectations.
- The **strategy's vision** (section 7.2) as its central goal, towards which all activities should be directed, and simultaneously the authentic essence of the strategy.
- The **strategy's objectives** (section 7.3) present the core, more precisely defined and internally consistent priority areas where the efforts of innovation stakeholders will be targeted.

The subsequent section 8 describes the implementation mechanism and its core elements.

7.1 Principles of regional innovation policy

The Regional Innovation Strategy of the Central Bohemian Region is now based on the principles of the regional innovation policy as defined by the evaluator of the CBRIS for the 2016-2021 period. These take into account the role of the regions and the feasible opportunities available to them in regional innovation policy in relation to the state innovation policy, and rely on the assumption of long-term synergy between the region and its innovation centre (i.e. a specialised executive agency) as a condition for the success of the strategy.

Principle 1 – **Resource concentration**

Concentrate regional resources on quality services and programmes showing the biggest potential for positive change.

Principle 2 – **Tool testing**

Thoroughly pilot test new services and programmes on an appropriate scale before allocating greater resources to their implementation.

Principle 3 – **Learning tools**

Develop services and programmes in the light of practical experience gained in delivering results and making incremental improvements. If unsuccessful, the programmes should be cancelled.

Principle 4 – **Greater risk = greater benefit**

Accept that not every supported project need be entirely successful and therefore embrace the risk associated with providing innovation-related services. The public sector does not have to support risk-free activities.

Principle 5 – **The region is not in competition with the state**

Regional programmes and services are not meant to compete with central government policy.

In cases where the state takes over what were originally regional programmes, the regions can only continue to provide them if they retain value added or maintain distinctive parameters at regional level.

Principle 6 – **The region complements the state**

The region's innovation policy should: (a) compensate for the shortcomings of state policies; (b) fill in for activities not undertaken by the state; and (c) pursue activities that are complementary to state policy (i.e. enhance their benefits for stakeholders in the region).

Principle 7 – **Interconnecting of stakeholders**

Regional innovation policy and regional innovation centres play a mediating role, i.e. they help to build the innovation ecosystem and foster cooperation between stakeholders across different sectors or groups that do not normally communicate with each other.

Principle 8 – **Concentration points**

In developing the innovation ecosystem, make use of local "concentration points" (institutions or communities), and gradually shape a regional innovation community around them.

Principle 9 – **Proximity of stakeholders**

The innovation community in the Czech Republic is easier to form at regional level due to the proximity and mutual knowledge of stakeholders and the better potential for cooperation.

Principle 10 – **Leverage**

Since resources are limited, the regional innovation policy should seek to leverage its activities to the maximum, i.e. (a) strive to achieve the greatest possible change and dissemination of good practice; (b) make maximum use of non-regional resources (government programmes, private resources, etc.); (c) enlist other stakeholders in the pursuit of the strategy's objectives; and (d) use regional resources to stimulate processes of positive change among other stakeholders.

7.2 Vision of the Central Bohemian RIS



Vision: A region where the population can live and work, with an active innovation community open to all ambitious, creative and entrepreneurial people. A place where they can realise their plans and make their dreams come true.

The vision takes into consideration the fact that the Regional Innovation Strategy is a thematic component of the strategy for the development of the region's innovation and entrepreneurial landscape.⁵ The activities in each of the objectives described below will contribute significantly to the attainment of the vision outlined above.

⁵ - As such, the strategy is consistent with the region's main strategic development document: the Central Bohemia Territorial Development Strategy for 2019–2024 and Outlook to 2030.

Other regions in Europe can be used as a benchmark to gauge the success of the strategy implementation process. This comparison would be based on the European Commission's "Regional Innovation Scoreboard",⁶ a methodology showing that the Central Bohemian Region is currently a "Moderate Innovator". Compared to the most innovative regions and to the EU average, the Central Bohemian Region is mainly lagging behind in the tertiary education of the population, international quality of research, and the extent of patent activity. Conversely, it is strong in corporate R&D and indicators measuring industrial and export performance.

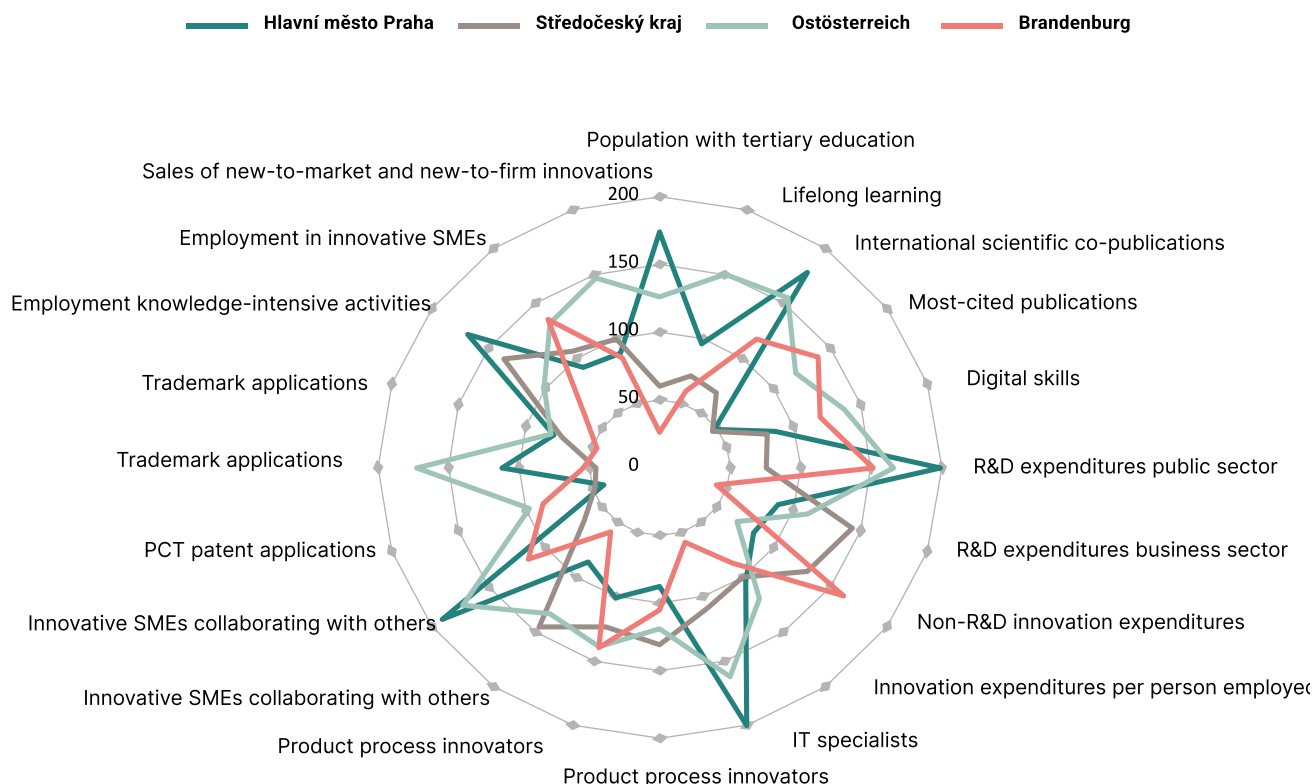
The scoreboard does not yet fully cover developments in the Central Bohemian Region in recent years, a period in which the potential at research organisations and new research infrastructures has grown exponentially and may contribute to these values. Furthermore, the interconnection between Prague and Central Bohemia is an opportunity for the region's overall innovation performance. In a number of areas where the Central Bohemian Region is weaker, Prague scores well above average, and vice versa. These two regions, combined, have the capacity to stand alongside Europe's most innovative regions in a manner similar to Ostösterreich, a region that includes both Vienna and the two surrounding federal states and is above average in the European Innovation Scoreboard, making it a "Strong Innovator". In the comparison, we also mention the German region of Brandenburg, which, like the Central Bohemian Region, forms a backdrop to the country's capital, and is also currently categorised as a Moderate Innovator.

It is the Central Bohemian Region's ambition to gravitate towards better scores in individual sub-indicators and in the overall scoreboard as a result of implementing the Regional Innovation Strategy. In 2021, the score was 88.8 (EU = 100; Prague 107.5; Ostösterreich 121.1; Brandenburg 95.9).



⁶-The Regional Innovation Scoreboard is published by the European Commission at: https://research-and-innovation.ec.europa.eu/statistics/performance-indicators/regional-innovation-scoreboard_en.

Comparison of selected regions according to the Regional Innovation Scoreboard 2021, comparison with the EU average (100%)



Note: The scoreboard uses NUTS 2 territorial units, i.e. the Ostösterreich region consists of the federal states of Niederösterreich, Wien, and Burgenland. Prague, the Central Bohemian Region and Brandenburg are NUTS 2 territorial units.

Data source: Regional Innovation Scoreboard 2021, European Commission



7.3 Strategic objectives

Overview of objectives, their focus and main results:

| focus | result |
|--|--|
| Objective A: Established companies competitive on an international scale | <ul style="list-style-type: none">• more competitive SMEs• corporations actively contributing to the development of the local ecosystem |
| Objective B: Ambitious start-ups | <ul style="list-style-type: none">• more start-ups• more business plans with the ambition and potential to succeed internationally |
| Objective C: Research applied practically in society | <ul style="list-style-type: none">• more research results put into practice• research organisations more effective at transferring knowledge• research organisations doing more to help companies and the public sector |
| Objective D: A collaborative innovation community | <ul style="list-style-type: none">• better mutual knowledge of stakeholders in the innovation landscape (companies, research organisations, investors, corporations, etc.)• more frequent collaboration between community members• more frequent joint action to defend common interests |
| Objective E: More people qualified to meet the needs of the economy | <ul style="list-style-type: none">• greater competence towards entrepreneurship• greater competence at meeting the needs of the economy• more workers with a higher skill set |

OBJECTIVE A: ESTABLISHED AND INTERNATIONALLY SUCCESSFUL COMPANIES BUILT ON UNIQUE IN-HOUSE KNOW-HOW

Stable, thriving businesses are the backbone of the regional economy and should be looked after, with a particular eye to SMEs, which employ 50% of the workforce. Enterprises with decision-making autonomy directly in the region, i.e. usually domestic businesses, are a vital subset. There is considerable potential for them to grow on the strength of the value added of their products and services. In addition, they have strong ties to the region and their owners are often important regional business leaders who improve the image of the business community and become role models for others. If these companies achieve international success and reach a critical size, they also become important drivers of the regional innovation ecosystem.

Corporations and large firms are another interest group. They are a crucial component of any viable innovation ecosystem. These firms could play a role in the region that is more significant than just being the end points of supply chains. Efforts must be made to embed them more firmly in the region and to localise their strategic functions. They should also be more integrated with the local community. Corporations' products are exported abroad and with them their components originating in the Czech Republic. This can help individual suppliers and the innovation landscape in the region.

The trends towards technological change and sustainability are also relevant to this objective, presenting opportunities for competitiveness growth, an increase in the value added of the product, and the harnessing of interest in decarbonisation and the circular economy.

Target state 2028:

Endogenous (domestic) SMEs that are more competitive than they are now

On average, domestic SMEs will enjoy higher productivity, larger markets, and greater output, and more of them will achieve international success with their own products. They will actively use advanced manufacturing technologies and will digitalise production and other internal processes to build their competitiveness. This part of the economy will thus grow in importance (its share in the structure of the economy will increase) and independence, and will generate its own capital for further investment and development. It will also gradually increase the pool of experienced local entrepreneurs who are able to share their know-how and empower the business community.

A shift in the transformation of the operations of foreign corporations with a view to the long-term sustainability of their presence in the region and the development of strategic business capabilities

The achievement of this objective will be seen, for example, in the intensified integration of corporations into the regional ecosystem, an increase in the number of joint projects with local stakeholders (e.g. through support for start-ups, the formulation of R&D mandates, etc.), an increase in the share of activities with higher value added (such as design, R&D, and marketing and sales) that a corporation bases in the region, etc.



How to get there (examples of typical activities):

- the active search for and identification of innovative domestic SMEs and targeted support for their growth and acceleration
- the financial and expert support of entrepreneurs in the pursuit of innovation at higher levels for international markets
- the digital transformation not only of companies' production activities, but also of their internal processes and entire business models
- consulting/expert support for innovators; the search for experienced experts prepared to help innovators, the expansion of their database; the expansion of the areas in which support is offered
- the mediation of assistance to innovators by research organisations
- a catalogue of the competences of research organisations
- information and data support for innovators (e.g. market research, the identification of market opportunities)
- the promotion of cooperation with companies and other types of partners abroad
- the establishment of long-term relationships with corporations in the region and the preparation of joint activities
- the effective interlinking of corporations with start-ups
- the effective promotion of programmes (state, regional) to SMEs, a one-stop shop for up-to-date information
- the exploitation of basic research needs (e.g. in instrumentation) as market opportunities or new specific customer segments
- the sharing of know-how within the region
- a change in legislation on depreciation favourable to the introduction of technological processes at existing plants
- the use of new learning methods to foster entrepreneurial skills (e.g. CBL – challenge-based learning)
- the intensive promotion of the stories of regional companies with output delivering high added value
- the application of modern technologies in traditional fields

How the pursuit of objectives will be monitored (indicators):

- the number of fast-growing companies ("gazelles")
- supported companies' sales/performance and employment compared to the development of the economy as a whole
- at least 50% of supported projects deliver on the planned strategic change
- the number of foreign companies with more than 250 employees that have increased their R&D expenditure



OBJECTIVE B: MORE NEW ENTREPRENEURS AND COMPANIES WITH INTERNATIONAL ASPIRATIONS

Entrepreneurship as a career path and lifestyle requires personal courage, stamina and patience to keep going even in the face of a few setbacks. Most importantly, it requires the mastery of a specific set of skills that are necessary to become successful. At a time of inscrutable social and economic change, it is vital to encourage those who are interested in entrepreneurship, to point out examples of successful entrepreneurs and companies, and to offer tangible tools for the cultivation of entrepreneurial skills. The more people who dedicate themselves to entrepreneurship, the greater the chances that an internationally significant company will be established in the region, with all the positive impacts that will have on the local economy, job opportunities, and ultimately the quality of life and future prosperity of the region.

For new entrepreneurs, sustainability trends and technological change also represent an opportunity to seek out appropriate market positioning and identify niches with the potential for compelling growth in the future.

Target state 2028:

A greater number of start-ups are being established

There will be a wider range of effective tools for this target group that help to tackle the critical initial stages of business. This will be a positive motivator for those interested in entrepreneurship. These services will be offered by various regional or local organisations (innovation centre, business incubators, coworking spaces, etc.) which, together, will form a readily accessible network of competent facilities providing consultancy and other services. This will also facilitate the establishment of enterprises in all parts of the region.

New entrepreneurs (start-up owners) have higher business ambitions and deliver scalable products

Those interested in pursuing a career as an entrepreneur respond positively to outreach and the growing number of successful home-grown entrepreneurs, who act as inspirational role models and sources of know-how (see also Objective A). This is matched by their growing drive to target larger markets or positions higher up the supply chains. Plus, their business plans include scalable products that inherently allow for what is essentially unlimited growth of their venture.



How to get there (examples of typical activities):

- the promotion of entrepreneurship among young people (in schools at all levels, including scientists)
- the search for and communication with individuals interested in entrepreneurship, the preparation of awareness-raising and educational events for this target group
- the development of the competence of company founders, e.g. through consultancy/coaching services
- the identification of experienced business people ready to help, and the mediation of their services for aspiring entrepreneurs
- the cultivation of a community where start-ups can share their experiences
- effective financial support for start-ups, the active involvement of investors (business angels, venture capital, banks) in the innovation landscape
- awareness-raising about areas suitable for entrepreneurship (e.g. where competition is scarce)
- a forum/fair for innovative companies at universities
- the promotion of successful entrepreneurs and innovative companies as role models
- an effective bridge between start-ups and corporations in the field of pilot projects and investments
- exchange visits by experts from abroad
- methodological, financial and expert support for start-ups



How the pursuit of objectives will be monitored (indicators):

- number of start-ups and newly self-employed persons relative to the economically active population
- the number of SMEs involved in activities (support programmes) that have increased the share of exports in their sales revenues or that have started exporting
- the number of SMEs involved in activities (support programmes) that have seen them enter new foreign markets



OBJECTIVE C: PRACTICAL APPLICATION OF QUALITY RESEARCH RESULTS IN SOCIETY

Internationally excellent research acts as an important stimulus to the region's innovation capacity, attracts top talent and is a prerequisite for the capacity to proactively address the challenges of today's world. An active innovation community should strive to maximise the use of public research sector capacity for the benefit of companies and society at large. The networking of stakeholders and the enhancement of know-how and skills in terms of both active cooperation and knowledge transfer in the region remain a largely untapped opportunity. The aim is to make research and its results much more widely felt in actively tackling society's challenges, giving impetus to companies' business and products, and changing lives for the better. In parallel to this, research areas in which the region is strong and which are of international stature need to be developed and strengthened in order to reach the critical size necessary for capacity and talent to be concentrated for the region's future competitiveness and to ensure achievement of real world applications.

Target state 2028:

More research results put into practice

The results of (applied) research more frequently reach the stage of tangible commercial application, which satisfies a defined need of a particular set of customers.

The efficient transfer of knowledge from research organisations to practical application

Research organisations have honed their know-how and skills for effective knowledge transfer and have internal processes set up to reflect this. Because these are transparent and predictable, they serve as a positive incentive for research organisations and researchers to focus on the practical application of their results. Academic spin-offs are set up more frequently to commercialise research organisations' results

Research organisations help the public sector to improve services, and companies to become more competitive

The public sector, as a specific potential user of research results and/or source of research assignments, finds that research organisations offer a comprehensible range of services that it can readily leverage to meet its needs. Companies make more frequent use of research organisations offering their capacities and know-how to serve the pursuit of business objectives and develop new scalable products.

Research organisations have diversified financial streams for their future activities

Research organisations' dependence on institutional funding and the use of grant projects is reduced. Efficient transfer generates additional funds, the use of which they can decide on independently.



How to get there (examples of typical activities):

- the application sphere (companies, municipalities, etc.) has a greater say in the setting of research
- the mediation of cooperation – the Central Bohemian Innovation Center acts as mediator; research organisations recommend others
- the creation of a marketplace of supply and demand – matching the producers of research results with those who are able to use them (including through group events such as speed-dating, B2B meetings, etc.)
- consultancy support for research organisations in the preparation and execution of the transfer (market research, validation of commercial application, internal processes within the organisation, etc.) objectives
- consultancy support for the development of research organisations
- the identification of experts appropriate for consultancy support and the creation of a database of such experts
- financial support for knowledge-transfer processes
- the formulation of research organisations' easily understandable offers to the public sector
- the formulation of research organisations' easily understandable offers to the corporate sector
- the support of companies in the efficient placement of demand, translating their needs into specific research assignments
- the formation of good practice procedures based on specific successful cases of transfer in practice in the Czech Republic
- the support of transfer managers by means of training in the field of knowledge transfer and commercialisation
- the fostering of entrepreneurship among scientists
- the establishment and promotion of strategic cooperation between the scientific community and application organisations
- support for the preparation of major joint projects
- the promotion and popularisation of successful examples of transfer
- mentoring in the field of cooperation between research organisations and companies

How the pursuit of objectives will be monitored (indicators):

- the amount of R&D funding obtained by research centres in the region from corporate sources
- the value of licences sold by research organisations
- the number of spin-off companies established
- the number of effective and long-lasting links between top research teams and innovative businesses

OBJECTIVE D: ACTIVE COMMUNITY OF STAKEHOLDERS IN THE CENTRAL BOHEMIAN REGION'S INNOVATION ECOSYSTEM

Having pursued its innovation policy for several years, the Central Bohemian Region now has a well-established specialised organisation (the Central Bohemian Innovation Center), which has steadily begun to lay the groundwork for the region's innovation community. It will continue to foster this community of regional business leaders and innovators, forging strong bonds of trust and new partnerships among its members. The community must be open to new entities and ideas, a platform for the sharing of inspiration and know-how, and a source of development initiatives. It should also offer its members the opportunity to work together so that they can cultivate an environment of innovation around themselves. The nurturing of the community includes the development of a regional investor network of business angels and successful entrepreneurs who judiciously invest the capital they have accumulated in new business opportunities or in commercialisation projects originating in academia.

Target state 2028:

Stakeholders in the innovation landscape know each other and have a good grasp of each other's capabilities and potential for collaboration

The innovation landscape is open to interested parties (both newcomers and start-ups) and is not a closed community. Stakeholders share a strong bond of trust and offer each other help and cooperation.

Stakeholders actively cooperate to improve the innovation landscape

Individual organisations embrace the region and the innovation landscape, actively cultivate it and see it as a way to strengthen their own competitive edge and prosperity.

Innovation landscape stakeholders communicate outwardly with a common voice (towards the state and the region) and promote their common interests

Stakeholders have a number of needs and expectations in terms of infrastructure and amenities which, taken together, form the setting in which the organisations operate (transport, education, health, etc.), but which are not part of innovation policy, despite often having a significant impact on it. The innovation community collectively supports change for the benefit of the innovation landscape.

The regional investor community plays an active role in expediting new business projects

A thriving community of investors and business angels from among successful entrepreneurs, whose know-how is shared with others in the region. This is another value-added investment opportunity for new innovative business projects emerging in the region. It is an important lever in accelerating further growth for projects directly supported by the Central Bohemian Innovation Center and for other initiatives. The Central Bohemian Innovation Center is the architect of this investment ecosystem and links it to the wider landscape in other parts of the Czech Republic.



The innovation ecosystems of the Central Bohemian Region and Prague are interconnected

The naturally evolving social and economic interconnectivity of the regions, and the related frequent concurrent operations of local organisations in both regions, are also taken more into account in the innovation policy of the two regions. Joint or coordinated activities, projects and programmes are developed to capitalise on the benefits yielded by the effective interplay between the two regions.

How to get there (examples of typical activities):

- the establishment and fostering of awareness of the ecosystem among its stakeholders
- the involvement of companies, research organisations, and other entities in the community of stakeholders
- the creation of opportunities for meetings and cooperation between stakeholders on the basis of common themes or specific requirements, including the holding of annual conferences on specific themes
- the sharing of information about the capabilities, facilities, etc., of individual organisations that they offer for use for the benefit of others
- the pursuit of a common marketing strategy, including the creation of a guiding marketing platform
- management of the region's reputation as a joint strategic project
- the cooperation of stakeholders in the execution of the strategy, including the preparation of joint systemic and/or strategic projects
- the formulation of shared needs and lobbying for the interests of the Central Bohemian Region's innovation ecosystem and its stakeholders (e.g. in terms of easing the administrative burden imposed by subsidy schemes)
- the integration of information (recruitment of people, reporting of information to providers, competence of organisations)
- the emergence of innovation ambassadors from the ranks of companies, academia, and other organisations
- the networking of Central Bohemian stakeholders with partners in other regions
- the linking of spatial planning to the region's thematic strategies (not only the RIS)

How the pursuit of objectives will be monitored (indicators):

- the number of cooperating organisations supported under the Central Bohemian Innovation Center's programmes
- the number of projects recorded in the state's Information System of R&D&I involving the cooperation of innovation ecosystem stakeholders
- the number of clients within the business infrastructure (coworking spaces, science and technology parks, other business infrastructure)
- the number of links established in connection with speed-dating and similar events (matchmaking)
- the number of actively involved investors and business angels undertaking activities in the innovation ecosystem



OBJECTIVE E: ENOUGH SKILLED PEOPLE TO BOOST THE KNOWLEDGE ECONOMY

Having a skilled enough workforce is a topical issue against the backdrop of ongoing demographic and technological change. If the economy is to be resilient and productive, this places demands on the education system, on the work employers do with their workforce, and on individuals to develop their own skills. Regional innovation policy has the potential to deliver improvements in all these respects. Given the emphasis placed on this issue by innovation landscape stakeholders, the innovation policy in this case seeks to synergise with the regional education policy and the development of the education system.

Target state 2028:

Greater skills and aptitude for entrepreneurship

Education gradually evolves to endow the region's inhabitants with universally applicable skills that enable active people to apply their enthusiasm, energy and desire for the improvement of their surroundings effectively, regardless of their specific career path (freelancers, entrepreneurs, employees, scientists, etc.).

Greater skills for the future needs of the economy and society

As a result of companies' active engagement in the educational process and/or extracurricular activities and lifelong learning, a larger part of the population gains personal experience of the reality of how companies operate and are motivated to study in fields that are in demand on the market (e.g. digital or technical expertise).

A higher number of workers in skilled positions

The number of skill-intensive jobs increases as companies move up the supply chains or as more demanding corporate agendas migrate to the region. In turn, highly skilled workers bring more disposable income to the region, which is passed on positively to other areas of the economy.

Increased use of technology to replace unavailable labour

In economically justified cases, companies replace the workforce with new technological solutions, while at the same time introducing know-how related to the operation and maintenance of these solutions to the region. This can lead to a steady and welcome change in the skill structure of the region's workforce.

How to get there (examples of typical activities):

- an increase in the intensity of students' exposure to the real workplace throughout their education, e.g. visits by representatives of companies and research organisations to schools
- the mediation of work experience between schools and companies
- activities promoting entrepreneurship in extracurricular activities and lifelong learning
- the practical inspiration of pupils and students with examples of careers as entrepreneurs and scientists (as a tool for the promotion of such careers)
- awareness-raising and training within and outside the education system, including, for example, fairs and group events ("researchers' nights", a regional science festival, etc.)
- industry competitions for students in fields such as science and business marketing, outreach activities
- the promotion of the region as a place offering exciting job opportunities
- the testing of technologies replacing human labour, e.g. via the European Digital Innovation Centre's Brain4Industry project, and their deployment at local businesses
- student grants and scholarships
- the mapping and communication of the plans of key stakeholders (especially large employers) to education policy agents

How the pursuit of objectives will be monitored (indicators):

- an increase in the share of highly skilled workers (ISCO 1–3)
- the proportion of pupils/students from the region going on to study engineering and science at secondary schools and/or universities
- the number and share of foreign researchers employed at research organisations in the Central Bohemian Region
- the number of inhabitants participating in lifelong learning
- the economically active population with above-average digital skills





8. Implementation of the RIS in the Central Bohemia Region

Framework of implementation in the Czech Republic

The implementation of the CB RIS should be viewed in the context of relevant national strategies, especially the National RIS3 Strategy and the Innovation Strategy of the Czech Republic 2019–2030 (also known as “Czech Republic – the Country for the Future”). The National RIS3 Strategy serves, among other things, as a vehicle for obtaining support from the European Structural and Investment Funds. In most cases, its objectives overlap with the objectives of the second strategy mentioned above. National and regional strategies are also similar in the methodological approach taken to their creation. As the state is the main driver of research, development and innovation policy in the Czech Republic, a regional innovation strategy logically does not cover the same range of topics as the national strategy, but focuses on priorities and areas where it has the potential to influence the achievement of the set objectives. This is now also reinforced by the principles of regional innovation policy set out in section 7.1.

Implementation structure and instruments of the Central Bohemian Region

The implementation of the Central Bohemian Region’s RIS falls within the independent competence of the Central Bohemian Region itself, i.e. regional self-government. The innovation policy agenda falls within the competence of the Subsidy Project Management Department of the Central Bohemian Regional Authority, which oversees the CB RIS and, in cooperation with the Central Bohemian Innovation Center, is responsible for updating and executing it. The basic actors implementing the RIS in the Central Bohemian Region are, in addition to the region’s political representation, the Competitiveness Council, the Central Bohemian Innovation Center, the regional RIS manager, and innovation platforms, whose roles are described below.

Competitiveness Council of the Central Bohemian Region

The Competitiveness Council of the Central Bohemian Region is an advisory body of the Central Bohemian Regional Council for the support of innovative business, research and development in the Central Bohemian Region.⁷ It has been formed on the principle of partnership between the public, private and research sectors in the region. Competitiveness Council members are representatives of innovative companies, academic entities operating in the region, representatives of regional self-government and representatives of supporting organisations active in the field of innovation support in the Central Bohemian Region.

The roles of the Competitiveness Council mainly include coordinating the preparation and implementation of the regional RIS and monitoring and evaluating the results of CB RIS implementation. The Competitiveness Council discusses CB RIS action plans, proposes possible changes, comments on proposed updates of the CB RIS document, approves – and recommends to the Central Bohemian Regional Council for approval – strategic interventions and projects that, in scope and content, are strategic for the region’s development and are financed from public funds.

⁷ - Based on the conditions of the “Smart Accelerator+ I” call under the Operational Programme Comenius, it also has certain approval powers under the project Smart Accelerator III in the Central Bohemian Region.



Central Bohemian Innovation Center

The Central Bohemian Innovation Center, as the region's public innovation agency, is responsible for the implementation of selected CB RIS tools and projects. The main role of the Central Bohemian Innovation Center focuses on activity aimed at strengthening competitiveness and developing the knowledge economy in the Central Bohemian Region. The Central Bohemian Innovation Center specialises in supporting research, development and innovation in the region, strengthening partnerships between companies, public administration and academia, and promoting the growth and development, in particular, of small and medium-sized innovative companies.

Regional RIS manager

The regional RIS manager manages and coordinates activities related to the development of the CB RIS and its action plans, is the secretary of the Central Bohemian Region's Competitiveness Council, and coordinates the activities of regional innovation platforms.⁸ As a member of staff of the Central Bohemian Innovation Center, the manager works with other members of the centre's team to encourage the building of regional partnerships and cooperation in the area, and seeks out and develops new interventions to achieve the CB RIS's objectives. The manager, together with the regional RIS coordinator operating directly at the regional authority, is also the region's contact person for the National RIS manager at the Ministry of Industry and Trade.

Innovation platforms

Regional innovation platforms play a supporting role in shaping interventions for the attainment of RIS objectives in the region. These are essentially working groups of the regional Council for Competitiveness that focus on issues relevant to the needs of the region. Innovation platforms are composed of the representatives of companies, towns, municipalities, and academic and research institutions in the Central Bohemian Region. Their goal is to initiate collaboration on specific projects across industries and sectors, define and share project ideas, identify barriers and look for ways to overcome them, coordinate certain types of activities across multiple organisations, help to spot market opportunities, etc.

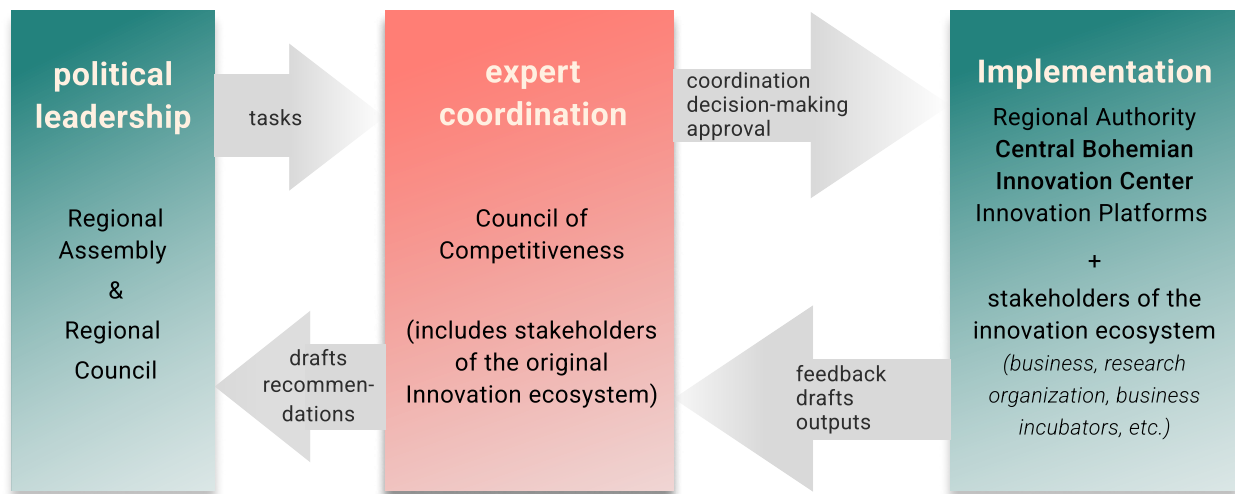
Action plan

that will meet its objectives. For each CB RIS objective, specific interventions are subsequently created – projects of strategic importance for the development of the region, which are drawn up in the form of an action plan. The action plan is thus a broad portfolio of interventions and project plans that contribute to the fulfilment of the CB RIS objectives. It provides an overview of the systemic steps contributed by individual stakeholders in the region.

Projects of strategic importance are considered to be projects (co-)financed from public sources (the region, towns, municipalities), usually involving multiple implementing partners, which have an impact on numerous organisations, typically a specific target group. They concern a large number of stakeholders in the innovation landscape and can therefore be viewed as “ecosystem” projects.

⁸ - This Is Also A Pivotal Person – Expert Manager – Of The Smart Accelerator Project, Which Is Designed To Support The Implementation Of The CB RIS.

Implementation diagram



9. The international dimension of implementing the strategy

The principles of smart specialisation require policymakers to heed the situation and practices in other regions and countries. As a result, it is possible, for example, with the help of systematic benchmarking, to map the European and international context and seek out examples of tools and good practices suitable for transfer to regional conditions. Cooperation with foreign organisations benefits everyone involved because the sharing of diverse expertise and know-how creates new knowledge, technologies and/or services. This is one of the reasons why suitable organisations or consortia are being sought to establish new partnerships. Experience of international cooperation subsequently helps to implement the most efficient tools in the Central Bohemian Region.

As such, the Central Bohemian Region draws on numerous impulses from abroad, which take various forms, in order to implement the Regional Innovation Strategy successfully. These include:

- the region's membership of the European Commission's S3 Platform⁹ – this is a Joint Research Centre – the Institute for Prospective Technological Studies in Seville, which methodically covers the European Commission's innovation strategy agenda and provides expert support to those implementing RIS strategies throughout the EU;
- involvement in international projects implemented by consortia from multiple countries for purposes of “policy learning”, or pilot projects. The region, or more precisely the Central Bohemian Innovation Center, has so far implemented (or is implementing) projects under Horizon Europe (the MERIT programme), Digital Europe (the EDIH Brain4Industry project), Interreg Europe (the Color Circle project), and Interreg Danube (the D-STIR and RI2Integrate projects);

⁹ see: <https://s3platform.jrc.ec.europa.eu>



- the implementation of “twinning” (the transfer of knowledge and good practice), i.e. intensive training courses acquainting participants with specific support tools at foreign innovation agencies and similar organisations, with the intention of transferring them to the Central Bohemian Region;
- the implementation of bilateral cooperation on the basis of memoranda of cooperation;
- involvement in the Capital Regions Exchange Partnership (CAPREX) and the 4-Agreement partnerships;
- participation in major international events where companies, researchers, policymakers and other stakeholders in the international innovation landscape meet, e.g. Innovation Growth Lab, CyberWeek, European Week of Regions and Cities.

Other stakeholders in the innovation ecosystem, such as research organisations and companies, are active in similar ways. The sharing of international contacts can thus benefit both business and research activities through effective matchmaking.

10. Financial resources for the implementation of the strategy

Various financial resources, depending on their availability and the conditions in which they can be obtained, are used in the implementation of the RIS. They include, in particular, subsidies from the Central Bohemian Region (operating subsidies to the Central Bohemian Innovation Center, the co-financing of projects), Community programmes of the European Union, national operational programmes subject to the European Structural and Investment Funds, central government schemes in support of research, development and innovation, and co-financing by project partners.

Specific sources and the amount of co-financing are agreed between the project partners and are subsequently subject to the approval of individual projects by regional bodies and/or in the relevant approval processes of the support providers concerned.

11. Monitoring and evaluation of the RIS in the Central Bohemian Region

Monitoring and evaluation activities are integral to the strategic management of the development of the innovation landscape. In the context of the Central Bohemian Region's RIS, these activities comprise action plan monitoring reports and evaluations of RIS implementation, plus, indirectly, numerous mapping exercises by the Central Bohemian Innovation Center and the collection of feedback on individual programmes and support instruments.

Action plan monitoring reports will contain information on the actual implementation of the planned interventions and projects. These reports will then be drawn up annually, along with the preparation of the new action plans. The action plans implemented so far and their monitoring reports are available on the Central Bohemian Innovation Center's website.

An interim evaluation of the RIS will be launched in the second half of 2025 as part of the project Smart Accelerator III in the Central Bohemia Region so that an update of the strategy can be prepared for the forthcoming EU programming period 2028+. In the design and development section of the strategy, monitoring indicators are prepared for each objective and will be monitored during implementation.





List of abbreviations

| | |
|----------------------|--|
| AI | artificial intelligence |
| B2B | business-to-business |
| BIOCEV | Biotechnology and Biomedicine Centre of the Academy of Sciences and Charles University in Vestec |
| CB RIS | Central Bohemian Regional Innovation Strategy |
| CBD | Extreme Light Infrastructure |
| EDIH | European Digital Innovation Hub |
| ELI | Extreme Light Infrastructure |
| EU | European Union (28 Member States) |
| FTE | full-time equivalent |
| GDP | gross domestic product |
| HPC | high-performance computing |
| HR | human resources |
| IoT | Internet of Things |
| ISCO | International Standard Classification of Occupations |
| NACE | EU's classification of economic activities |
| NUTS | EU's classification of territorial statistical units |
| OECD | Organisation for Economic Cooperation and Development |
| R&D | research and development |
| R&D&I | research, development and innovation |
| RIS | Regional Innovation Strategy |
| RIS3 | research and innovation strategy for smart specialization |
| S3 | smart specialisation strategy |
| SWOT | analysis of strengths, weaknesses, opportunities and threats |
| SMEs | small and medium-sized enterprises |
| UN | United Nations |
| WEF | World Economic Forum |



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Central Bohemian Innovation Center

2023