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Methodology for the Involvement of Innovation Infrastructures in RIS3

Systemic Support for the Implementation and Management
of the National RIS3 Strategy 2023+

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1. Executive Summary

Dear readers,

The document you are holding represents one of the outputs of the project “Systemic Support for the Implementation and Governance of the National RIS3 Strategy 2023+”.

Objective

The document is conceived as a methodology whose purpose is to **describe how innovation infrastructures can be engaged in the practical implementation of regional RIS3 strategies through specific steps aimed at strengthening the innovation ecosystem within a given region, with the objective of creating favourable conditions for the development of specific domains of specialisation.**

The topic of this Methodology, “Engagement of Innovation Infrastructures in RIS3”, was selected on the basis of findings from the Methodology for the Development of Innovation Infrastructures (Samek, 2022)¹ and the mapping of Inostructures in Czechia, which revealed continuing gaps at both the national and regional level in the systematic engagement of different Inostructures and innovation-ecosystem actors, particularly in their involvement in the design and implementation of RIS3 activities. The active involvement of a diverse range of innovation infrastructures is essential for developing the potential and effective functioning of the innovation ecosystem.

Content

Among other aspects, the Methodology focuses on describing procedures for linking national-level activities with regional implementation in a way that supports a better understanding of how regional innovation ecosystems function, strengthens alignment between national measures, and contributes to the Entrepreneurial Discovery Process (EDP).

The content of the Methodology is based on interviews and questionnaire surveys conducted among Czech innovation infrastructures, as well as on interviews with and visits to selected international innovation infrastructures specialising in biotechnology, green technologies and living laboratories. It also draws on research studies, articles, expert inputs and other online sources.

The resulting document outlines the roles of different types of innovation infrastructure in RIS3, highlights emerging innovation infrastructure trends, seeks to clarify innovation infrastructure terminology and definitions, presents examples of good practice from both Czechia and abroad in the development of regional innovation ecosystems, and proposes recommended approaches for linking national and regional activities, together with possible future models for engaging innovation infrastructures in RIS3, at both the national and regional level.

The structure of the document may appear thematically diverse, and, for some readers, only partly aligned with the original objective of engaging Inostructures in RIS3. However, this is intentional and reflects both expert recommendations and the findings of an analysis of the forms of innovation infrastructure engagement in RIS3, which revealed that the level of such systematic involvement is generally low in Czechia and abroad. As a result, the volume of available data and examples of good practice relevant to the focus of this Methodology proved more limited than the author – and perhaps readers – might have expected.

Terminology

The term Inostructures refers to all innovation infrastructures and organisations that support the development of smart specialisation domains (priority sectors for research and innovation support defined in national and regional RIS3 strategies), regional innovation ecosystems, the emergence of new innovations and companies, as well as research and testing facilities and equipment. These include innovation hubs, accelerators, business incubators, science and technology parks, coworking centres, fab and maker labs, living labs, clusters and others. The Methodology also touches briefly on so-called research infrastructures, which include large research infrastructures and specialised laboratories providing services and cooperation to companies and industry. These cannot be completely separated from innovation infrastructures and play an important role within the framework of smart specialisation.

Although various terms are used abroad to refer to these types of organisations (e.g. Business Support Organisations, Technology Infrastructures, Science and Business Parks, Entrepreneurial Support Organisations, Innovation Infrastructures), we retain the familiar term innovation infrastructures or Inostructures for short.

It is also necessary to emphasise that the definitions of individual Inostructures presented here do not necessarily correspond to every incubator, science and technology park (STP), living lab, etc. in Czechia. We are aware that the name of a particular Inostructure does not necessarily mean that the Inostructure in question meets the relevant definition and essence of the term or that it truly represents the type of institution it claims to be. The Methodology is complemented by terminology derived from English-language definitions used abroad.

We have also included a brief chapter on start-ups and their relationship to innovation infrastructures. Start-ups are an integral part of innovation ecosystems and, at the same time, also products of Inostructures. Understanding how they relate to Inostructures and specialisation domains can help to better formulate both Inostructure services and support at the national level.

Findings of the analysis

The analysis of the involvement of individual Inostructures showed that, in general, most Inostructures in the regions, except those explicitly mandated within RIS3, do not directly participate in the implementation of RIS3. There is also generally no shared communication platform enabling this network to share information and address issues related to the support and development of innovation in general. Cooperation usually takes place only with partners who are themselves active in supporting the innovation ecosystem and who have an interest in cooperating.

The most important role in the preparation and implementation of RIS3 within regions is played by regional innovation centres and RIS3 teams composed of representatives of regional authorities, regional development agencies and innovation centres.

¹ Samek, R. (2022). *Methodology for the development of innovation infrastructures in the Czech Republic*. <https://mpo.gov.cz/assets/cz/podnikani/ris3-strategie/projekty-na-podporu-ris3/operacni-program-vyzkum-vyvoj-a-vzdelavani/2023/2/Metodika-rozvoje-inovacnich-infrastruktur-v-CR.pdf>

Coworking centres, open workshops and hubs, as well as private business incubators, are hardly involved in RIS3 at all. When they are involved, it is typically with a more significant and active innovation centre, a science and technology park or technology park, or a large research infrastructure.

However, even smaller coworking centres, hubs, open workshops or private incubators can play an important role in RIS3. They can be specialised and focus on supporting innovators and start-up entrepreneurs in a particular field, as demonstrated by examples from Czechia and abroad. Science and technology parks and clusters tend to be the main creators of innovation ecosystems owing to their role in connecting and bringing together companies of all sizes across value chains as well as research institutions.

A similar situation prevails abroad, where cooperation among individual Inostructures is based on voluntary participation and willingness, rather than the systematic approach of a region or association.

It must, however, be noted that the level and willingness as regards cooperation abroad are significantly higher and more intensive, including among competing Inostructures.

Proposed recommendations and follow-up steps at the national and regional level

We propose the following as the most important measures (suggestions for implementation are given in Chapter 8):

The national level could

- ▶ Modify the conditions of grant programmes and calls with a greater focus on supporting the creation of start-ups and the creation and development of innovation infrastructures and regional innovation ecosystems that more closely reflect smart specialisation strategies and sectoral focus.
- ▶ Communicate more frequently and more intensively with regional Inostructures, actively listening to their needs, suggestions and knowledge of the regional innovation ecosystem environment, for example by establishing one regular shared communication platform with the coordinators of the Inostructure agenda at the national and regional level.
- ▶ Propose measures, methodologies and activities at the national level only where they address relevant and real needs of regions and Inostructures.
- ▶ Provide financial support and strengthened staffing capacity for the development of cutting-edge innovation ecosystems and specialised and shared Inostructures, following international examples and linked to RIS3.
- ▶ Monitor global trends in the development of innovation ecosystems and the services and programmes of foreign innovation agencies, and implement these in the services of the Ministry of Industry and Trade, CzechInvest, the Technology Agency of the Czech Republic and other ministries supporting the development of entrepreneurship and Inostructures.
- ▶ Cooperate with international organisations such as EBN, TAFTIE, ENOLL, IASP and ERRIN, amongst others.
- ▶ Involve large companies and industrial clusters in building large shared Inostructures such as sector-specific science and technology parks and campuses, innovation districts such as Medicon Village in Gothenburg, IDEA Park in Lund, the Brainport Eindhoven Campus, Belgian Wageningen Campus, EnergyVille Genk, the Copenhagen Innovation District and others.
- ▶ Unify the terminology of Inostructures, at least within the Czech environment.
- ▶ Pay greater attention to mapping Inostructures and updating them on a regular basis.
- ▶ Suggest ways to increase the involvement of Inostructures in RIS3, strengthen their interconnections or umbrella structures, and provide advisory and awareness-raising activities in relation to the construction and development of Inostructures, particularly specialised ones (e.g. through a specialised information website, seminars, training sessions).

- ▶ Connect and coordinate inter-ministerial cooperation in the establishment of new and specialised Inostructures (one example is CzechInvest's initiation of a joint information platform for living labs).
- ▶ Facilitate discussions and cooperation among regions on the topic of sharing and establishing Inostructures.

The regional level could

- ▶ Enable the creation of a unified and regular communication channel between the national level and regional Inostructures. This would increase involvement in regional RIS3 activities and enable more effectively targeted national support. Such communication would help better share mutual needs and suggestions and clarify the areas of responsibility and activities of both levels.
- ▶ Create a suitable system enabling the involvement of important regional Inostructures in the governance of the innovation system, in a manner corresponding both to the nature (development stage) of the given regional innovation system and to the nature of individual Inostructures within individual regions.
- ▶ Create and strengthen regional financial and support instruments to increase the involvement of Inostructures in RIS3 and to support the establishment of specialised Inostructures based on the "Western" model.
- ▶ Seek ways to involve smaller local Inostructures, where appropriate, in RIS3 activities and projects.

Both the national and regional levels should work together to increase the level and development of regional innovation ecosystems along the lines of countries such as Sweden, Finland, the Netherlands, Ireland, Spain, Italy and others, for example through research, by analysing how innovation systems work in these countries, studying their support programmes and activities, and applying examples of good practice.

The measures are discussed in more detail in Chapters 8: Proposed Procedures and Steps for Strengthening Connections, and 9: Conclusion.

2. Methods Used in Preparing the Methodology

Methods and procedures used

Within the primary research, the following methods were used to develop the Methodology:

Questionnaire survey

- A total of two questionnaires were created, one in Word format and one online.
- Between February and June, a series of in-person visits by the national RIS3 team took place at the headquarters of the regional RIS3 teams. In order to obtain information regarding regional innovation infrastructures, a **Word-based questionnaire** containing three questions was prepared and used to collect the data. The questions were also always sent to the RIS3 teams in advance to enable them to prepare their responses. The questions concerned the current state of innovation infrastructures in the regions, examples of good practice in involving Inostructures in RIS3, as well as needs and problems.

Questions:

1. We would like to ask about the current situation regarding the number, types and functioning of existing and planned infrastructures in the region (incubators, technology parks, accelerators, innovation centres, open/fab/maker labs, coworking centres, living labs, etc.). Ideally, we would also welcome data, statistics and analyses (verification and updating of data for NRIS3).
 - A. What examples of good practice do they have (which specific projects and collaborations) and from which sources (in Czechia and abroad) do they draw inspiration when creating and involving their Inostructures in the preparation and implementation of RIS3 strategies, specialisations and projects? Where do they seek inspiration?
 - B. Why did they decide on particular Inostructures? What has and has not proved successful, and why? What do they plan to test?
 - C. What are the regional RIS3 teams' concerns or interests with regard to Inostructures (topics, trends)? What would they need advice and help with? Where would they see the role of CzechInvest (and where, on the contrary, do they not need CI/the state), and likewise ministries/the state?

In November of the same year, an additional **online questionnaire** (see Annex 1) was prepared and sent to the RIS3 teams to supplement certain responses for which there had not been enough time during the meetings.

Personal inquiries

Data on regional or foreign Inostructures were also collected through personal meetings and interviews during various events held with representatives of innovation centres and RIS3 teams (RIS3 meets, seminars, conferences) or during international study visits to sector-specialised infrastructures in countries such as Sweden, Belgium, Denmark, the Netherlands, Romania and Ireland. During these visits, it was also often possible to interview representatives of Czech Inostructures that were also participating in the trips.

Telephone inquiries

Some innovation centres and RIS3 teams were also contacted by telephone to obtain additional information and responses to other questions about Inostructures and involvement in RIS3, as well as active work with local Inostructures.

Electronic inquiries

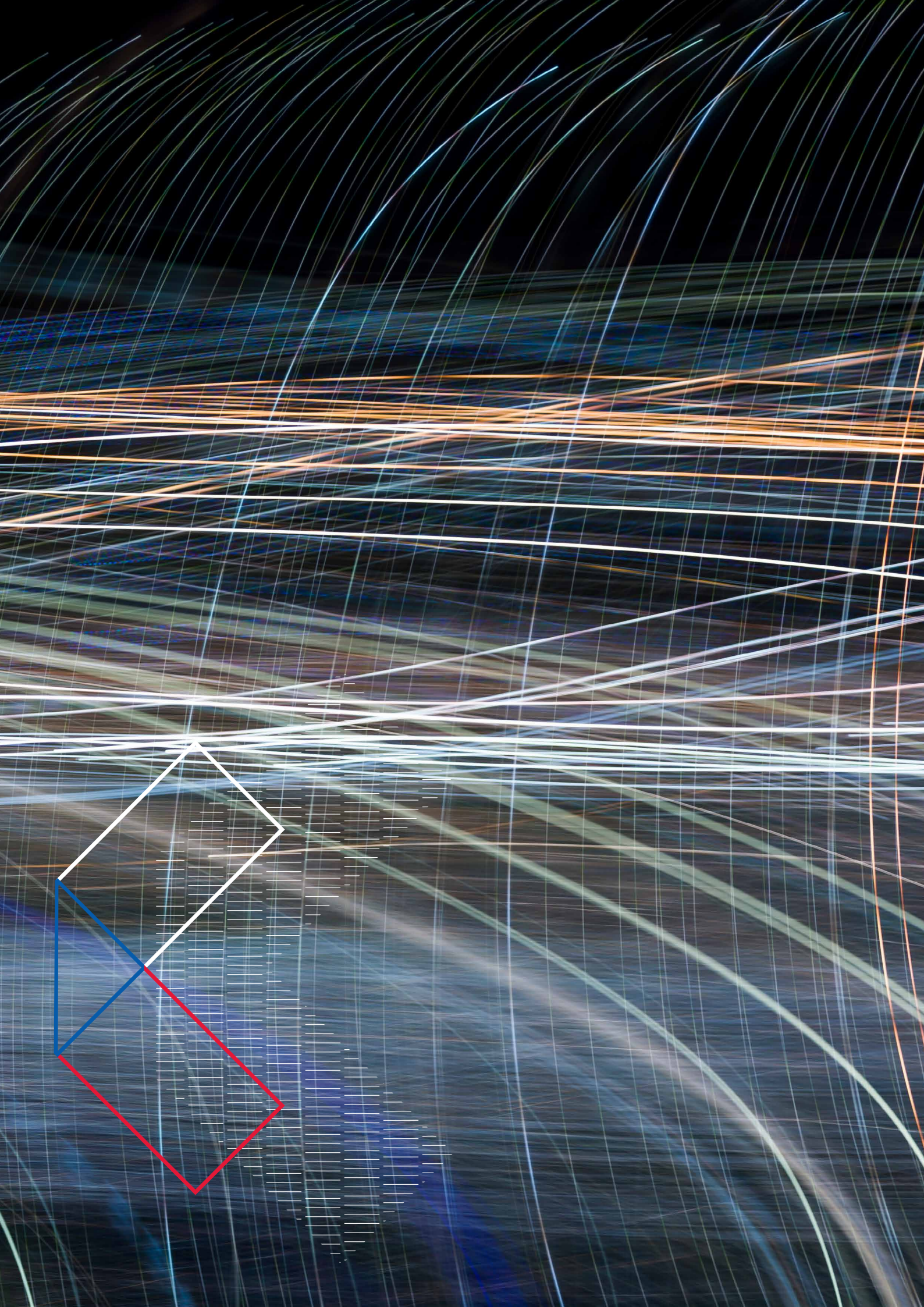
- **Electronic mail**
When planning domestic and international study visits, email communication was used to arrange meetings and send questions in advance, and in some cases also to arrange telephone, online and in-person inquiries.
- **Online video meetings**
Online meetings were used to obtain more detailed answers and information from representatives of certain Swedish science and technology parks, incubators and regions, as well as from the Swedish innovation agency Vinnova.

Consultations

In developing the structure and content of the Methodology, consultations were held with several experts in the field, mainly from regional innovation centres with detailed knowledge and practical experience in the field of innovation infrastructures. They provided valuable advice, recommendations and examples that have significantly shaped this Methodology.

Secondary research

The secondary research used the Internet as a source for searching for and supplementing information on innovation infrastructures, studies and analyses, definitions and examples of good practice. Artificial intelligence tools, in particular Open AI's ChatGPT, were also used to find examples of foreign Inostructures' involvement in RIS3. The outputs were subsequently verified.



3. Types and Terminology of Innovation Infrastructures

When referring in this Methodology to innovation infrastructures (also abbreviated as Inostructures), we primarily mean those presented in the Methodology for the Development of Innovation Infrastructures from 2022 (René Samek, CzechInvest), as well as others not mentioned in the Methodology, such as living labs, testbeds and clusters. In simplified terms, we mean all organisations that provide support services, whether business advisory services or research, development and testing, as well as facilities and equipment to supporting the development of innovation and entrepreneurship.

For the sake of clarity, this document provides one or more official definitions for each type of Inostructure we were able to identify. Annex 2 contains a table with the English equivalents. This terminology section is included in the Methodology due to a continuing misunderstanding surrounding these terms, not least because some countries and professional communities use different terms. Definitions and views on certain Inostructures also vary within professional circles. Therefore, this Methodology does not aim to unify or definitively clarify the terminology – although the topic does deserve its own dedicated methodology at the global level – but rather to define the terms for the purposes of this Methodology. It should be noted, however, that even a well-written definition of innovation infrastructure does not necessarily correspond to reality in terms of its actual implementation. In Czechia alone, there are a number of business incubators and science and technology parks that no longer fulfil – or in some cases never fulfilled – the mission implied by their name.

When it comes to innovation infrastructures in general, different definitions exist across EU countries. The European Commission has attempted to harmonise them, such as in the document *Technology Infrastructures: Commission Staff Working Document*² (2019):

“Technology infrastructures are facilities, equipment, capabilities and support services required to develop, test and upscale technology to advance from validation in a laboratory up to higher TRLs prior to competitive market entry. They can have public, semi-public or private status. Their users are mainly industrial players, including SMEs, which seek support to develop and integrate innovative technologies towards commercialisation of new products, processes and services, whilst ensuring feasibility and regulatory compliance.”

The document highlights the fragmentation of definitions across EU Member States and their strategies and policies, where harmonisation has not yet been achieved. It is therefore always necessary to determine what similar organisations are referred to in each country.

The term innovation infrastructures used in Czechia is primarily derived from Anglo-Saxon terminology (United Kingdom) and from the Swedish environment. It generally refers to a combination of organisations supporting entrepreneurship, start-ups and innovation ecosystems, i.e. business support organisations (BSOs) and infrastructures for the development and testing of innovations, as described at the beginning of this chapter.

Within Czechia, official definitions of individual types of Inostructures are almost non-existent. They are partly addressed by the rules of certain grant programmes and calls.

The OP TAC Infrastructure Services³ programme defines so-called research and innovation (R&I) infrastructure, which “...includes organisations such as science and technology parks, research and innovation centres, technology incubators and business incubators. R&I infrastructure stimulates and manages the flow of knowledge and technology between universities, research and development institutions, enterprises and markets; facilitates the creation and growth of innovation-based enterprises through incubation and spin-off processes; and provides other value-added services together with high-quality premises and facilities”.

For testing and experimental infrastructure, OP TAC (which also refers to it as a synonym for technology infrastructure) uses the following definition: “These are facilities, equipment, capacities and resources, such as test benches, pilot lines, demonstration facilities, test facilities or living labs, and related support services, which are used predominantly by companies, particularly small and medium-sized enterprises, seeking support for testing and experimentation in the development of new or improved products, processes and services, and for testing and upgrading technologies in order to advance through industrial research and experimental development. Access to publicly funded testing and experimentation infrastructures is open to multiple users and must be provided on a transparent and non-discriminatory basis and under market conditions.”

The definition of science and technology parks is given by the IASP definition in the European Commission (2014) *Setting up, Managing and Evaluating EU Science and Technology Parks: A Good Practice Guide*. See Chapter 5.2 for more details.

Figure 1 Categories of Research and Innovation Infrastructures

Research infrastructures

- Research laboratories
- Large research infrastructures
- Computing systems
- Scientific databases and data collections, etc.

Technology infrastructures

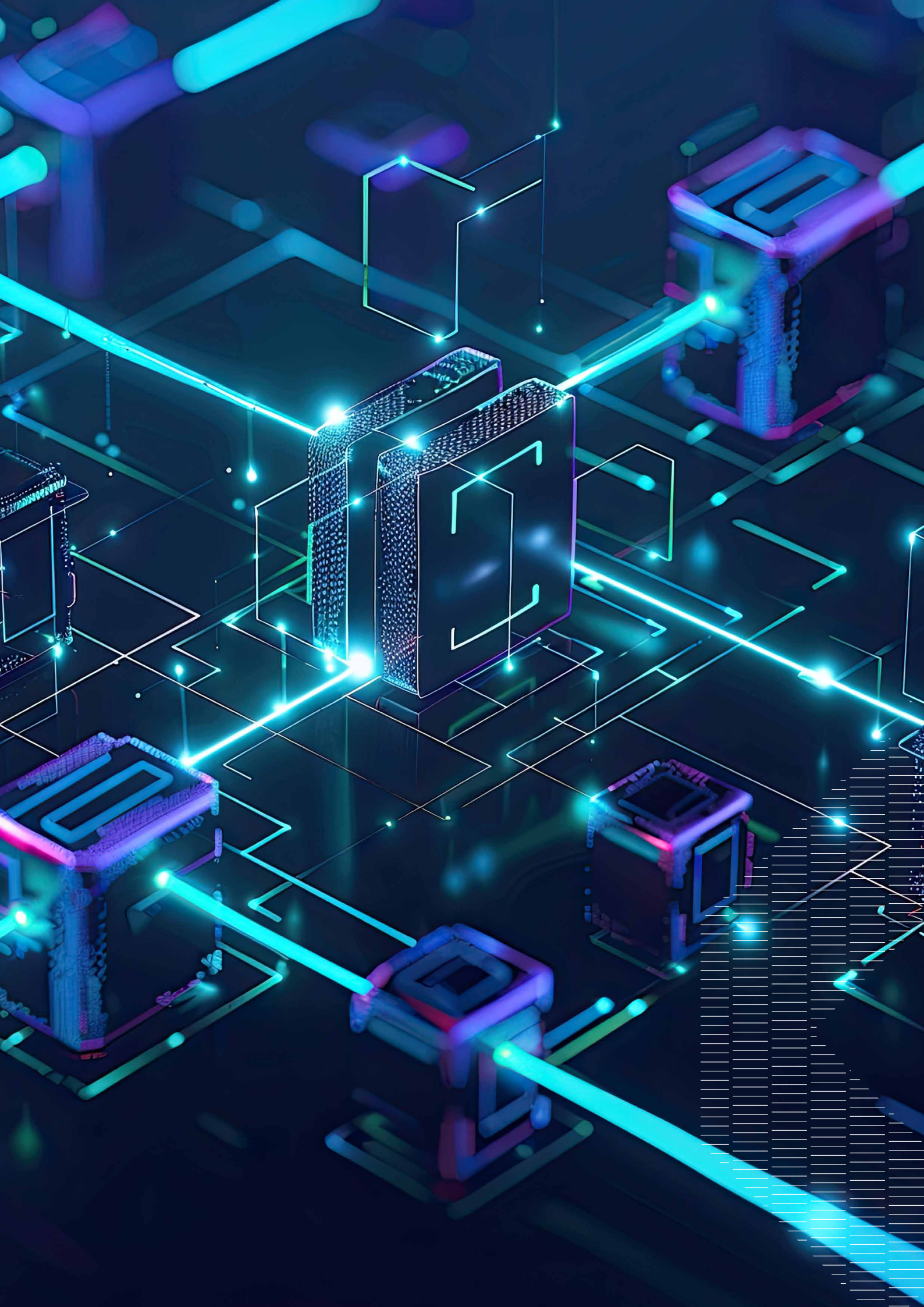
- Test benches
- Pilot lines
- Demonstrators
- Testing facilities
- Testbeds
- Living labs
- DIH/EDIH
- TEF
- Regulatory sandboxes
- Clean rooms, etc.

Innovation infrastructures

- Science and technology parks
- Incubators
- Innovation hubs and coworking spaces
- Open workshops
- Innovation centres
- Technology transfer centres
- Clusters
- Innovation districts, etc.

² Commission: Directorate-General for Research and Innovation. (2019). *Technology infrastructures: Commission staff working document*. Publications Office. <https://data.europa.eu/doi/10.2777/83750>

³ Ministry of Industry and Trade. (2023). *Managing Authority of the Operational Programme Technology and Applications for Competitiveness 2021–2027. Infrastructure Services – Call I*. sluzby-infrastruktury-vyзва-i-op-tak.pdf



4. RIS3 and Potential for Involvement

What is meant by involving Infrastructures in RIS3? What does RIS3 mean and what areas of involvement does it offer? This chapter summarises the most important points.

4.1 Recap of the RIS3 Strategy

RIS3 stands for Research and Innovation Smart Specialisation Strategy. According to the RIS3 portal (www.ris3.cz⁴), this strategy ensures the effective targeting of resources — particularly from European, national and territorial budgets — to support oriented and applied research and innovation. Support is directed towards selected priority areas with a high potential to create a long-term competitive advantage for Czechia based on the use of knowledge and innovation. Identifying and developing these promising areas, i.e. “smart specialisation”, builds on the strengths of Czechia and its individual regions. It seeks to make targeted and “smart” use of the opportunities offered by the country’s economic base and research and innovation capacities. At the same time, the weaknesses of the innovation system that represent barriers to the development of the innovation environment as a whole are addressed.

Smart specialisation strategies exist both at the national level⁵ and at the level of individual regions of Czechia in the form of regional RIS3 strategies and implementing action plans. They describe **vertical domains of specialisation** reflecting research and innovation areas of industrial sectors that are strategically important for the country and regions, as well as **RIS3 missions (priority topics addressing societal challenges)**. They also include supporting **horizontal priorities and areas** such as digitalisation, people and smart skills, research, development and innovation for business, and higher quality public research. These horizontal priorities are then further translated into specific objectives of activities and priorities such as entrepreneurship education, training in professional skills, attracting and working with new talent, support for start-ups, linking companies with the research sector, motivating researchers, introducing new digitalisation technologies, improving the functioning of innovation ecosystems, etc.

A key element of RIS3 is the Entrepreneurial Discovery Process (EDP), a process led by entrepreneurs aimed at identifying new high-potential opportunities. There are many different ways to implement the EDP process at the regional level, and in some cases it may be appropriate to involve representatives of key Infrastructures in the process.

4.2 The Role of Innovation Infrastructures in RIS3 Internationally

The importance and role of innovation infrastructures is discussed in several key documents on smart specialisation. For example, Chapter 8 of the JRC Handbook⁶ from 2016 talks about science and business parks and business centres and describes their role in the context of RIS3 (p. 119).

The JRC Handbook highlights the important role that all innovation actors should play in the RIS3 process. Science, technology and business parks are essential stakeholders that should

be included in the RIS3 governance framework, and their involvement in the prioritisation phase should be considered a key element in the process.

Moreover, these parks contribute to other dimensions of the smart specialisation paradigm: their governing bodies have experience in stimulating and managing of knowledge and information flows between companies, universities, entrepreneurs and technical experts, and provide an environment that fosters a culture of innovation, creativity and quality. They facilitate the creation of new companies through incubation and spin-off mechanisms and accelerate the growth of small and medium-sized enterprises, operating within a global network that brings together many thousands of innovative companies and research institutions around the world, thereby facilitating the internationalisation of the companies based within them. Companies located in such parks also tend to specialise in very specific activities across several different sectors. This is why, when these companies collaborate with others, new products, services or technologies often emerge through a combination of different activities and different sectors. This process of cross-fertilisation of activities and sectors (and the related diversity) is also a common focus of park management bodies and can provide many examples of how such processes develop.

Another JRC refers to science and technology parks:⁷

“As a rule, science and technology parks form the breeding ground for knowledge-intensive domains of specialisation on which regions can rely to increase their competitiveness. This is why science and technology parks appear to play a key role in innovation strategies for smart specialisation (S3).”

It should be noted, however, that in Czechia there are very few science and technology parks which, despite their designation, actually fulfil the definition and mission of such parks through their real activities and services, while at the same time being key actors in the implementation of RIS3, particularly in terms of their sectoral specialisation, as described in the JRC Handbook. This fact was also demonstrated by a detailed analysis and the Methodology for the Development of Innovation Infrastructures (Samek, 2022). In Czechia, this role is currently played primarily by regional innovation centres.

However, this does not change the fact that each type of innovation infrastructure has its own important role to play in the preparation and implementation of RIS3, as demonstrated by numerous examples from both Czechia and abroad. The roles of individual Infrastructures are described in Chapter 5 in the section “*Involvement in RIS3*”.

⁴ Ministry of Industry and Trade. *RIS3*. <https://www.ris3.cz/>

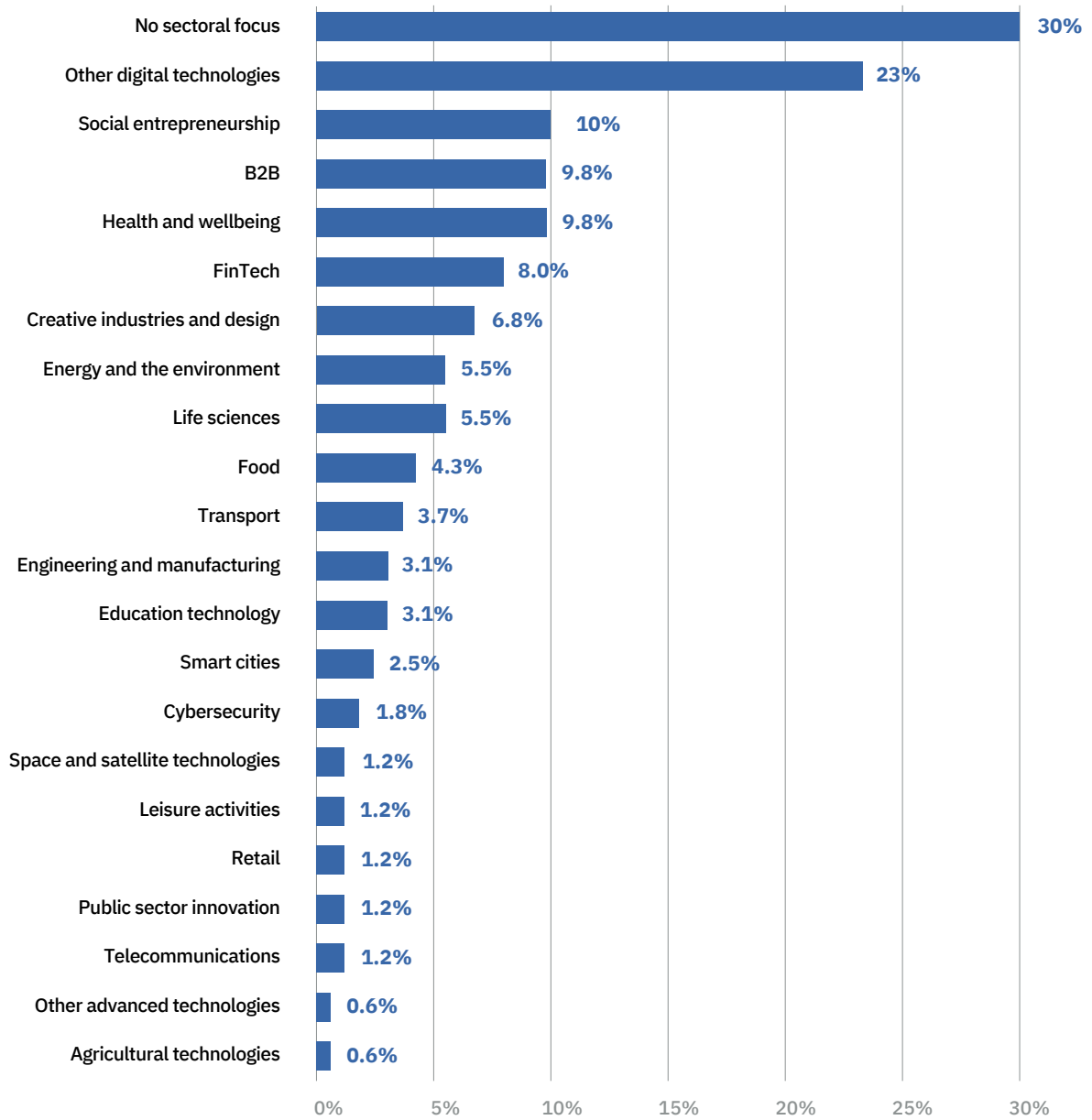
⁵ Technology Agency of the Czech Republic. (2023). *National RIS3 Strategy: Research and Innovation for Smart Specialisation in the Czech Republic* https://www.ris3.cz/sites/default/files/2023-01/A_RIS3%20Strategie.pdf

⁶ Gianelle, C., Kyriakou, D., Cohen, C., & Przeor, M. (Eds.). (2016). *Implementing Smart Specialisation Strategies: A Handbook*. European Commission, Joint Research Centre. [jrc102764_s3p-fromdesigntoimplementationfinal\(16-12-016\)web.pdf](https://www.jrc.ec.europa.eu/publications/102764_s3p-fromdesigntoimplementationfinal(16-12-016)web.pdf)

⁷ Kleibrink, A., & Stancova, K. (2014). *The Role of Science Parks in Smart Specialisation Strategies*. European Commission, Joint Research Centre. https://www.researchgate.net/profile/Alexander-Kleibrink/publication/271512268_The_Role_of_Science_Parks_in_Smart_Specialisation_Strategies/links/54ca251b0cf2807dcc28a903/The-Role-of-Science-Parks-in-Smart-Specialisation-Strategies.pdf

The sectoral specialisation of some infrastructures was the subject of a 2017 study by the UK innovation agency NESTA (National Endowment for Science and Technology and the Arts), entitled *Business Incubators and Accelerators: The National Picture*⁸. As Figure 2 shows, 70% of accelerators specialised in a particular sector. Most commonly on digital technology and social entrepreneurship, but also on health and fintech.

Figure 2 Proportion of specialised accelerators in the United Kingdom

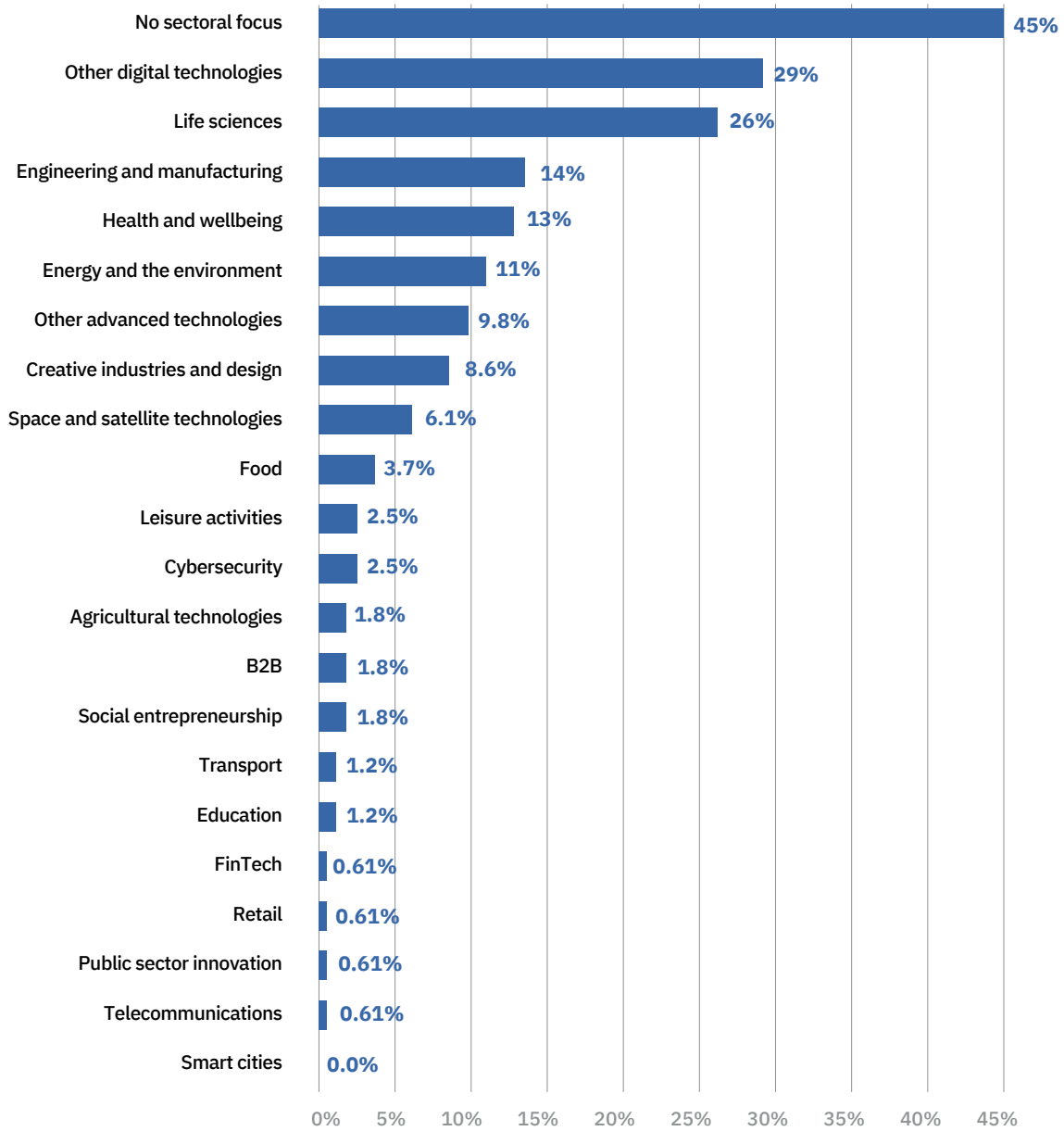


Source: NESTA (2017)

⁸ Department for Business, Energy & Industrial Strategy. (2019). *Business Incubators and Accelerators: The National Picture*. <https://assets.publishing.service.gov.uk/media/600ed7838fa8f56551364ffd/business-incubators-accelerators-uk-report.pdf>

Figure 3 shows the specialisation of business incubators. More than half of them focus on specific sectors of industry and innovation. Digital technologies and life sciences are the most prominent sectors. Unlike accelerators, sectors such as fintech, B2B and social entrepreneurship are the least represented.

Figure 3 Proportion of Sector-Specialised Incubators in the United Kingdom



Source: NESTA (2017)

Figure 4 from the same study shows the focus of incubators. The development of the regional ecosystem ranks first, while support for the development of specific sectors ranks as low as 8th.

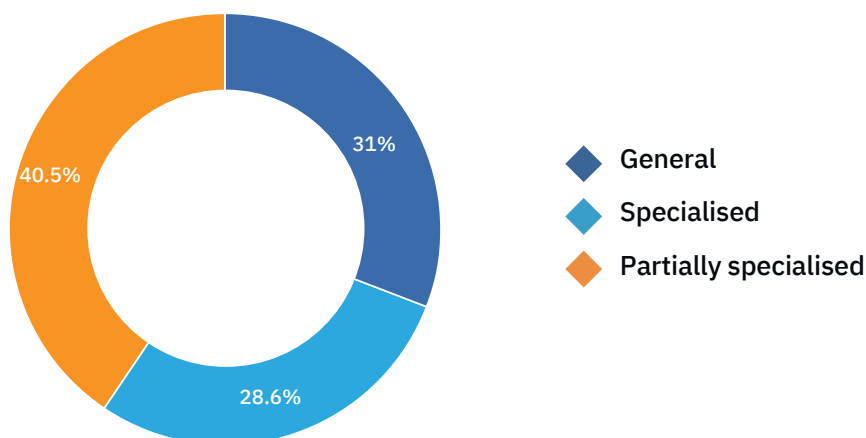
Figure 4 Main Objectives of Incubators in the UK⁹

Top three objectives of incubators	All incubators (n=60)		University incubators (n=33)		Non-university incubators (n=29)	
	n	%	n	%	n	%
Develop a regional ecosystem to support start-ups and/or enable people in the region to start their own business	31	50%	17	52%	14	48%
Select and support scalable, fast-growing businesses	28	45%	15	45%	13	45%
Help students realise their business ideas	26	42%	18	55%	8	28%
Support regional development and job creation	20	32%	9	27%	11	38%
Support social entrepreneurship	11	18%	7	21%	4	14%
Support the commercialisation of knowledge and technologies developed at universities	10	16%	8	24%	2	7%
Connect start-ups with large enterprises interested in their capabilities/resources/technologies	8	13%	2	6%	6	21%
Support the development of specific sectors	7	11%	5	15%	2	7%
Provide students with practical experience that develops career and life skills	7	11%	4	12%	3	10%
Other	6	10%	2	6%	4	14%
Help disadvantaged groups and individuals with projects	4	6%	1	3%	3	10%

Source: NESTA (2017)

Figure 5 presents, in a 2024 study, the sectoral specialisation of members of the International Association of Science Parks and Incubators IASP10, which includes science parks, innovation districts and geographic areas of innovation. Up to 70% of these infrastructures specialise in certain business and industry sectors, with as many as 30% being fully specialised. The report states that specialisation in a particular sector has become a trend in recent years. Unfortunately, however, the study does not provide more detailed data on the types of specialised infrastructures.

Figure 5 Sectoral Focus of Science and Technology Parks, Innovation Districts and Innovation Zones



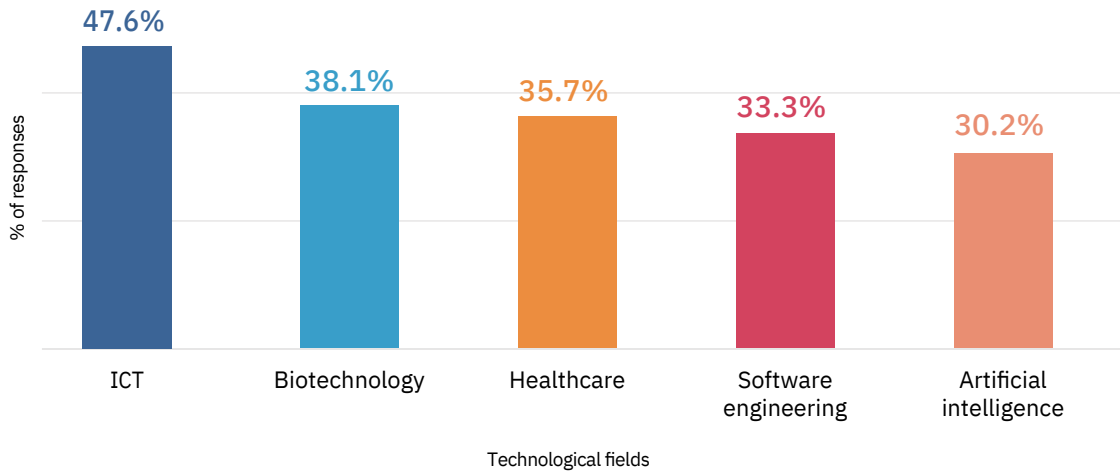
Source: IASP Global Survey Report 2024

⁹ Department for Business, Energy & Industrial Strategy. (2019). *Business Incubators and Accelerators: The National Picture*. P. 60. [https://ec.europa.eu/programmes/erasmus-plus/project-result-content/35ce359d-3c74-4857-91c8-ea03510f35b6/Critical factors \[EN\].pdf](https://ec.europa.eu/programmes/erasmus-plus/project-result-content/35ce359d-3c74-4857-91c8-ea03510f35b6/Critical%20factors%20EN.pdf)

¹⁰ International Association of Science Parks and Areas of Innovation. (2024). *IASP Global Survey Report*. <https://www.iasp.ws/activities/news/iasp-global-survey-report-published>

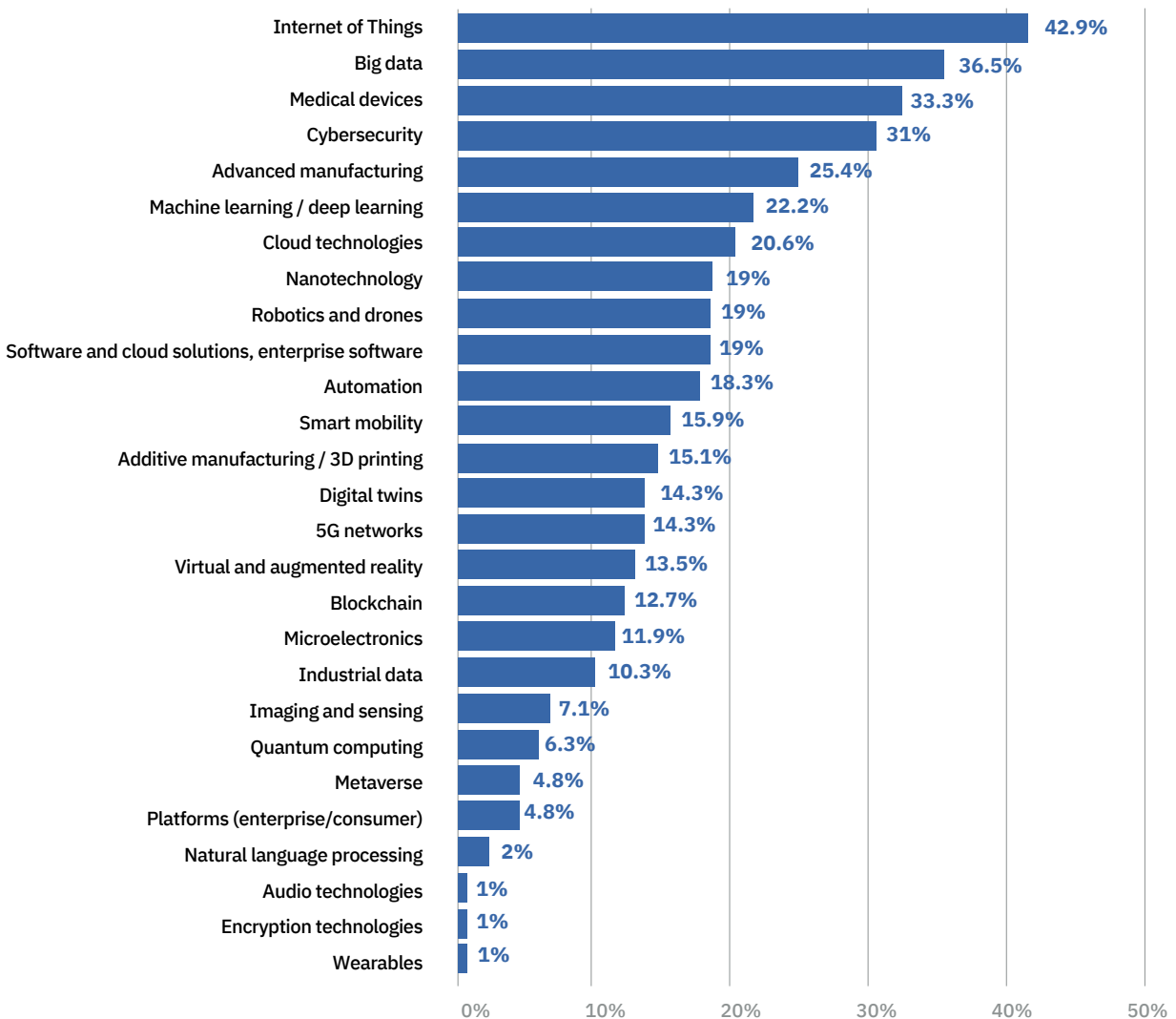
Figures 6, 7 and 8 show the technological or sectoral specialisation of science and technology parks. In terms of the current technological fields of their clients, the most frequent focus is on ICT fields such as artificial intelligence, but also biotechnology and health, energy or electronics. Future trends are expected to include the Internet of Things and big data, followed by medical devices, cybersecurity and additive manufacturing.

Figure 6 Main Technological Fields of Innovation Zones, Innovation Districts and Science and Technology Parks



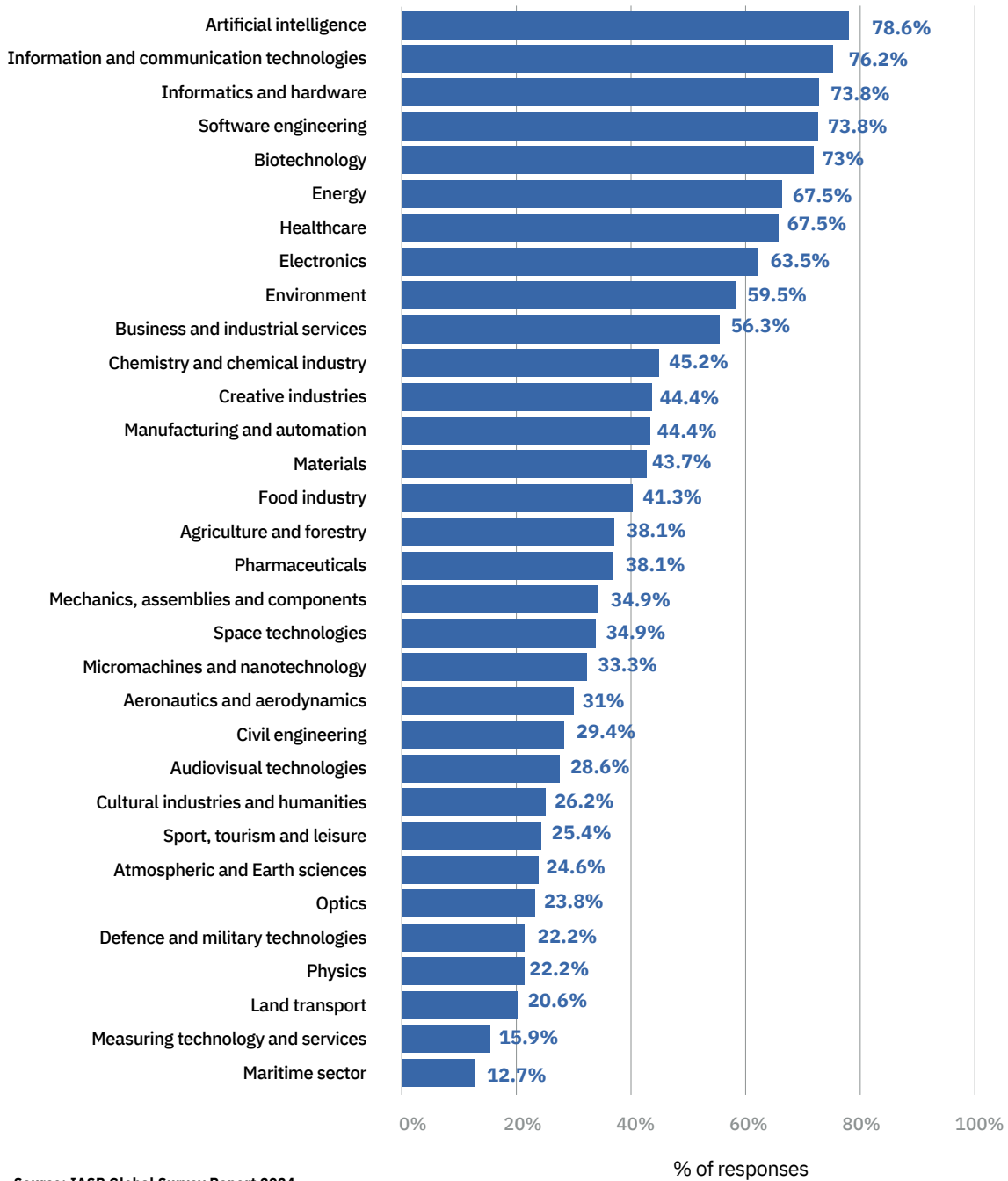
Source: IASP Global Survey Report 2024

Figure 7 Technological Trends in Innovation Zones, Science and Technology Parks and Innovation Districts



Source: IASP Global Survey Report 2024

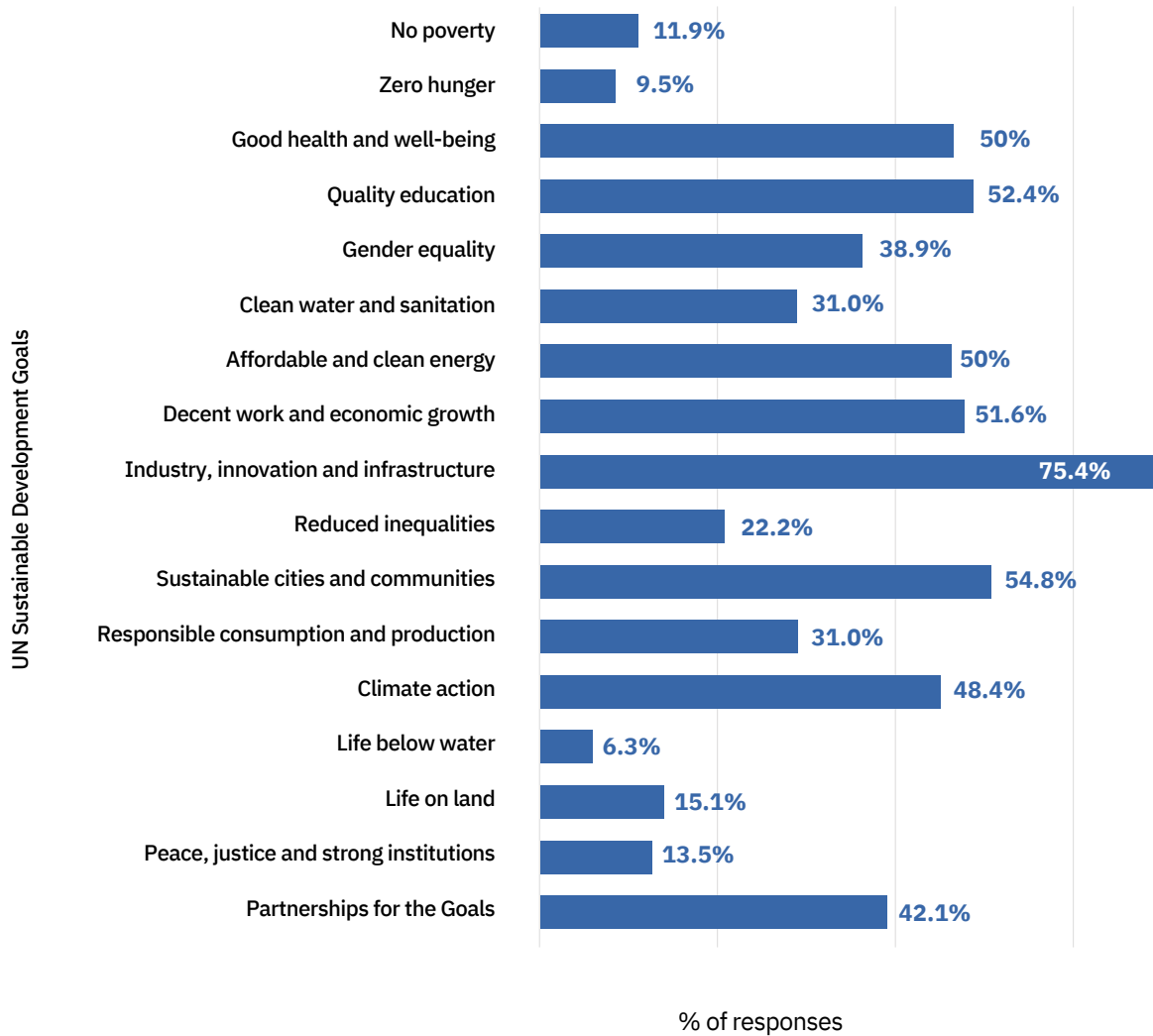
Figure 8 Technological Sectors in Innovation Zones, Science and Technology Parks and Innovation Districts



Source: IASP Global Survey Report 2024

Figure 9 shows how technology parks parks around the world also incorporate the UN Sustainable Development Goals into their strategic documents, which are also referenced by RIS3 missions. Unsurprisingly, the Industrial Innovation and Infrastructure objective is at the forefront (75%). Right behind it, the goal of Science and Technology Parks focuses mostly on sustainable cities and communities, quality education, decent work for all and economic growth, health, wellbeing and clean energy. All with a share slightly above 50%. Approximately 72% of technology parks have their own sustainability policy. The main focus of these is on adaptation to climate change (62%) and environmental risk monitoring and management systems (68%), while reducing CO₂ emissions is addressed least frequently (34%).

Figure 9 Focus of Science and Technology Parks, Innovation Zones and Districts on the UN Sustainable Development Goals



Source: IASP Global Survey Report 2024

4.3 Forms of Involvement in RIS3

When we talk about involvement in RIS3 strategies, we mean the active participation of representatives of individual innovation infrastructures in activities and objectives defined in the national and regional strategies or regional action plans derived from them.

This involvement may take several forms:

1. Participation in the preparation of the RIS3 Strategy, including, for example, the EDP process. In particular, larger Inostructures such as innovation centres, science and technology parks, business incubators, major research infrastructures and clusters can contribute key proposals for the creation or updating of RIS3 strategies.

2. Participation in the implementation of RIS3 through specific projects based on RIS3 and action plans (e.g. building an innovation ecosystem within a particular domain of specialisation, developing infrastructure, orienting certain regional Inostructures towards specific smart specialisation domains, education, talent attraction, etc.).
3. Participation and membership in regional innovation platforms and councils (Research, Development and Innovation Councils and Commissions; Regional Innovation Platforms, etc.).
4. Consultation and training provided by a central regional Inostructure (e.g. a regional innovation centre) to local Inostructures or their clients.

Involvement can certainly take other forms as well, but this Methodology focuses on the most common ones.

4.4 Analysis of the Involvement of Innovation Infrastructures in Czechia

Each methodology and recommendation is based on an analysis of the environment for which the methodology is intended. The main target group of this Methodology will consist primarily of regional RIS3 teams (also referred to as *regions* for the sake of simplicity) and representatives of innovation infrastructures. Therefore, we sought to understand the procedures, tools and experience that, for example, regional RIS3 teams and innovation centres in the 14 regions around Czechia use in involving regional Inostructures in activities derived from regional RIS3 strategies.

Data were obtained through interviews conducted during visits between February and June 2024, the online questionnaire presented in Annex 1, and telephone and in-person interviews.

For the sake of completeness, it should be noted that 11 regions responded, seven of which completed the online questionnaire (including by telephone or in person), three regions responded through telephone interviews, including online, and one region completed the questionnaire through an in-person interview.

We were particularly interested in whether the regions cooperate with Inostructures within their territory, what forms this cooperation takes, and where they seek inspiration.

Conclusions of the Survey:

Overview of Inostructures in the region

- Regional RIS3 teams generally have most of their regional Inostructures mapped and are aware of their existence.

Systematic (non-)cooperation with regional Inostructures

- On the other hand, in most cases, the institutions responsible for RIS3 regional strategies do not cooperate systematically or regularly with most local Inostructures. The reasons for this vary:
 - A low number of Inostructures in some regions, particularly smaller ones.
 - A limited number of Inostructures genuinely focused on incubating start-ups, entrepreneurship education or providing facilities for emerging companies.
 - The declared status of innovation infrastructure based only on the institution's name, without fulfilling the corresponding role (a common issue among many business incubators and/or science and technology parks).
 - A lack of Inostructures capable of acting as relevant partners for RIS3 issues, which requires active involvement in the EDP process and in the development of the local innovation ecosystem or domain and vertical specialisation.
 - Often, lack of interest among other Inostructures, apart from the regional innovation centre, in participating in RIS3.
 - Shortage of larger Inostructures in certain regions due to the geographical layout and size of their cities. Regions with significantly smaller municipalities and towns outside the regional capital do not have the capacity to create larger Inostructures such as hubs, incubators or science and technology parks, and therefore cannot bring a larger number of relevant partners into RIS3.
 - A sense of competition for the same sources of funding.

- Poor personal and professional experience with certain institutions.
- Limited budgets for such activities, both at the regional level and among smaller Inostructures.

- For these reasons, a systematic approach by regional innovation centres aimed at involving all innovation ecosystem actors in RIS3 cannot be applied. Such an approach may have existed in the early days of these centres, but after analysis of the situation, it was largely abandoned.
- Cooperation with other regional Inostructures is therefore somewhat ad hoc, where these Inostructures themselves show interest and their involvement makes sense. Typically, this is not the case with coworking centres, which focus on renting space and organising more general workshops; the same is true of the Inostructures described above, which no longer fulfil the role implied by their name.
- For similar reasons, there are often no shared communication platforms covering all or most regional innovation infrastructures for meetings, consultations and the exchange of views.
- The analysis identified two approaches to cooperation with other actors in the region: a centralised approach, where the innovation centre provides services centrally from the regional capital and does not support the creation of Inostructures in smaller municipalities; and a proactive approach, when the regional centre or RIS3 team encourages municipalities to establish hubs, coworking spaces, incubators, etc. and involves them in activities, projects and sometimes even cooperation on RIS3.

Linking different Inostructures

- Examples of regions still actively pursuing such connections include the Central Bohemian Region, the Olomouc Region and the Zlín Region.
- The Central Bohemian Innovation Centre regularly maps the presence of coworking spaces, hubs, science and technology parks and incubators in the region, seeks to engage them in cooperation, promotes them on its website, and initiates discussions with municipalities where no such Inostructure yet exists but where it would make sense to build one.

Involvement in RIS3

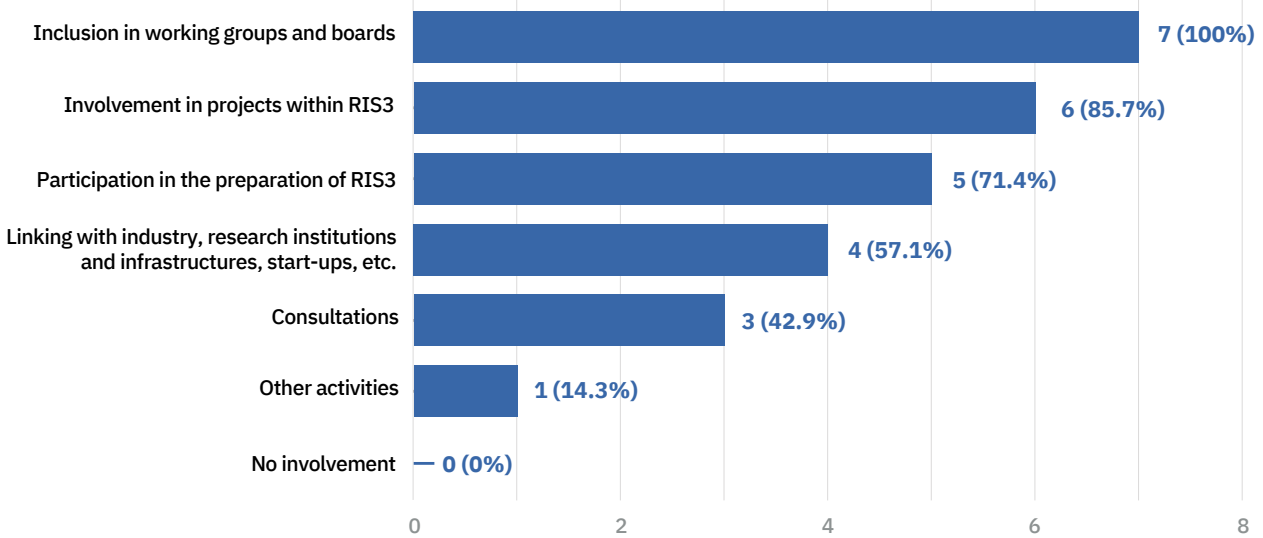
- When it comes to forms of Inostructures' involvement in RIS3, the survey showed that cooperation is most often through participation in working groups of Regional Innovation Platforms or the Research, Development and Innovation Council. The second most frequent form of involvement is through projects, while the third most frequent is direct participation in the preparation of RIS3 strategies.

Domain specialisation

- With a few exceptions (such as KUMST in the cultural and creative industries, INBIT and Innocrystal in biotechnology, and PowerHub in mobility), there are almost no sector-specific or domain-focused incubators, science and technology parks or hubs in Czechia. Most of them are open to all start-ups regardless of sector and operate across multiple domains. The only ones that track regional or national RIS3 domains in relation to start-ups are regional innovation centres. For example, university incubators are better able to support and assist start-ups aligned with academic disciplines, such as xPORT VŠE (economic IT applications), PointOne ČZU (food and agriculture), inQbay CTU (technical solutions), and the ESA incubator (space sector).
- Very few provide laboratory facilities, particularly for sectors such as healthcare, pharmaceuticals and biotechnology.

Figure 10 Involvement of Regional Inostructures in RIS3

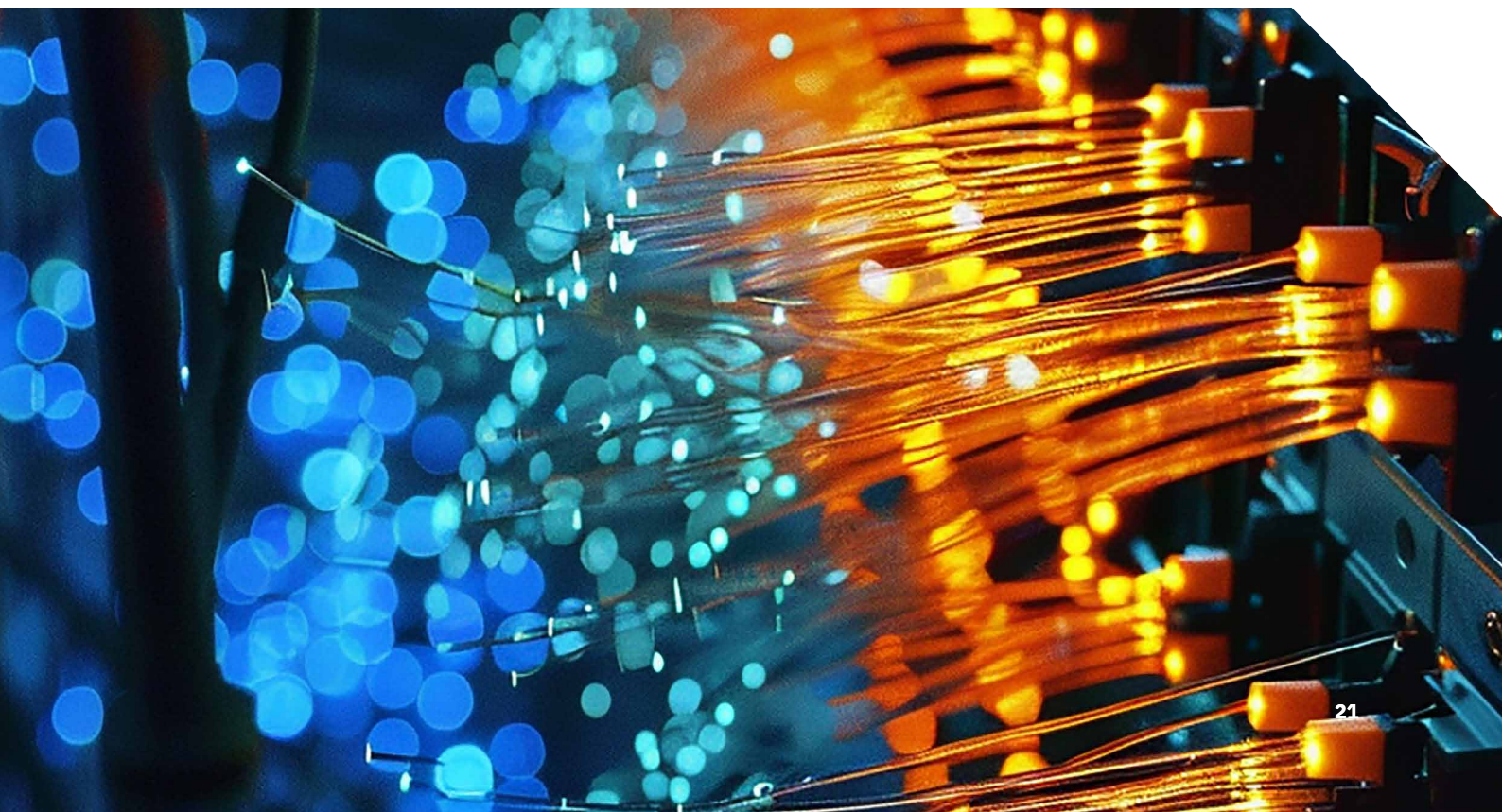
How and which regional Inostructures are you involving in RIS3, including in relation to specialisation domains?
For example:

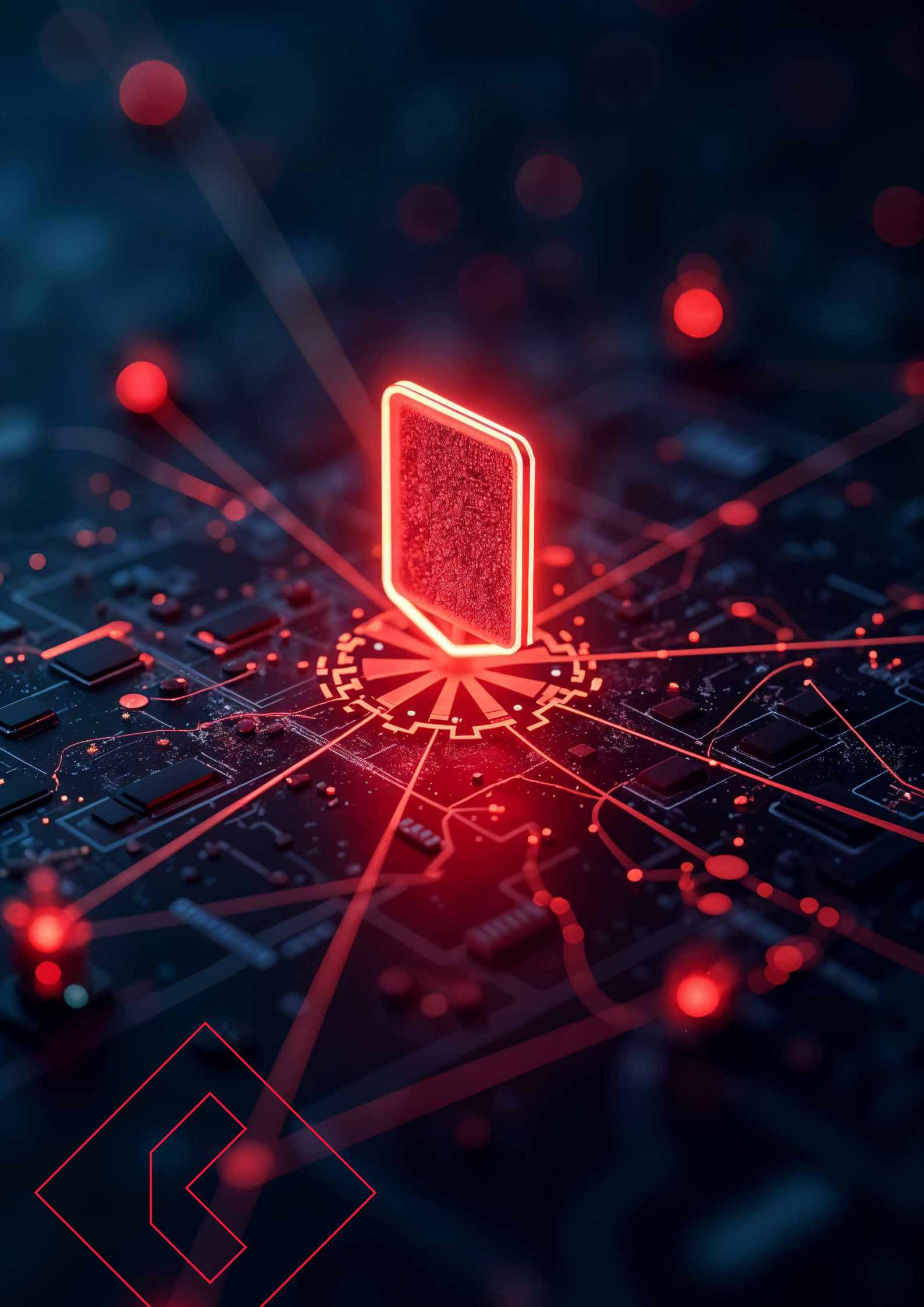


Source: CzechInvest survey (2024), see Annex 1

Expectations of Inostructures at the national level for greater involvement in RIS3

- Support for cascade financing mechanisms to fund Inostructures.
- Active collection and processing of feedback from potential beneficiaries and applicants for innovation infrastructure grants when designing support instruments and outlining Inostructure needs. In the future, some grant programmes and calls aimed at supporting innovation and innovation infrastructures could take greater account of RIS3, such as domain specialisation and strategic technologies.
- Reduction of bureaucracy in public aid schemes and more flexible application of public aid, following the example of countries such as Germany, France, the United Kingdom, the Benelux countries, Denmark, the countries of Scandinavia, Italy, etc.
- Continuation of programmes such as OPST Strategic Projects, OPST Innovation Voucher, etc.
- Sharing information with regional innovation centres on negotiations with regional municipalities and companies regarding the creation of new hubs, coworking spaces, incubators, etc., where the national level is the first institution approached.
- Sharing examples of good practice – presenting specific tools and activities that have proven effective.





5. Involvement in RIS3 by Type of Inostructure

This chapter presents the role, benefits and involvement of innovation infrastructures in RIS3, according to their individual types.

For each type of innovation infrastructure, a brief description or definition is provided, together with possible forms of involvement and examples. The examples presented only briefly here; some are described in greater detail in Annex 3.

These examples were sourced from study visits in 2024 to innovation infrastructures in Belgium, the Netherlands, Luxembourg, Sweden, Denmark and Ireland, as well as interviews, questionnaires with representatives of Czech innovation centres, various studies and documents, and online sources.

5.1 Regional Innovation Centres and BICs

Definition

According to the Methodology for the Development of Innovation Infrastructures (Samek, 2022), innovation centres and/or Business and Innovation Centres (BIC) are organisations or institutions with a broader range of objectives and activities than incubators and accelerators. In addition to supporting start-ups and SMEs, they also promote entrepreneurship and innovation, foster cooperation between academic research organisations and private companies, and develop the regional innovation ecosystem.

They should also be distinguished from the concept of innovation centres used abroad, which generally refers to a place equipped with technology (such as a laboratory or fab lab) within a single company, where various actors can develop and test their innovations. Such spaces can also serve as innovation showroom or venues for sharing know-how, workshops, and similar activities (see, for example, publications by IGI Global¹¹ or Stantec.¹²

According to the JOIST Innovation Park¹³ in Greece, an innovation centre is a physical space or hub that offers various resources and services to entrepreneurs, start-ups and established companies. It is a collaborative environment where individuals or organisations can come together to exchange ideas, innovate and develop their projects. Innovation centres are designed to provide access to essential resources that are usually beyond the reach of small businesses, such as expensive equipment, specialised training and mentoring. Innovation centres may take various forms, including incubators, accelerators, coworking spaces and research and development centres. This concept is identical to that of innovation centres in Czechia.

In the Czech environment, regional innovation centres are usually defined as organisations that:

- support the creation and development of innovative businesses,

- act as the main coordinator of the regional innovation ecosystem,
- operate within networks to support entrepreneurship and innovation,
- cooperate with a number of other partners at the regional, national and international level,
- develop cooperation between companies and research institutions and universities to stimulate company growth,
- develop the region's innovation ecosystem and creates new innovation partnerships,
- help entrepreneurs accelerate the growth of their companies through innovation.

They are therefore close to the definition of JOIST.

Involvement in RIS3

Regional Innovation Centres in Czechia usually play a significant role in preparing analyses and proposals for regional smart specialisation strategies. Within regions, they generally play the main role in the design and implementation of RIS3 in building and shaping the innovation ecosystem.

- They are often entrusted with implementing the strategy for the development of innovative business and industry and for delivering their objectives.
- They address horizontal RIS3 activities such as entrepreneurship education, start-up incubation, and the search for and acquisition of talent.
- They can may develop support programmes for building start-ups and scale-ups in a particular sector of industry.
- They also work on developing the innovation ecosystem within a specific sector or domain of specialisation by coordinating other actors in the regional innovation ecosystem (Inostructures, innovation companies and research organisations). They act as coordinators of the entire system.
- They discuss the preparation and implementation of RIS3 in cooperation with the main innovation actors in the region – industry, research institutions, regional assemblies and representatives of other infrastructures that support the emergence of innovation in the region (innovation hubs, science and technology parks, business incubators, coworking spaces, etc.).
- They are entrusted with coordinating the EDP process in the regions. They are thus the de facto representatives of the public sector vis-à-vis the companies and research organisations with and for whom they jointly manage and implement RIS3.
- Within the region, they also have a strong position in connecting and cooperating with other Inostructures in the region.

¹¹ IGI Global. (n.d.). *Knowledge in Science and Technology Parks*. [google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiSkKrX-oq-KAxVg3AIHHa69CNMQFnoECBQAw&url=https://www.igi-global.com/dictionary/knowledge-in-science-and-technology-parks/91918&usg=AOvVaw1V2tCWjYN18VfntmOX_VC_&opi=89978449](https://www.igi-global.com/dictionary/knowledge-in-science-and-technology-parks/91918&usg=AOvVaw1V2tCWjYN18VfntmOX_VC_&opi=89978449)

¹² Stantec. (n.d.). *What is an Innovation Center? A Collaborative Workspace That is Essential in Today's Office*. <https://www.igi-global.com/dictionary/knowledge-in-science-and-technology-parks/91918>

¹³ JOIST Innovation Park. (n.d.). *What is an Innovation Center?* <https://joistpark.eu/en/what-is-innovation-center>

Examples

SIC – Central Bohemian Innovation Centre¹⁴

A good example of systematic cooperation at the regional level is the Central Bohemia Region.

- SIC regularly maps innovation infrastructures in its region.
- It creates and publishes maps of these infrastructures and innovation ecosystem actors on its website.
- It is in contact and cooperates with most Inostructures, such as in the preparation and updating of RIS3.
- It proactively seeks out and approaches other institutions.
- It also approaches municipalities offering consultation on building coworking centres and hubs where appropriate.
- Science and technology parks are represented in smaller towns such as Zlatníky-Hodkovice, Vestec near Prague, Kralupy n. Vltavou and Čelákovice; incubators in Kolín and Nymburk, a hub in Mladá Boleslav, and coworking spaces in Řevnice, Prague-East, Kolín, Příbram, Brandýs nad Labem, Mělník and Poděbrady.

ICOK – Innovation Centre of the Olomouc Region¹⁵

Like SIC, the Olomouc Innovation Centre also seeks to work actively with innovation institutions in the region. It aims to support the creation of innovation hubs in larger regional cities (such as IN-HUB Přešov, a coworking space in Jeseník with plans for a hub, and a planned hub in Zábřeh).

Within the biotechnology sector, which has strong representation and support for start-ups in the Olomouc Region, a biomedical incubator or park is planned for the future. Inspiration was also provided by a study visit to southern Sweden organised by the CzechInvest agency, the Embassy of the Czech Republic in Stockholm and with the support of the Ministry of Industry and Trade, examples of which are given in Annex 3.

Zlinnovation¹⁶

This is a platform for cooperation between entities comprising the innovation ecosystem of the Zlín Region. The aim of the platform is “to coordinate, connect and promote the activities of members to create a joint personalised offer of services to meet the needs of target groups in the innovation ecosystem in line with the Regional Innovation Strategy of the Zlín Region, communicated under the unified marketing brand ZLINNOVATION”. The platform has its own website.

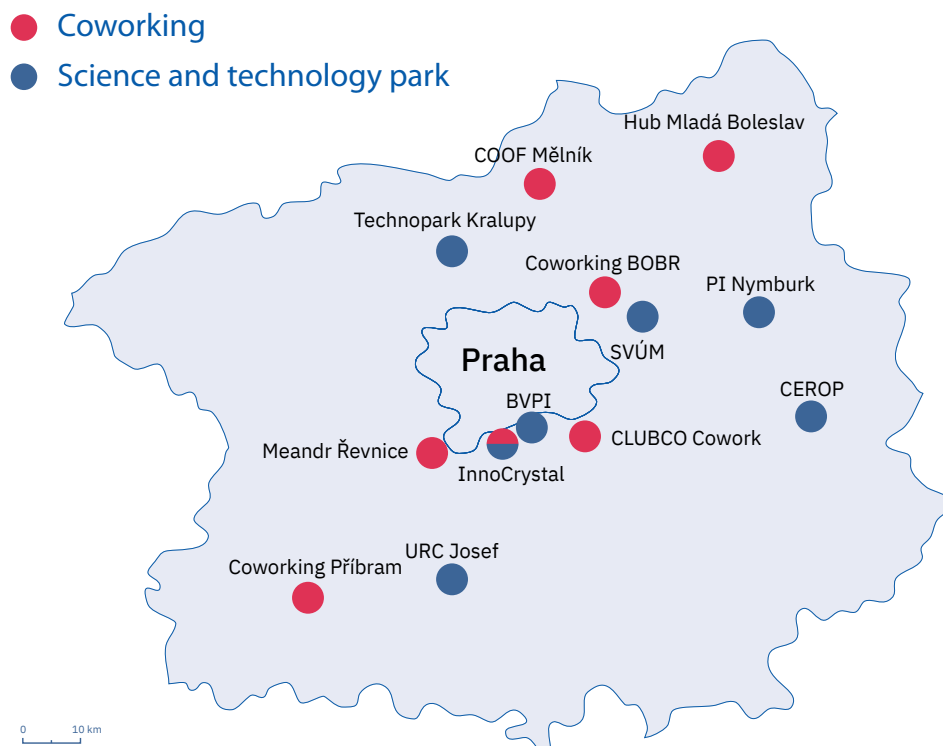
The platform is made up of key actors in the Zlín innovation ecosystem, such as branches of national innovation agencies (CzechInvest, API, Technology Agency of the Czech Republic), incubators, clusters, business clubs, chambers and associations, technology transfer centres, universities and the region.

The platform organises a series of educational and discussion events, workshops, working groups and programmes.

Startovarna MSIC

The Moravian-Silesian Innovation Centre (MSIC), in cooperation with and with financial support from around 10 towns and cities in the region, has launched the Startovarna platform¹⁷ and the Smart Start accelerator supporting emerging entrepreneurs.

Figure 11 Overview of Innovation Infrastructures in the Central Bohemian Region



Source: SIC (2023)

¹⁴ Central Bohemian Innovation Centre. (n.d.). *Map of supporting innovation infrastructure*. <https://s-ic.cz/cs/podnikatelske-inkubatory-vedecko-technicke-parky-i-coworky-vyuzijte-inovacni-infrastrukturu-sck/>

¹⁵ ICOK. (n.d.). *Introduction*. <https://www.inovaceok.cz>

¹⁶ Zlinnovation. (n.d.). *Introduction*. <https://zlinnovation.cz/>

¹⁷ Start Up MSK, z.s. (n.d.). *Startovárna*. www.startovarna.eu



5.2 Science and Technology Parks (STP/TP)

Definition

It focuses more on providing services and space to established companies and more experienced start-ups.

According to the Methodology for the Development of Innovation Infrastructures (Samek, 2022), science and technology parks (STP) can be characterised as areas similar to industrial zones, where there is at least one, but usually several buildings with various clients (owners and tenants) primarily engaged in research, development and innovation. Some of their activities may also involve manufacturing (particularly high-tech manufacturing), distribution, customer support or repair activities. STPs are typically located close to universities and research institutes. Sometimes, universities and research institutes themselves also carry out part of their research activities in STPs, such as through specialised research centres.

Technology parks (TPs) are similar to STPs, but the proportion of companies engaged in research and development activities is usually lower and the physical presence of academic research activities is low or even non-existent.

According to the International Association of Science Parks and Areas of Innovation (IASP)¹⁸, an STP is an organisation run by specialised professionals whose main aim is to increase the wealth of its community by fostering a culture of innovation and the competitiveness among its associated knowledge-based enterprises and institutions. In order to achieve these goals, a science park stimulates and manages the flow of knowledge and technology among universities, research and development institutions, companies and markets; facilitates the creation and growth of innovation-based companies through incubation and spin-off processes; and provides other value-added services together with high-quality space and facilities. IASP also considers terms such as *technology park*, *technopole*, *research park* and *science park* to be equivalent.

The abbreviation STP (science and technology park) is used for all these expressions. The same definition is also used, for example, by the Czech grant programme OP TAC in the call Infrastructure Services.

One of the main features of STPs is that they are organisations that primarily provide a range of services in the field of innovative entrepreneurship to companies that have little or no research and development capacity. They also assist with technology transfer. STPs may have their own business incubators, although only 40% of TPs and STPs worldwide engage in this activity (according to a 2024 IASP study).

However, as mentioned in Chapter 4, although there are officially around 50 STPs in Czechia (Methodology for the Development of Innovation Infrastructures; Samek, 2022), only a small number actually meet this definition and thus genuinely cooperate within RIS3. Many have cut back their services to the mere rental of premises, buildings and land. However, there are also good exceptions.

Involvement in RIS3

- They can be the main carriers and creators of innovation in specific industrial specialisations.

- If they focus on a specific field (biotechnology, energy, optics, etc.) and if cooperation is effective between small companies, large companies and academic institutions within the park, they become carriers of new knowledge and innovation from which new companies — start-ups and spin-off companies — may emerge, thereby contributing to the development of the sector.
- Ideally, they provide facilities for scale-ups, as well as spaces and equipment for development and testing.

Examples

The Science and Technology Park of Palacký University in Olomouc¹⁹ is an example of how an STP should look and operate. It is one of the longest-running science and technology parks in Czechia. Established by the university, the park is located in an industrial zone surrounded by companies. The STP complex consists of incubators for start-ups and spin-off companies, facilities for university faculties, technology transfer centres and prototype equipment for 3D printing, scanning and measurement. Since 2020, it has also been based in the new, modern Envelopa building in the city centre, close to the university's workplaces. The building provides start-ups with office and laboratory space, coworking facilities and a testbed for health technologies. It works closely with the Innovation Centre of the Olomouc Region. The STP offers an incubation programme including the rental of space, business consultancy, assistance with the establishment of start-ups and spin-offs, and links to industrial partners, research laboratories and experts. It is a member of a number of organisations, such as the National Cluster Association, Transfera, the European Enterprise Network, ASTP, etc. It is also represented on research and innovation councils and regional innovation platforms, and actively participates in the development of RIS3 and its updates. It is funded mainly from its own rental income, as well as contracts and services provided to companies.

The **Science and Technology Park Pilsen²⁰** was established by the City of Plzeň in 2005 and is operated by the Business and Innovation Centre BIC Plzeň, which is the longest-running BIC in Czechia (founded in 1991). It is located on the Borská pole industrial estate near the University of West Bohemia in Plzeň. One of the university's research centres is located within the STP campus.

It offers laboratory, operational and office space covering more than 20,000 m², as well as consulting services focused on business development, technology transfer and links to research institutes and experts from the University of West Bohemia, as well as services provided by BIC Plzeň. It is part of the RIS3 Strategy as one of the key regional Inostructures.

Technology Park Brno²¹ is the oldest park of its kind in Czechia. Its development began back in the early 1990s. It is located close to the research institutions of the Brno University of Technology (BUT), the BUT CEITEC research centre, the South Moravian Innovation Centre (JIC) and the AdMaS university research centre for advanced materials.

It serves as an administrative, research and high-tech manufacturing space for various established companies. Within the RIS3 Strategy of the South Moravian Region, it is mentioned as one of the key Inostructures supporting enterprises.

¹⁸ IASP. (n.d.). *Science park*. <https://www.iasp.ws/our-industry/definitions/science-park>

¹⁹ VTP UPOL. (n.d.). *Introduction*. <https://www.vtpup.cz>

²⁰ VTP Plzeň. (n.d.). *Introduction*. <https://vtpplzen.cz/>

²¹ Technology Park Brno. (n.d.). *Introduction*. <https://www.technologypark.cz/>

High Tech Campus Eindhoven²² (Netherlands)

This extensive campus in the Netherlands near Eindhoven was established in 2003 by Philips on land where the company's main R&D centre had stood since 1964. Over time, the founders were joined by companies such as ASML, TNO and BOM (the Dutch innovation agency), and the campus is now home to 300 companies and research institutions and 12,500 researchers. They focus on Sustainable Development Goals (SDGs). The aim is to become the most sustainable campus in the EU by 2030. The advantage for start-ups is the ability to share equipment and experts, as well as their proximity to large companies and investors. See Annex 3 for more details.

A similar park is **GoCo Health Innovation City²³** (Netherlands), located on **AstraZeneca's** site.

Another example is the **Brainport Industries Campus Eindhoven²⁴** (Netherlands), a complex of buildings and land focused on deep technologies, advanced manufacturing, smart energy and renewable resources, with a number of test centres, pilot production lines, fab labs, field labs, etc. It forms part of the RIS3 Strategy for the Southern Netherlands.²⁵ See Annex 3 for more information.

Green Energy Park Zellik²⁶ (Belgium)

This is a science and technology park, testbed and living lab with its own infrastructure, set up in 2018 by two universities on the grounds of the science park of the Belgian town of Zellik. It is mainly used to develop and test new technologies in the energy sector. See Annex 3 for more information.

NOI Techpark Bolzano²⁷ (Italy)

NOI Techpark is an innovation campus and science and technology park in Bolzano, founded in 2017 on the site of a former aluminium plant. It connects research, business and public administration in the fields of green energy, mobility, food, ICT and alpine technologies. It is managed by NOI S.p.A., owned by the Autonomous Province of Bolzano. The park brings together more than 100 companies and 80 laboratories and acts as the centre of the regional RIS3 Strategy for sustainable and digital development of South Tyrol.

5.3 Business Incubators and Accelerators

Definition

According to the Methodology for the Development of Innovation Infrastructures (Samek, 2022), business and innovation incubators are facilities, organisations or institutions that help individuals establish a new business entity and start doing business. Their services include renting out space to emerging business entities, providing consulting, mentoring or coaching services related to setting up a company and starting a business,

and facilitating contacts to providers of specialised services, financing, grants, etc. One typical feature of an incubator is that it usually offers its premises on non-commercial terms, i.e. at a lower rent than the usual rate in the region/micro-region at the time, albeit only for a certain period of time (e.g. three years). After that, the tenant must start paying the usual commercial rent or move out of the incubator to make way for other clients.

According to the World Bank,²⁸ InfoDev and a number of international business incubator associations, an incubator is a physical space or facility that accommodates the business incubation process.

According to the European Commission and OECD document "Policy Brief on Incubators and Accelerators that Support Inclusive Entrepreneurship"²⁹, published in 2019, business incubators are defined as support structures that support entrepreneurs in setting up and developing their businesses. The broad aim of a business incubator is to create and develop companies and improve their chances of success. It also involves providing workspace to tenant entrepreneurs, usually on favourable and flexible terms, for a particular sector or type of company. They have access to various services and preferential rent. The incubation programme has three phases (pre-incubation, incubation and post-incubation) and lasts for several years.

The American National Business Incubation Association (NBIA) views incubators as organisations that "...support the development of entrepreneurial companies and help them survive and grow during the start-up period, when they are most vulnerable. Incubator programs provide client companies with business support services and resources tailored to young companies. The most common goals of incubation programmes are creating jobs in the community, improving the entrepreneurial climate, retaining businesses in the community, building or accelerating growth in local industries, and diversify local economies."

In addition to business incubators with physical infrastructure, incubation programmes with a typically shorter format are also popular. These aim to kick-start an idea through mentoring, capacity building, expert consultations or other activities and turn it into a functioning business (such as the Social Impact Award organised by Impact Hub). These programmes do not require occupancy. Examples include Start-It from ČSOB and the Craft Accelerator in Ostrava run by Impact Hub. These formats are paid or free of charge, usually last no more than six months, and take place offline, online or in hybrid form.

According to the Methodology for the Development of Innovation Infrastructures (Samek, 2022), business and start-up **accelerators** focus their services on existing companies, including start-ups, and aim to support the development of these clients. This may include, for example, a company's growth — from a micro company (up to 10 employees) to a small company (up to 50 employees), or from a small company to a medium-sized one (up to 250 employees), or entry into new markets — often in exchange for a share in the company. This is also in line with the European Commission's notion, as in the article *The Role of Incubators and Accelerators in Knowledge Valorisation* posted

²² High Tech Campus Eindhoven. (n.d.). *About Us*. <https://www.hightechcampus.com/about-us>

²³ GoCo Health Innovation City. (n.d.). *Our Story*. <https://goco.se/our-story>

²⁴ Brainport Industries Campus. (n.d.). *Brainport Industries*. <https://www.brainportindustriescampus.com/en/>

²⁵ Stimulus. (2020). *Regional Innovation Strategy South Netherlands 2021–2027*. <https://www.stimulus.nl/opzuid/wp-content/uploads/sites/4/2020/11/Regional-Innovation-Strategy-South-Netherlands-2021-2027-English.pdf>

²⁶ GreenEnergyPark Zellik. (n.d.). *About us*. <https://www.greenenergypark.be/en/about-us/>

²⁷ NOI Techpark Bolzano. (n.d.). *Homepage*. <https://noi.bz.it/en>

²⁸ The World Bank. (n.d.). *Home*. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/717091562157862660/bim-module-1-business-incubation-definitions-and-principles>

²⁹ OECD. (2019). *Policy Brief on Incubators and Accelerators That Support Inclusive Entrepreneurship*. https://www.oecd.org/en/publications/policy-brief-on-incubators-and-accelerators-that-support-inclusive-entrepreneurship_d7d81c23-en.html

on its knowledge valorisation website, it states that “incubators usually operate at an earlier stage of start-up development than accelerators”. According to the EC and the OECD, the main purpose of business accelerators is to speed up the establishment of enterprises.

The services are similar to those of incubators, but provided only for a shorter period of 3 to 12 months, for already established start-ups, and the accelerator usually takes an investment stake in the supported start-ups. Accelerators are ideally part of all infrastructures, innovation centres, STPs, coworking spaces, testbeds, etc.

Involvement in RIS3

- Some incubators tend to be sector-focused on start-ups in areas such as agrifood, energy, the circular economy, biotech, thereby helping to strengthen and develop the smart specialisation domains defined by RIS3.
- They encourage the creation of new companies in a particular sector or sectors.
- They contribute to the EDP process by connecting start-ups, mentors, partners, research institutions, consultants, customers, investors within the regional innovation ecosystem.

Examples of incubators

JIC INBIT³⁰ is the biotechnology incubator of the South Moravian Innovation Centre, offering facilities for companies that require an absolutely clean environment and biotechnology laboratory facilities. One major advantage is its location at the Bohunice University Campus, enabling start-ups to be in contact with other fellow researchers. JIC is also the author and implementer of the regional RIS3.

EIT Climate-KIC Accelerator³¹ (EU): focuses on supporting start-ups working on climate innovation, in line with S3 sustainability goals.

Start-up Spark³² (Łódź Special Economic Zone, Poland): helps start-ups scale up in areas such as Industry 4.0 and IoT (Internet of Things) and directly contributes to S3 priorities in advanced manufacturing.

Examples of accelerators

Techstars Sustainability Accelerator³³ (Europe): focuses on start-ups working on sustainable and green technologies that are aligned with S3 environmental innovation goals.

MassChallenge³⁴ (Switzerland): supports start-ups in areas such as health, digital technologies and advanced manufacturing, sustainable food, sustainable and efficient industry, and the HealthTech sector, which are aligned with S3 regional priorities.

HighTechXL Eindhoven³⁵ (Netherlands): an incubator and deep-tech venture fund founded by Phillips, ASML, TNO and the national innovation agency BMO. It is located in the science and technology park of the former Phillips research centre. The incubator focuses on talent and deep-tech start-ups addressing societal challenges and missions related to achieving the Sustainable Development Goals. See Annex 3 for more details.

Buccaneer TU Delft³⁶ (Netherlands): a university incubator with offices specialising in the development of start-ups and scale-ups in the fields of marine technologies, energy and urban innovation. Most of its income comes from member and partner contributions, office rental and its accelerator programme. It works closely with other STPs and incubators such as YES!Delft, GreenVillage, NEXTDelft, FieldLab and TNO. See Annex 3 for more details.

Startlife Wageningen³⁷ (Netherlands): a university incubator and accelerator specialising in food technologies from the most prestigious food and agriculture universities. Most of its funding comes from companies and sponsors. They work closely with other Inostructures in the country. FoodTech is one of the main domains of the RIS3 Strategy of the eastern Netherlands.³⁸ See Annex 3 for more details.

YES!Delft³⁹ (Netherlands): a university incubator with an incubation programme focused on technology start-ups in areas such as robotics, green technology, deep tech and healthcare, key strategic sectors within the regional S3 framework. See Annex 3 for more information.

GreenBizz Brussels⁴⁰ (Belgium): a municipal incubator with production and storage facilities, office space, coworking areas and a fab lab. It focuses exclusively on start-ups, scale-ups and innovation in sustainability and the circular economy. See Annex 3 for more details.

Envibooster MSIC⁴¹: an environmentally focused accelerator programme (aligned with the RIS3 domain). The programme is funded by the Life Programme (“IP Life Coala” project).

5.4 Innovation Hubs

Definition

In this case also, there is no single universally accepted definition. Some even differ and represent a different type of Inostructure.

³⁰ JIC. (n.d.). *JIC – Looking for Premises*. <https://www.jic.cz/cz/potreby-a-sluzby/hledam-prostory>

³¹ EIT Climate – KIC Open Accelerator. (n.d.). *EIT Climate Accelerator*. <https://eit.europa.eu/our-activities/opportunities/eit-climate-kics-open-accelerator>

³² Start-up Spark. (n.d.). *Invest in Lodz SEZ*. <https://invest-in-poland.eu/lodz-special-economic-zone/>

³³ Techstart Sustainability Accelerator. (n.d.). <https://www.nature.org/en-us/about-us/who-we-are/how-we-work/technology-and-innovation/techstars-sustainability-accelerator/>

³⁴ MassChallenge. (n.d.). *Switzerland Programs*. <https://masschallenge.org/programs-switzerland/>

³⁵ HighTechXL Accelerator. (n.d.). *HighTechXL*. <https://hightechxl.com/>

³⁶ Buccaneer Accelerator TU Delft. (n.d.). *Home*. <https://buccaneerdelft.com/>

³⁷ StartLife Accelerator. (n.d.). *Home*. <https://startlife.nl/>

³⁸ Technopolis Group & ERAC. (2020). *Smart Specialisation Strategy (RIS3) East Netherlands 2021–2027*. https://www.s3vanguardinitiative.eu/sites/default/files/2021-06/RIS3_Oost-Nederland_V1_0_engels.pdf

³⁹ YES!Delft Incubator TU Delft. (n.d.). *Home*. <https://yesdelft.com/>

⁴⁰ GreenBizz Brussels Incubator. (n.d.). *Home*. <https://greenbizz.brussels/en/>

⁴¹ Envibooster. (n.d.). *Introduction*. <https://envibooster.com/>

According to the consulting firm McKinsey & Company⁴², innovation hubs are geographic areas that bring together research and development institutions (such as technology companies, universities, and medical facilities) as well as venture capital, incubators, and start-ups. They fall into three categories: smaller districts, medium-sized technology centres (hubs) and larger interregional innovation ecosystems.

A different concept, closer to the nature of innovation hubs in Czechia, was presented by Indian business consultant Rajashree Rao on LinkedIn,⁴³ who describes an innovation hub as a physical or virtual space that serves as a collaborative platform enabling individuals, organisations and communities to come together to invent, innovate and create solutions to the world's most pressing challenges. These centres facilitate creativity, knowledge sharing and interdisciplinary collaboration, bringing together individuals with a diverse range of skills and backgrounds to work together towards common goals. Innovation hubs typically offer resources and support such as mentoring, workshops and funding opportunities to help start-ups and entrepreneurs develop their ideas and bring them to market. They also provide access to cutting-edge technologies such as 3D printing, virtual reality and artificial intelligence, helping companies remain at the forefront of innovation.

In Czechia, the organisation **Impact Hub** operates as an innovation hub⁴⁴, with physical branches and spaces in Prague, Brno and Ostrava. The hub focuses on technologies and start-ups in the field of sustainability, as well as social innovation. Innovation hubs also include the so-called EDIHs (see Chapter 5.8), which focus on digital transformation. CzechInvest has also created sector-focused hubs for the development of start-ups in seven defined specialisation domains under the Technology Incubation programme.

Involvement in RIS3

- Like clusters, living labs or EDIHs, innovation hubs have the capacity to create innovation ecosystems at the regional level with the involvement of triple and quadruple helix actors. They thus enable and accelerate the EDP process and transfer of technology. They often cooperate with other Inostructures in the region.
- They support the creation and growth of new companies in certain sectors,
- and may be industry-oriented. They can focus on sectors related to RIS3 regional or national specialisation domains as well as broader societal challenges and missions (sustainability, inclusion, green technologies, health).
- Innovation hubs serve as catalysts for technological development by providing resources such as prototype facilities, access to expertise, specialists and funding opportunities.
- Innovation hubs can also act as clusters and platforms for sharing information and contacts among sector actors and for forming project consortia.

Examples

GreenTech Innovation Hub⁴⁵ (Sweden): It focuses on clean energy and sustainability, directly aligned with S3's regional green technology priorities.

EIT Health Innovation Hubs⁴⁶ (Europe): Supporting innovation in health and contributing towards S3 objectives in improving healthcare systems and technologies.

Station F⁴⁷ (France): Station F is located in Paris and is one of the most important innovation hubs in Europe. It offers a collaborative space enabling start-ups, entrepreneurs and large corporations to connect and innovate. In addition, Station F provides resources and support, including mentoring, funding, and training programmes to help businesses grow and succeed.

Impact Hub Vienna (Austria): The organisation has a Climate Lab, an Education Lab and a Future Health Lab. It enables connections between national and municipal administration on the one hand and the academic and startup sector on the other. At the same time, it accelerates corporate innovation, for example by connecting start-ups.

Other industry-focused innovation hubs include the **Enel Innovation Hub**⁴⁸, founded by the energy company Enel and focusing on the development of new energy technologies and products (renewable energy sources, smart grids). Financial services companies such as Citigroup (Citi **Innovation Lab**)⁴⁹ and **JP Morgan Chase**⁵⁰ also have innovation hubs focused on new technologies, financial tools and banking applications, block-chains, artificial intelligence, etc. In the healthcare sector, Mayo Clinic and their **Mayo Clinic Innovation Exchange**⁵¹ may also be mentioned.

Well-known technology hubs include **Google X**, **Apple Park** and **Silicon Valley**.

The Food **Innovation Hub Europe** has been established within Foodvalley in Wageningen, the Netherlands, in cooperation with the World Economic Forum.⁵²

5.5 Coworking Centres

Definition

There is no official definition of coworking. According to the Methodology for the Development of Innovation Infrastructures (Samek, 2022), coworking centres are spaces and organisations that provide workspace to individuals and small companies without their own facilities. Coworking centres enable such companies to meet other entrepreneurs and companies, exchange experience and use the services that these centres offer (such as meeting and conference rooms or presentation and communication facilities).

According to one of the largest coworking space providers, WeWork⁵³, coworking is a working arrangement in which people

⁴² McKinsey & Company. (2023). *Building Innovation Ecosystems: Accelerating Tech Hub Growth*. <https://www.mckinsey.com/industries/public-sector/our-insights/building-innovation-ecosystems-accelerating-tech-hub-growth>

⁴³ Rao, R. (2023). *What is an Innovation Hub?* <https://www.linkedin.com/pulse/what-innovation-hub-rajashree-rao/>

⁴⁴ Impact Hub. (n.d.). *Home page*. <https://impacthub.cz/>

⁴⁵ GreenTech Innovation Hub. (n.d.). *Home*. <https://www.greentech.fr/en/greentech-an-innovation-hub/>

⁴⁶ EIT Health. (n.d.). *Promoting Innovation in Health*. <https://eithealth.eu/>

⁴⁷ Station F. (n.d.). *World's Biggest Startup Campus*. <https://stationf.co/>

⁴⁸ Enel Green Power. (n.d.). *Innovation Hub&Lab*. <https://www.enelgreenpower.com/who-we-are/innovation/innovation-hub-lab>

⁴⁹ Citigroup. (2019). *Celebrating 10 Years of Our Citi Innovation Labs*. <https://www.citigroup.com/global/news/perspective/2019/celebrating-10-years-of-our-citi-innovation-labs>

⁵⁰ JPMorgan Chase & Co. (n.d.). *Home*. <https://www.jpmorganchase.com/>

⁵¹ Mayo Clinic Innovation Exchange. (n.d.). *Homepage*. <https://innovationexchange.mayoclinic.org/>

⁵² Foodvalley. (n.d.). *Food Innovation Hub Europe*. <https://foodvalley.nl/en/food-innovation-hub-europe/>

⁵³ WeWork. (n.d.). *What is Coworking?* <https://www.wework.com/ideas/workspace-solutions/flexible-products/what-is-coworking>

from different teams and companies come together to work in one shared space, while also sharing knowledge and ideas. It is also characterised by the sharing of facilities, services and tools. Sharing infrastructure helps to spread running costs among members.

The **Global Coworking Unconference Conference**⁵⁴ sees coworking as a set of five principles: Community, Openness, Collaboration, Accessibility, Sustainability.

Coworking spaces are generally aimed at aspiring entrepreneurs without any specialisation in a particular sector. However, there are also specialised ones,⁵⁵ such as those supporting female entrepreneurs, catering for the local community, or aimed at IT or the creative industries. They may be sector-focused if, for example, they are sponsored by a company or a cluster of companies.

They are also a standard part of all larger Inostructures — hubs, STPs, incubators, innovation centres and makerlabs.

There are more than 100 coworking spaces in Czechia. The exact number is difficult to determine, as there is no study mapping them or organisation that brings these types of facilities together. An clear overview of coworking centres is provided, for example, by the website <https://navolnenoze.cz/novinky/coworking>, which as of December 2024 listed 105 mapped coworking spaces and hubs across the country, i.e. organisations offering space and, where applicable, services. There is also an overview of coworking spaces on the CzechInvest website at www.czechstartups.org.

Involvement in RIS3

- Coworking centres are usually not directly involved in RIS3, at least not intentionally. However, they are important for generating ideas, projects and companies, and for connecting teams and idea holders; they may also specialise in a particular sector.
- They may form part of sector-focused Inostructures (such as biotech or greentech incubators, hubs, and specialised STPs).
- They offer training in entrepreneurship, networking, motivation and attracting talent, supporting pre-incubation ideas and teams, i.e. the horizontal domains of RIS3.

Examples

One specialised coworking space in Czechia is **UPPER — Centre for Creative Industries and Entrepreneurship**⁵⁶. It is part of the Tomas Bata University in Zlín, is located in the TIC Zlín building and provides a space designed for kick-starting creative entrepreneurship.

Cowork IncubaThor⁵⁷ (Belgium): In the Belgian city of Genk, this coworking space is located in the IncubaThor business incubator building in the Park EnergyVille Genk science and technology park. The incubator specialises in start-ups in the fields of smart energy, smart manufacturing and technology.

Creative Valley⁵⁸ (Netherlands — Utrecht and other cities): This coworking and innovation space emphasises sustainability

and innovation in line with Dutch smart specialisation domains such as renewable energy and high-tech systems. Creative Valley provides a collaborative environment for entrepreneurs, researchers and start-ups to work on projects that support regional innovation.

B. Amsterdam⁵⁹ (Netherlands): This large-scale coworking space acts as an innovation hub that supports collaboration between start-ups, businesses and government entities. It is often involved in initiatives related to smart mobility and sustainable urban development, key areas of Dutch regional strategies.

Silversquare⁶⁰ (Belgium — Brussels, Liege, Antwerp and others): With its unique spaces and events, Silversquare fosters a strong entrepreneurial community and encourages innovation in areas such as mobility and digital transformation. It connects members with projects and opportunities aligned with Belgian regional smart specialisation priorities.

Corda Campus⁶¹ (Belgium — Hasselt): This coworking and innovation campus is a hotspot for technology companies and start-ups that actively contribute to Limburg's smart specialisation strategy in IT and digitalisation. It provides not only office space, but also testing environments and resources for technology-driven innovation.

5.6 Open workshops (Fab Labs and Makerlabs)

Definition

According to the Methodology for the Development of Innovation Infrastructures (Samek, 2022), open workshops (also referred to as makerspaces, hackerspaces or fab labs) are spaces equipped with instruments and tools that can be used by individuals or companies that do not possess such equipment and for whom acquiring it would not be cost-effective. Services include assistance from trained staff who can be able to operate the equipment and tools and help with training.

The website Makerspace.com describes an open workshop (makerspace) as a collaborative workspace located in a school, library or standalone public/private facility for creating, learning, exploring and sharing that uses cutting-edge technology.

Open workshops (makerspaces), including fab labs, hackerspaces and craft workshops, are now standard infrastructure and part of the innovation ecosystem of every region and many municipalities, providing facilities and equipment for the production of prototypes, models and initial test products, i.e. innovations.

As prototyping centres, they are also suitable shared infrastructure for technology parks, science and technology parks and other innovation and technology infrastructures. They are ideally combined with other Inostructures such as incubators, hubs, accelerators, STPs and coworking spaces.

⁵⁴ Global Coworking Unconference Conference. (n.d.). Home page. <https://gcuc.co/>

⁵⁵ Faggian, A., Marzucchi, A., & Montresor, S. (2024). *Regions facing the 'twin transition': Combining regional green and digital innovations*. *Regional Studies*. <https://www.tandfonline.com/doi/full/10.1080/00343404.2024.2399282?src=exp-la#abstract>

⁵⁶ UPPER UTB. (n.d.). Introduction. <https://upper.utb.cz/>

⁵⁷ IncubaThor. (n.d.). Home. <https://www.incubathor.be/en/>

⁵⁸ Creative Valley. (n.d.). Utrecht CS. <https://www.creativevalley.nl/en/utrecht-cs/> Creative Valley. (n.d.). Utrecht CS. <https://www.creativevalley.nl/en/utrecht-cs/>

⁵⁹ B. Amsterdam. (n.d.). Cowork. <https://b-amsterdam.com/en/work/cowork/>

⁶⁰ Silversquare. (n.d.). Coworking Locations: Brussels. <https://silversquare.eu/en/coworking-locations/brussels>

⁶¹ Corda Campus. (n.d.). Home. <https://www.cordacampus.com/en/>

Their services typically include training on manufacturing machinery, design thinking and other product and process development methods, training for start-ups, rental of machinery, where applicable with operators and training, and the development of prototypes and other custom technical solutions.

Their target groups are relatively broad, from children and hobbyists to start-ups, scale-ups, and even large industrial corporations. The makerspace concept is evolving from small fab labs aimed at children and hobby users towards larger manufacturing and prototyping infrastructures.

Where there is interest in a certain type of Inostructure and its services, they are, for many start-ups, the most sought-after type of Inostructure, after office and specialised space.

Open workshops can specialise in areas such as IT, mechatronics, art, design and furniture, materials — woodworking or metalworking, gastronomy, textiles, etc.

There are more than 30 open workshops in Czechia.

The examples below, such as **Grand Garage in Austria**, **Verne** in France and **PBN** in Hungary, show a shift away from small fab labs towards complex innovation infrastructures characterised by a high degree of involvement of actors across the entire triple helix. The involvement of industry at the project planning stage is extremely important. These initiatives often have an international dimension, and cooperation between these centres and **EIT Manufacturing — European manufacturers together**, which links development activities with industry, plays an important role⁶².

In Czechia, the Innovation Centre of the Ústí Region has taken a similar path, preparing a large makerspace as part of the regional **Transformation Centre of the Ústí Region project**.⁶³

The Hungarian example shows that this activity can also be carried out in a relatively smaller region. It is important to connect local players, involve industry and find suitable domains of specialisation within the region's smart specialisation framework.

Involvement in RIS3

- Open workshops are not usually directly and independently involved in RIS3.
- However, at relatively low cost, they enable the availability, creation and implementation of initial prototypes and innovations in technically oriented sectors that form part of RIS3 strategies and domains of specialisation (initial prototypes and models for medical devices, green technologies, hardware and software, robotics, advanced engineering, the creative industries, etc.).
- In combination with other Inostructures and activities, where they form part of larger infrastructures such as TP/STPs and testbeds or innovation cities and valleys (see Chapter 5.11), they can enable all triple and quadruple helix actors to collaborate within a shared infrastructure.
- They enable the development of products, start-ups and therefore also specific industrial sectors.

Examples

Grand Garage Linz⁶⁴ (Austria) This project is the closest to us in geographical terms. Grand Garage forms part of the advanced innovation ecosystem of Upper Austria, coordinated by the innovation agency Business Upper Austria. The project was created in a brownfield site, a former tobacco factory covering 2,000 m², and developed the activities of students from vocational and technical schools in the region. It is closest to the original fab lab concept and is also interesting in the way it links a range of actors in its funding, including the private sector.

IRT Jules Verne⁶⁵ (France) This is a typical French “large-scale project” funded by regional and national government. The training workshop builds on the **IRT Jules Verne (IRT JV) research institution**⁶⁶, which provides its knowledge base. Covering an area of 3,000 m², it is probably the largest comparable centre in Europe. Its impact lies in combining training (the Jules Verne Manufacturing Academy) and prototyping activities (IRT JV), together with a regional technology park and innovation agency. Together, these form a very strong complex of services.

Pannon business Network (PBN) (Hungary) The shared infrastructure **am-LAB**⁶⁷ was established by the agile foundation **Pannon Business Network**⁶⁸, founded by ten regional institutions of the Western Pannonian region with the aim of creating a regional platform to promote the development of an innovation ecosystem. In the rather difficult political and funding conditions in Hungary, they pursue a high degree of independence, combining European projects with revenues from operating equipment, measurement and development. They are strongly focused on commercial prototyping for regional as well as multinational companies. am-LAB has been recognised as the best European digital hub.

One example of shared and jointly used infrastructure is the use of an **EIT facility and an incubator**⁶⁹, where the University of Twente uses an ESIF-funded incubator to host start-ups supported by EIT Digital. Last but not least, EIT knowledge and innovation communities have offered training related to S3. EIT InnoEnergy has provided training and knowledge sharing services to the regional governing authority of Małopolska (Poland) and the government venture capital HiVentures in Hungary.

FabLab Brno⁷⁰ — specialises in digital and manufacturing technologies (3D printing, a laser cutter, a CNC milling machine). It offers a mobile version in a truck, with a workshop and equipment that can be moved from place to place.

The **fab lab**⁷¹ operating in the **KUMST Brno innovation hub**⁷² specialises in the cultural and creative industries, innovation and products.

⁶² EIT Manufacturing. (n.d.). Home. <https://www.eitmanufacturing.eu/>

⁶³ Transformation Centre of the Ústí Region. (n.d.). Home. <https://tcuk.cz/>

⁶⁴ Grand Garage. (n.d.). Home. <https://grandgarage.eu/>

⁶⁵ JVMA. (n.d.). Home. <https://www.jvma.fr/>

⁶⁶ IRT Jules Verne. (n.d.). IRT Jules Verne. <https://www.irt-jules-verne.fr/en/irt-jules-verne/>

⁶⁷ AM-LAB. (n.d.). Home. <https://www.am-lab.hu/>

⁶⁸ Pannon Business Network. (n.d.). Introduction. <https://www.pbn.hu/main.php?Lang=EN>

⁶⁹ University of Twente. (n.d.). Partners & Networks. <https://www.utwente.nl/en/digital-society/innovation/partners-networks/>

⁷⁰ FabLab Brno. (n.d.). Home. <https://www.fablabbrno.cz/>

⁷¹ FabLab Brno. (n.d.). KUMST — Creative Hub. <https://wiki.fablabbrno.cz/kumst>

⁷² KUMST Brno. (n.d.). Homepage. <https://www.kumstbrno.cz/>

The open workshop at **IN-HUB Přerov** is also centred around the creative industries.⁷³

MojeDílna⁷⁴ in Zlín focuses on ceramics.

KABINET CB,⁷⁵ a re-use centre in České Budějovice, specialises in repairing and renovating used items.

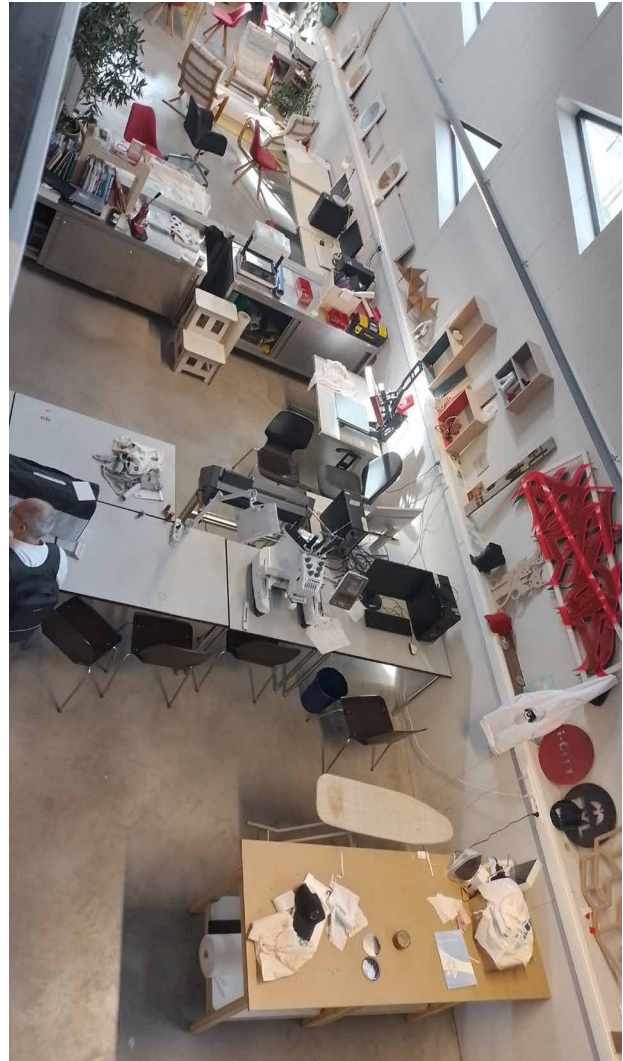
NEXT Zone⁷⁶ is an open workshop belonging to the **Smíchov Secondary School and Grammar School in Prague**, focusing, among other things, on smart home solutions and digital technologies.

ROBOTA⁷⁷ is a creative digital workshop run by Tomas Bata University in Zlín.

Other well-known Czech open workshops include **iQFablab**⁷⁸ at **iQLandia in Liberec**, **SIT Port**⁷⁹ in Plzeň, **Fajna dílna**⁸⁰ in Ostrava, **Olomoucká dílna**⁸¹, **Brno šije**⁸² in Brno, and **DigiLab**⁸³ in Ústí nad Labem. In České Budějovice, there are plans to prepare an energy park and a fab lab as part of the project for a waste-to-energy plant (**ZEVO**⁸⁴).

Fablab CityFab1⁸⁵ (Belgium) located within **Greenbizz Brussels**⁸⁶ specialises in working with textiles, wood and plastic, in addition to its traditional focus and equipment (3D printing, a plotter, a CNC cutter, etc.). See Annex 3 for more information.

Figure 12 Fablab GreenBizz Brussels



Source: GreenBizz, photo Jakub Hruška (2024)

⁷³ InHub Přerov. (n.d.). Home. <https://inhubprerov.eu/>

⁷⁴ MojeDilna.com. (n.d.). Home. <https://mojedilna.com/>

⁷⁵ Kabinet CB. (n.d.). Home. <https://www.kabinetcb.cz/>

⁷⁶ Next Zone. (n.d.). Home. <https://www.nextzone.io/>

⁷⁷ Tomas Bata University in Zlín. (n.d.). ROBOT. <https://robota.utb.cz/>

⁷⁸ iQLANDIA. (n.d.). IQFABLAB. <https://iqlandia.cz/iqfablab>

⁷⁹ SIT Port. (n.d.). Home. <https://sitport.cz/>

⁸⁰ Fajná dílna. (n.d.). Home. <https://fajnadilna.cz/>

⁸¹ Olomoucká dílna. (n.d.). Home. <https://olomoucka-dilna.cz/>

⁸² Brno šije. (n.d.). Home. <https://www.brnosije.cz/>

⁸³ Innovation Centre of the Ústí Region. (n.d.). DIGILAB. <https://icuk.site/sluzby/digilab/>

⁸⁴ Zevo Vráto. (n.d.). Home. <https://www.zevovrato.cz/>

⁸⁵ Greenbizz Brussels. (n.d.). Cityfab1: Le paradis des makers. <https://greenbizz.brussels/en/2019/11/04/cityfab1-le-paradis-des-makers-3/>

⁸⁶ Greenbizz Brussels. (n.d.). Accueil. <https://greenbizz.brussels/fr/>

5.7 Testbeds

Definition

According to Commission Regulation (EU) 2023/1315 of 23 June 2023 (GBER),⁸⁷ point 98a), test facilities form part of the broader definition of Testing and Experimentation Facilities (TEFs), the definition of which was introduced in Chapter 3.

For example, according to **SURA** (the Southeastern Universities Research Association)⁸⁸, a testbed is an environment for testing large development projects. Testbeds enable rigorous, transparent and reliable testing of scientific theories, computational tools and new technologies.

According to the EIT Community⁸⁹, a testbed is a controlled experimental platform where solutions can be deployed and tested in an environment that replicates real-world conditions. It aims to create growth opportunities for new products, services or business development.

Testbeds enable new technologies to be verified in a simulated real-world environment in accordance with the applicable standards and norms. This facilitates transfer into practice and reduces the risk of rejection and market failure.

They typically include test tracks and dedicated areas for testing new vehicle features and models, digital and virtual test centres, laboratory spaces and facilities for testing new manufacturing processes and components, etc. Testbeds form part of the definition of Technology Infrastructures.

Examples of specialised TEFs include those focused on artificial intelligence.⁹⁰ These infrastructures combine physical and virtual facilities where clients from technology companies can receive support in testing their own software and hardware solutions using artificial intelligence in real or simulated environments.

Involvement in RIS3

- As part of shared Infrastructures such as STPs/TPs and incubators or living labs, and through collaboration activities, they enable the development of new technologies, products and processes.
- They are often sector-specialised (mobility, semiconductors, energy, IT, biotechnology, advanced manufacturing, robotics)
- Testbeds act as neutral platforms where multiple stakeholders — companies, researchers, policymakers and end users — can collaborate in developing and refining innovative solutions.
- This encourages partnerships across sectors and disciplines, a core principle of the S3 entrepreneurial discovery process.
- Testbeds are an integral part of building regional capacity in strategic areas identified in S3, such as digital transformation, green technologies and advanced manufacturing.
- They provide local companies with access to state-of-the-art facilities and expertise and promote regional innovation and economic growth.

- Insights gained from testing operations may serve as a source of information for policymaking and help ensure that S3 initiatives are based on practical, scalable solutions.
- They provide data and evidence to support the region's strategic priorities.
- By integrating testing facilities into S3, regions can ensure that innovation processes are robust, inclusive and aligned with real-world challenges, maximising their potential impact on economic development and social well-being.

Examples

SmartSantander⁹¹ (Spain) This testbed is located in Santander and focuses on experimentation with the Internet of Things (IoT) in a smart city context. It offers a large-scale urban environment for testing IoT applications and services, contributing to advances in smart city technologies.

CIIRC CTU and CEITEC BUT Brno

The international interconnection of testbeds **RICAIP**⁹² (Research and Innovation Center on Advanced Industrial Production) is an international centre of excellence (CoE) for distributed research based on a strategic partnership between four leading Czech and German research institutions, CIIRC CTU, CEITEC BUT in Brno, DFKI (German Research Centre for Artificial Intelligence) and ZeMA (Centre for Mechatronics and Automation Technology) based in Saarbrücken. It is the largest decentralised German-Czech testbed for the integration of industrial artificial intelligence in distributed manufacturing within the Industry 4.0 paradigm. It provides services, testing capacity and state-of-the-art equipment including test-before-invest and digital twins for research teams and companies, and works with accelerators, transfer centres, AI organisations, technology integrators.

TEF AsRS

Like to the EDIH network, there is also an AI TEF for artificial intelligence. Central Testing and Experiment Facilities (TEFs) offer a combination of physical and virtual facilities where technology providers can obtain technical support for testing their latest AI-based software and hardware solutions (including AI-powered robotics) in a real-world environment. This includes support for the full integration, testing and experimentation with the latest AI-based technologies to address problems and improve solutions in specific application sectors, including validation and demonstration. AI TEFs focus on testing advanced AI-based technologies and solutions that have already been tested in laboratories and need to be validated in a real-world environment before entering the market. The network comprises 25 partners in 7 countries under the name AI-MATTERS. In Czechia, services are provided by CIIRC CTU (RICAIP Testbed Prague), which runs the testbed, as well as CEITEC CTU and VŠB-TU Ostrava. It provides a range of services and direct support to manufacturers, AI technology providers and technology integrators in areas such as AI, robotics, and intelligent autonomous systems. Through the National Recovery Plan,

⁸⁷ European Union. (2023). *Regulation (EU) 2023/1315 of the European Parliament and of the Council of 27 June 2023*. <https://eur-lex.europa.eu/legal-content/CS/TXT/?uri=celex:32023R1315>

⁸⁸ Southeastern Universities Research Association (SURA). (n.d.). *What Is a Testbed?* <https://sura.org/programs/coastal/coastal-history/what-is-a-testbed/>

⁸⁹ EIT Community. (n.d.). *Testbeds*. <https://testbeds.eitcommunity.eu/>

⁹⁰ EU Grants. (2024). *Testing and Experimentation Facilities for Artificial Intelligence*. https://www.dotaceeu.cz/cs/evropske-fondy-v-cr/unijni-programy-2021_2027/inovace,-site-a-jednotny-trh/program-digitalni-evropa/novinky/testovaci-a-experimentalni-zarizeni-pro-umelou-int

⁹¹ Sánchez, L., Muñoz, L., Galache, J. A., Sotres, P., Santana, J. R., Gutierrez, V., Ramdhany, R., Gluhak, A., Krco, S., Theodoridis, E., & Pfisterer, D. (2024). *SmartSantander: IoT Experimentation over a Smart City Testbed*. https://arxiv.org/abs/2403.03196?utm_source=chatgpt.com

⁹² DFKI. (2022). *Europas größtes Testbed für verteilte Produktion von CIIRC und DFKI gestartet*. <https://www.dfi.de/en/web/news/europas-groesstes-testbed-fuer-verteilter-produktion-von-ciirc-und-dfki-gestartet>

⁹³ AI-Matters. (n.d.). *AI in Manufacturing for EU Industries*. <https://ai-matters.eu/>

companies can receive up to 100% discounts. AI-MATTERS is co-funded by the National Recovery Plan and the Digital Europe Programme. For more information, visit <https://www.ciirc.cvut.cz/en/ai-matters>.

Intemac Testbed

A testbed operated by Intemac solutions, s.r.o. established by JIC in Kuřim⁹⁴, focusing on testing, development and application of advanced manufacturing technologies. It functions as an open laboratory for experiments, proof-of-concept, development, practical demonstrations and as an open showroom for initial familiarisation with new technologies. It also enables, for example, the introduction of automated small-batch production for manufacturing companies.

Energy Ville Science and Technology Park Genk⁹⁵ (Belgium)

The park has 12 testing laboratories with equipment and experts that can be rented for the development and validation of new technologies in areas such as smart energy, batteries, charging infrastructure, low and high voltage systems, photovoltaics, electricity grids, renewable electricity and smart homes. See Annex 3 for more information.

Brainport Industries Campus Eindhoven⁹⁶ (Netherlands)

This technology park offers testing and prototyping centres and testbeds for both large companies and start-ups in the fields of advanced manufacturing technologies and AI. See Annex 3 for more information.

5.8 DIH and EDIH

Definition

According to the European Commission⁹⁷, DIHs (Digital Innovation Hubs) are non-profit “one-stop” shops that support companies, particularly SMEs, and the public sector in their digital transformation. DIHs are usually centred around research and technology organisations or university laboratories offering the following services in collaboration with partners:

- Test before invest — experimentation with new digital technologies — software and hardware (e.g. artificial intelligence, high-performance computing, cybersecurity, blockchain...) — to understand new opportunities and investment returns.
- Skills and training to make the most of digital innovation: bootcamps, internships, exchange of curricula and training materials.
- Support in finding investment.
- Innovation ecosystems and networking opportunities.

According to the European Union, EDIHs (European Digital Innovation Hubs) are independent entities or coordinated groups of entities (consortia) with complementary expertise and a non-profit objective that support the digital transformation of businesses and public sector organisations at the regional level.⁹⁸

The core focuses of EDIHs include high-performance computing (HPC), artificial intelligence (AI), cybersecurity (CYBER) and advanced digital skills.

There are six EDIHs in Czechia, each focused on different topics. Most of them are consortia of several partners, including a university, an innovation centre and research infrastructure.

The EDIH network offers a complete set of services, including the necessary infrastructure, with specific technological specialisation tailored to the needs of local SMEs and the public sector in their digital transformation.

EDIHs provide services such as test before invest, training and skills development, support in securing investment, networking and access to innovation ecosystems.

EDIHs are co-financed by the Digital Europe Programme and the National Recovery Plan — Component 1.5 Digital Transformation of Enterprises.

Involvement in RIS3

- The main role of EDIHs is digital transformation, which is also the main objective of both the national and regional RIS3 strategies. They significantly contribute to the digitalisation of sectors and specialisation domains, most recently in the introduction of artificial intelligence into companies.
- EDIHs work closely with business and innovation centres, which act as the orchestrators of regional innovation ecosystems and assist EDIHs in their role, through promotion, awareness raising and communication with regional innovators from companies, industry, public administration and research institutions. According to EBN, for example, 42 EU|BIC members support 34 EDIHs across Europe in this way.

Examples

EDIH OSTRAVA⁹⁹, focusing on HPC — supercomputing used for computational modelling, numerical simulations, data analysis, and the development of AI and robotics.

EDIH DIGIMAT¹⁰⁰, focusing on flexible manufacturing systems using AI, digital transformation and automation in the manufacturing sector.

BRAIN FOR INDUSTRY¹⁰¹, focusing on the use of AI for SMEs, industrial digitalisation, digital audits and mathematical calculations and digital simulations.

EDIH NORTHERN AND EASTERN BOHEMIA¹⁰², focused on digitalisation and AI in mechanical engineering, the automotive industry, healthcare and nanotechnology.

CYBERSECURITY INNOVATION HUB¹⁰³ www.cybersecurity-hub.cz, offering services and technologies in the cybersecurity sector and specialising in cybersecurity research and industry, commercialisation and the implementation of technologies.

⁹⁴ INTEMAC. (n.d.). *Testbed: Experience Industry 4.0 First-Hand*. <https://www.intemac.cz/co-nabizime/test-before-invest/testbed/>

⁹⁵ EnergyVille. (n.d.). *Home*. <https://energyville.be/en/>

⁹⁶ Brainport Industries Campus. (n.d.). *Home*. <https://www.brainportindustriescampus.com/en/>

⁹⁷ Digital Innovation Hubs (DG Connect, December 2018) https://ec.europa.eu/futurium/en/system/files/ged/digital_innovation_hubs_in_digital_europe_programme_final2_december.pdf

⁹⁸ Ministry of Industry and Trade (n.d.). *European Centres for Digital Innovation (2023)*. <https://www.mpo.gov.cz/podnikani/digitalni-ekonomika/evropska-centra-pro-digitalni-inovace/evropska-centra-pro-digitalni-inovace---277088/>

⁹⁹ EDIH Ostrava. (n.d.). *Homepage*. <https://www.edihostrava.cz/>

¹⁰⁰ EDIH DIGIMAT. (n.d.). *Homepage*. <https://www.edih-digimat.cz/>

¹⁰¹ Brain4Industry. (n.d.). *Homepage*. <https://www.brain4industry.cz/>

¹⁰² EDIH Northern and Eastern Bohemia. (n.d.). *Homepage*. <https://www.edih-northeast.cz/>

¹⁰³ Cybersecurity Innovation Hub. (n.d.). *Homepage*. <https://www.cybersecurityhub.cz/>

EDIH CTU104 www.edihctu.eu, focused on AI, research and technology transfer, digitalisation of public administration and small and medium-sized enterprises.

EDIH DIVA Pays de la Loire¹⁰⁵ (France) offers a similar model to Czech EDIHs. Its partners include EU|BICs **Atlanpole**¹⁰⁶, **Angers Technopole**¹⁰⁷ and **Laval Mayenne Technopole**¹⁰⁸. DIVA provides personalised assistance with a focus on the ethical aspects of AI. It is co-financed by European Commission programmes and supported by the Pays de la Loire regional council.

5.9 Living Labs

Definition

The European Network of Living Laboratories (**ENoLL**)¹⁰⁹, established by the European Commission and comprising 165 members and 500 certified living labs, defines living labs as open innovation ecosystems in real-world environments based on a systematic user co-creation approach, integrating research and innovation activities in communities and/or multi-stakeholder settings and placing citizens and/or end-users at the centre of innovation.

The term “Living Lab” is used to refer to an organisation that innovates according to these principles, but also refers to innovation projects that follow these guidelines, as well as to the link with specific activities, methods and tools within these innovation projects. Therefore, a distinction can be made between the Living Lab organisation, the Living Lab project and Living Lab activities, methods and tools (micro, meso, macro).

Living labs are among the most important innovation infrastructures relevant for the implementation of RIS3. They are forms of collaboration leading to the development of innovations that link all actors in the triple and quadruple helix. They represent one of the fundamental approaches to mission development, i.e. the search for innovative responses to major societal challenges. They are only briefly mentioned in this Methodology, but deserve a more detailed analysis and methodology of their own.

According to a survey conducted by the CzechInvest RIS3 team in December 2025, there are over 30 living labs in Czechia that officially describe themselves as such. However, only 10 of them can be considered genuine living labs. Around four more are in the preparation phase and three are members of the European ENoLL network. Tables 1 and 2 show a list of these living laboratories in Czechia, their year of establishment and sectoral specialisation. These include, for example, **Living Lab Prague at PowerHUB**¹¹⁰, **Brno Living Lab** at the RECETOX research centre of Masaryk University¹¹¹, **BVV Living Lab**¹¹² operated by BVV Trade Fairs Brno,

the four living labs of VSB—Technical University of Ostrava within the **REFRESH** project¹¹³, the private and first ENoLL-certified living lab **PROBIO LL**¹¹⁴ of the Czech company Czech Organics, s.r.o., **PilsLab**¹¹⁵ run by the municipal company SIT in Plzeň, the Finnish **Lyyli Living Lab**¹¹⁶, in which the Czech companies Škoda Digital and TechInn are involved and which is operated in Tampere, Finland, and **LIVERUR Pošumaví**¹¹⁷). Another project dealing with living labs with a focus on smart city solutions is the international

project **PilotInnCities**¹¹⁸, led by the Ministry of Industry and Trade of the Czech Republic. In geographical terms, Czech living labs are concentrated mainly in Brno, Prague, Ostrava and Plzeň, but also, for example, in Klatovy. However, of the 30 or so organisations found that describe themselves as living labs, not all meet the ENoLL definition, for example, and it is questionable whether they are genuine living labs. Nevertheless, interest in these cooperation platforms is growing in Czechia and it is in the national interest to respond to this trend. This is also why the CZELLAP platform was established. More on proposed national-level approaches to living labs can be found in Chapter 8.

Czech Living Lab Platform CZELLAP

In October 2024, CzechInvest announced a plan to establish a Czech national living lab platform. This took place on 3 June 2025, when the first meeting was also held with the participation of five founding members (BVV LL, RECETOX MUNI, PowerHUB, JINAG, VSB—TUO — REFRESH), representing eight living labs and three partners (CzechInvest, the Ministry of Industry and Trade, and the Ministry of Regional Development). By the end of 2025, the number of platform members had grown to 20, including public institutions. Of these, 16 members operate 10 living labs and another four are in the process of being established or redefined. These include, for example, the proposed living lab of the City of České Budějovice, TIC Zlín, the testbed and living lab of the City of Prague under the auspices of Operátor ICT, VTP UPOL, and the Botanical Living Lab in Brno). The Ministry of Environment has also joined the partners through the State Environmental Fund. The platform’s statutes and website are also being prepared.

The purpose of the platform is to defend the interests of its members, share insights and know-how, establish terminology, communicate with the national level, provide advice to parties interested in establishing a living lab, and inform and educate. Platform members also collaborate with the European Network of Living Labs, ENoLL.

¹⁰⁴ EDIH CTU. (n.d.). *Homepage*. <https://www.edihctu.eu/>

¹⁰⁵ European Business and Innovation Centre Network (EBN). (2023). *EUBIC Innovation Ecosystem Framework* (web version). EUBIC-Innovation-Ecosystem-Framework-Web-version-1.pdf

¹⁰⁶ EU-BIC and EDIH Atlanpole. (n.d.). *Profile on the European Commission's EDIH network website*. <https://european-digital-innovation-hubs.ec.europa.eu/edih-catalogue/atlanpole>

¹⁰⁷ Angers Technopole. (n.d.). *Profile on the EBN website*. <https://ebn.eu/member/angers-technopole/>

¹⁰⁸ Laval Mayenne Technopole. (n.d.). *Profile on the EBN website*. <https://ebn.eu/member/laval-mayenne-technopole/>

¹⁰⁹ ENoLL. (n.d.). *Homepage*. <https://enoll.org/>

¹¹⁰ Living Lab Prague. (n.d.). *Homepage*. <https://livinglabs.cz/prague/>

¹¹¹ Brno Living Lab. (n.d.). *Homepage*. <https://webcentrum.muni.cz/rcx-monet>

¹¹² BVV Living Lab. (n.d.). *Homepage*. <https://www.bvv.cz/living-lab>

¹¹³ REFRESH. (n.d.). *Homepage*. <https://www.smaragdova.cz/refresh/>

¹¹⁴ PROBIO LL. (n.d.). *Homepage*. <https://www.eco-ready.eu/living-labs/probio/>

¹¹⁵ PilsLab. (n.d.). *Homepage*. <https://www.techtower.cz/prostory/pilslab/>

¹¹⁶ Lyyli LL. (n.d.). *Homepage*. <https://www.tampereenratikka.fi/en/lyyli-living-lab/>

¹¹⁷ LIVERUR Pošumaví. (n.d.). *Homepage*. <https://www.uhlava.cz/index.php?page=580&pages=542&idp=0&lang=cz&sm=0&view=on>

¹¹⁸ PilotInnCities. (n.d.). *Information about the project on the MIT website*. https://mpo.gov.cz/zahranicni-obchod/podpora-exportu/pilotinn-cities_-mezinarodni-projekt-s-financni-podporou-evropske-unie--281676/

Figure 13 Statistics of Living Labs in Czechia

Status	Number of	Name of LL
Established	10	BVV LL, RECETOX MUNI, PowerHUB, VSB TUO- REFRESH (4x LL), PROBIO, Lyyli LL, PilsLab
Under preparation	4	České Budějovice, Testbed and LL of the City of Prague, TIC Zlín, JINAG
Certified by ENoLL	3	PROBIO LL, LL Brno RECETOX, PilsLab
Partners	4	CzechInvest, Ministry of Industry and Trade, Ministry for Regional Development, State Environmental Fund

Figure 14 Living Labs in Czechia

Name	Founder	Year Established	Sector
BVV LL	Veletrhy Brno, South Moravian Region, City of Brno, Ministry of Industry and Trade, Ministry for Regional Development, Ministry of Transport, Ministry of the Environment, JINAG, JIC.	2024	Smart Cities, Mobility, Industry 4.0, Life Sciences
RECETOX MUNI	Masaryk University	2020	Health and the environment
PowerHUB z.ú.	PowerHUB, EIT Urban Mobility East Prague	2017	Mobility
Materials & Environment Lab	VSB TUO REFRESH	2022	New materials
Energy Lab	VSB TUO REFRESH	2022	Energy
Industry 4.0 & Automotive Lab	VSB TUO REFRESH	2022	Industry and mobility
Social Lab	VSB TUO REFRESH	2022	Social sector
PROBIO	Czech Organics, s.r.o.	2025	Organic food and agriculture
Lyyli Tampere	Škoda Digital/Škoda Group	2022	Mobility, trams
PilsLab	Information Technology Administration of the City of Plzeň	2024	Autonomous mobility, urban air mobility

Involvement in RIS3

- Because of their nature, bringing together all actors of the quadruple helix (industry, the public sphere, academia and customers) to participate in the development of innovation, living labs are key future tool for the implementation of RIS3 strategies.
- They also embody the concept of the EDP process.
- They focus on innovation solutions for societal problems, SDGs and missions.
- Through their bottom-up approach, they reflect regional needs more closely.
- They are always sector-specialised (biotechnology, health, food, the circular economy, AI, etc.).
- They form part of a number of funding instruments, particularly those of the European Commission (HorizonEurope, EIT).

Examples

Living Lab Prague¹¹⁹ at **PowerHub Prague**¹²⁰ focuses on living

lab projects in the fields of smart cities, mobility, transport, energy, digitalisation and sustainable technologies.

Brno Living Lab¹²¹ at the RECETOX research centre of Masaryk University in Brno focuses on innovation in the field of the environment and its impact on public health. Its projects include, for example, measuring air quality in primary and nursery schools, as well as assessing the impact pesticides used in agriculture have on public health.

Helsinki Living Lab¹²² (Finland): addresses urban challenges by working with citizens and companies to create smart city solutions. It is organised by Forum Virium Helsinki, an organisation set up by the City of Helsinki.

Within **EnergyVille Genk** in Belgium, the **Open Thor Living Lab**¹²³ operates as a living lab for the energy transition which, in addition to strategic infrastructure, offers a unique open innovation ecosystem where joint development and co-creation among scientific, industrial and residential partners play the central role. It also offers solutions for smart manufacturing and smart city applications. In addition to a number of testing laboratories and experts, it also includes a collaborative residential district and model smart homes, such as the two-storey HomeLab Gent, a house for testing energy systems, appliances, apps, etc. See Annex 3 for more information.

Like the **Open Thor Living Lab** (Belgium), the living lab at **Green Energy Park Zellikis**¹²⁴ operates with its own physical and testing infrastructure for smart homes, energy, smart grids, energy storage in batteries using renewable energy and hydrogen, and charging stations. See Annex 3 for more information.

Delft University of Technology (Netherlands) operates 12 field labs (the equivalent of living labs) with a focus on fields such as aviation, robotics, AI, mobility and smart manufacturing). These include the **Green Village**¹²⁵, a physical infrastructure consisting of buildings and streets centred around the built environment, where testing can be carried out at the district, street and building level. It focuses on sustainable construction and renovation, the energy system of the future (use of renewable energy), and the climate adaptive city (floods, droughts, etc.).

Figure 15 Green Village



Source: TU DELFT

¹¹⁹ Living Labs Prague. (n.d.). Home. <https://livinglabs.cz/prague/>

¹²⁰ PowerHUB. (n.d.). Homepage. <https://powerhub.cz/>

¹²¹ Masaryk University. (n.d.). RCX MONET: Brno Living Lab. <https://webcentrum.muni.cz/rcx-monet>

¹²² Rural Urban. (n.d.). Helsinki Living Lab. <https://rural-urban.eu/living-lab/helsinki>

¹²³ OpenThor. (n.d.). Home. <https://www.openthor.be/en>

¹²⁴ Green Energy Park. (n.d.). Facilities. <https://www.greenenergypark.be/en/what-we-offer/facilities/>

¹²⁵ The Green Village. (n.d.). Home. <https://www.tudelft.nl/sciencecentre/ontdek/rondleidingen>

5.10 Clusters

Definition

Industry-oriented clusters are another type of platform and innovation infrastructure that makes a significant contribution to achieving RIS3 objectives. The topic of clusters is also addressed in more detail in the Methodology for Cooperation with Clusters (Krůta, 2022),¹²⁶ which also mapped sectoral alignment with RIS3 specialisation domains.

According to CzechInvest's publication **Cluster Guide**¹²⁷, clusters are local concentrations of interconnected companies and institutions within a particular field. Clusters comprise a group of interrelated industries and other entities important for competition.

The National Cluster Association of the Czech Republic¹²⁸

uses the definition by Michael Porter, who defines a cluster as “a geographically close grouping of interrelated companies, specialised suppliers, companies in related industries, service providers, and related institutions in particular fields that compete but also cooperate” (M. B. Porter, Harvard Business Review, 1998)¹²⁹.

The European Collaboration Cluster Platform¹³⁰ sees clusters as regional ecosystems of specific branches of industry and competences representing a broad spectrum of cross-sectoral actors.

The European Commission¹³¹ defines them as groups of companies, related economic actors and institutions that are located near one another and have reached a sufficient scale to develop specialised expertise, services, resources, suppliers and skills. Clusters are referred to both as a concept and a real economic phenomenon, one example being Silicon Valley, whose effects, such as employment concentration, can be measured.

Involvement in RIS3

- These organisations are the most from the perspective of RIS3, as the EDP process runs through them and they are also the founders of shared infrastructures.
- They are domain-oriented (optics, electronics, medicine).
- They continuously map sectors, their potential and their effective involvement in regional innovation platforms and the national innovation platform, where they share this know-how. This helps to ensure that strategic documents and their updates respond to current needs.

- They bring business and research and development opportunities, not only within their own focus but also across sectors. Clusters are therefore an important player in the innovation ecosystem.
- Together with the regions of Czechia, clusters are involved in European thematic platforms for smart specialisation. Clusters connect regional actors with international partners, thereby promoting internationalisation and participation in international cluster networks.

Examples

Examples of well-functioning clusters in Czechia involved in RIS3 include MECHATRONIKA¹³², Nanoprogress¹³³, the Moravian Aerospace Cluster¹³⁴, the Moravian-Silesian Automotive Cluster¹³⁵, CzechImplant¹³⁶ and the Czech Optical Cluster¹³⁷. All these clusters work closely with the RIS3 teams in their respective regions and are members of regional innovation councils. All Czech clusters are members of the National Cluster Association, and an overview of cluster organisations and technology platforms is available in the continuously updated Cluster Map: <https://nca.cz/mapa-klastru>.

Aerospace Valley¹³⁸ (France): this cluster supports innovation in the aerospace sector, a strategic priority for the regions of Occitanie and Nouvelle-Aquitaine within S3.

BioValley¹³⁹ (Germany, France, Switzerland): focuses on life sciences and biotechnology in line with cross-border S3 initiatives in the field of healthcare innovation.

CleanTech Delta¹⁴⁰ (Netherlands): promotes clean energy and sustainability and supports the achievement of S3 objectives in the Rotterdam region.

Brainport Industries Eindhoven, mentioned earlier, is managed by a cluster of companies.

Further examples of clusters are given in the Methodology for Cooperation with Clusters (Krůta, 2022).¹⁴¹

¹²⁶ Krůta, F. (2022). *Methodology for Cooperation with Clusters*. [https://www.ris3.cz/sites/default/files/2023-02/Metodika spolupráce s klastry_web.pdf](https://www.ris3.cz/sites/default/files/2023-02/Metodika%20spolupr%C3%A1ce%20s%20klastry_web.pdf)

¹²⁷ CzechInvest. (n.d.). *Cluster Guide*. <http://old.czechinvest.org/data/files/pruvodce-klastrem-63.pdf>

¹²⁸ National Cluster Association (NCA). (n.d.). *Home*. <https://nca.cz/>

¹²⁹ Porter, M. B. (1998, November). *Clusters and the New Economics of Competition*. *Harvard Business Review*. <https://hbr.org/1998/11/clusters-and-the-new-economics-of-competition>

¹³⁰ European Cluster Collaboration Platform (ECCP). (n.d.). *Home*. <https://www.clustercollaboration.eu/>

¹³¹ European Commission. (n.d.). *Cluster policy*. https://single-market-economy.ec.europa.eu/industry/cluster-policy_en

¹³² Mechatronika Cluster. (n.d.). *Homepage*. <https://www.klastrmechatronika.cz/>

¹³³ Nanoprogress. (n.d.). *Homepage*. <https://www.nanoprogress.eu/cs/>

¹³⁴ Moravian Aerospace Cluster. (n.d.) *Homepage*. (<https://www.czech-aerospace.cz/>)

¹³⁵ Moravian-Silesian Automotive Cluster. (n.d.). *Homepage*. <https://autoklastr.cz/cs/>

¹³⁶ CzechImplant. (n.d.). *Homepage*. <https://czechimplant.cz/>

¹³⁷ Czech Optical Cluster. (n.d.). *Homepage*. <https://www.optickyklastr.cz/>

¹³⁸ Aerospace Valley. (n.d.). *Homepage*. <https://www.aerospace-valley.com/en>

¹³⁹ BioValley. (n.d.). *Homepage*. <https://www.biovalley.de/en/>

¹⁴⁰ Clean Tech Delta cluster. (n.d.). *Homepage*. <https://upcycleyourwaste.com/team/clean-tech-delta/>

¹⁴¹ Krůta, F. (2022). *Methodology for Cooperation with Clusters*. [https://www.ris3.cz/sites/default/files/2023-02/Metodika spolupráce s klastry_web.pdf](https://www.ris3.cz/sites/default/files/2023-02/Metodika%20spolupr%C3%A1ce%20s%20klastry_web.pdf)

5.11 Regional Innovation Valleys, Districts and Other Innovative Business Support Tools in Relation to RIS3

Other means of developing innovation infrastructures and ecosystems and their role in supporting the implementation of smart specialisation objectives include various platforms for cooperation and interaction among infrastructures, as well as geographically clustered and coordinated innovation ecosystems.

Collaboration platforms

One effective example of a well-functioning collaboration platform is the Czech association of regional innovation centres Ynovate, founded in 2018. It currently has 10 Czech members and 2 Slovak members. Its members can share data, information and know-how related to the development of their regions, both within and across regions. They and their start-up and enterprise clients have access to more than 150 experts, mentors and investors from various fields. The network also has an international dimension, with an innovation centre from Slovakia as a member. Most members are also implementers of RIS3 strategies and members of regional RIS3 teams. The network addresses a number of common topics in working groups, one of which is RIS3.

Another example of linkage between the regional and national levels in Czechia is the regular RIS3 meetings. They take place twice a year and are attended by representatives of all regional RIS3 teams, including innovation centres, regional development agencies and representatives of regional authorities responsible for RIS3.

Regional innovation valleys and districts

Other ways of coordinating the innovation ecosystem at local but also international level include innovation districts and innovation valleys. These are not typical innovation infrastructures, but rather concepts for the collaboration and integration of innovation infrastructures.

Regional Innovation Valleys are designations awarded by the European Commission to collaborating European regions, addressing societal issues by sharing the know-how, technologies and resources of their innovation ecosystems. Innovation Valleys aim to harness the full innovation potential across Europe, connect less innovative regions with more innovative ones and address societal challenges through cutting-edge technologies. Participating regions identify their competitive advantages to bridge the innovation gap by leveraging their complementary strengths to improve research and innovation (R&I) ecosystems. According to the ICUK innovation centre in Ústí nad Labem, one of the organisations awarded the RIV label, the aim is to support regions with the potential to become global innovation centres. The programme promotes collaboration

between local innovators, entrepreneurs, academics and policy-makers in order to stimulate research and development, attract investment and increase global competitiveness.

As stated in an article on the RIS3 portal, “it is a new concept for specialised regional ecosystems in selected technological areas, including deep tech, which are essential for EU industrial value chains contributing to the twin (i.e. green and digital) transition and a resilient society.” Regional Innovation Valleys are therefore also closely linked to RIS3.

There are currently 149 innovation valleys in Europe, while five regions in Czechia hold this designation:¹⁴² Central Bohemia, Southwest (South Bohemia and Plzeň regions), Northeast (Liberec and Hradec Králové regions) and Northwest (Karlovy Vary and Ústí nad Labem Regions). Obtaining the designation also brings financial benefits in the form of grants.

These initiatives also include the **European Circular Innovation Valley (ECIV)**,¹⁴³ where nine European regions collaborate in the circular economy with impacts across ten industrial sectors.

There are also various sector-focused valleys within the individual countries.

HealthValley¹⁴⁴ in the eastern Netherlands region focuses on creating and testing the healthcare system of the future (in the sense of moving from healthcare to health) to ensure accessible and high-quality healthcare. The network includes over 200 partners.

Innovation Valley Garzweiler¹⁴⁵ in North Rhine-Westphalia in Germany aims to transform a former large lignite mining area into large demonstration zones for innovation and future-oriented business by 2026. The transformation is carried out in cooperation between the districts of Neuss and Heinsberg, the State of North Rhine-Westphalia and the innovation agency ZENIT GmbH.

A similar concept to innovation valleys, but on a geographical scale within a single country and with a clear governance model, is that of innovation districts.

According to the wikipedia definition¹⁴⁶ based on a series of scientific studies¹⁴⁷, innovation districts are urban geographic areas of innovation where strong research and development institutions, companies and other private actors develop integrated strategies and solutions to develop thriving innovation ecosystems — areas that attract entrepreneurs, start-ups and business incubators.

Unlike science parks, innovation districts are physically compact, take advantage of density and accessibility, and provide a mix of activities, including housing, offices, and neighbourhood amenities. More than 100 such agglomerations exist worldwide.

Early inspiration came from clusters and hubs such as Silicon Valley, Silicon Alley in New York and the Seaport District in Boston, which emerged near cities. From around 2000, cities began creating zones within urban areas to retain companies, research institutions and innovation infrastructures, while also leveraging the potential of existing infrastructure. The aim was to bring together entrepreneurs, start-ups, business accelera-

¹⁴² European Commission. (2025). *Research and Innovation: Downloadable Document*. https://research-and-innovation.ec.europa.eu/document/download/12476e45-0413-4487-bdd6-668d7457f1cc_en

¹⁴³ European Week of Regions and Cities. (2023). *Session 33466: Engaging Regions and Cities in Policy*. <https://regions-and-cities.europa.eu/programme/2023/sessions/33466>

¹⁴⁴ Health Valley. (n.d.). *About Us*. <https://www.healthvalley.nl/en/about-us/>

¹⁴⁵ WFMG — Wirtschaftsförderung Mönchengladbach. (n.d.). *Innovation Valley Garzweiler*. <https://www.wfm.de/en/projekt-details/innovation-valley-garzweiler/>

¹⁴⁶ Wikipedia. (2024). *Innovation district*. https://en.wikipedia.org/wiki/Innovation_district

¹⁴⁷ Wagner, J., Katz, B., Osha, T. (2019). *The Evolution of Innovation Districts*. <https://giid.org/research/evolution-of-innovation-districts/>

tors and incubators. To do this, cities adapted public transport, introduced high-speed internet connectivity and started actively coordinating these ecosystems to enable knowledge sharing, the exchange of know-how and collaboration.

In their 2014 report, researchers Bruce Katz and Julie Wagner¹⁴⁸ identified three primary models for the creation of innovation districts:

Anchor plus model — based on a strong local institution (company or university) that decides to redevelop its land and buildings to create an innovation district and attract start-ups, entrepreneurs and talent. This is how MIT created Kendall Square in Cambridge. A similar example is High Tech Campus Eindhoven.

Re-imagined urban areas — an innovation district created in a former industrial area, brownfield site or declining industrial zone. It requires significant involvement and investment on the part of the city and developers. Examples include the Boston Innovation District and Barcelona's 22@ district.

Urbanised science park — created by developing several small distributed districts located on the outskirts of or outside cities. One example is Research Triangle Park in Raleigh-Durham.

The most well-known districts include Kendall Square (Cambridge, USA), Oxford Road Corridor (Manchester, UK), High Tech Campus Eindhoven and Innovation Quarter Rotterdam (Netherlands), Glasgow City Innovation District (Scotland), Helsinki Innovation City (Finland), Stockholm Science City (Sweden), and Mazda in Japan. The first such district Europe was 22@ in Barcelona.

Innovation districts also have their own organisation: the **Global Institute on Innovation Districts**¹⁴⁹, a non-profit organisation that conducts independent, practice-oriented research on innovation districts and provides practical support, such as through the Innovation District Playbook.

Involvement in RIS3

Regional innovation valley

- They support the green and digital transition, which are the main objectives of RIS3.
- They lead to the creation of collaborations and leadership roles in innovation and innovation ecosystems focused on RIS3 priorities at the international level.

Innovation districts

- They may be sectorally (i.e. domain) specialised (biotechnology, deep tech and advanced manufacturing, the circular economy), but they do not have to be.
- They can actively link different innovation infrastructures in support of RIS3 objectives.
- The role of coordinator and implementer can be effectively fulfilled by regional innovation centres, their regional branches, or specially established organisations.

Examples

High Tech Campus Eindhoven (HTCE) in the Netherlands.¹⁵⁰

The campus was originally founded by Philips and became the breeding ground for many successful Philips products as well as for a large number of high-tech start-ups, some of which later became leading OEM (Original Equipment Manufacturer) companies themselves, such as ASML and NXP. In 2003 the campus was opened up to other companies, and in 2012 it was sold to a consortium of external investors. This has led to a substantial increase in the number of high-tech companies and other tenants — large and small. HTCE has therefore been recognised as one of the best places in the world for the development of high-tech systems and solutions.

Innovation District Copenhagen (IDC)¹⁵¹ in Denmark

It was founded in 2008. The initiator was a professor from Copenhagen University Hospital. The district has a high concentration of educational and research institutions in the fields of medicine, health and the natural sciences thanks to institutions such as University College Copenhagen, Copenhagen University Hospital and the University of Copenhagen. It has the advantage of being located close to all innovation institutions — companies, universities, incubators, etc. It covers an area of 2 km² and employs 40,000 people work.

Key partners include the City of Copenhagen, the Capital Region of Denmark, University College Copenhagen, the University of Copenhagen, Rigshospitalet (Copenhagen University Hospital), the Danish Building and Real Estate Agency, Copenhagen Bio Science Park, the coworking space Symbion and Novo Nordisk.

Funding was initially provided by the Danish government for the purchase of the buildings. The company Novo Nordisk subsequently joined the initiative.

Today, IDC also aims to support other industries. Six of the twelve RIS3 domains are represented in the district, including AI, quantum technologies and nanotechnology.

5.12 Research Infrastructures

Definition

For the purposes of this Methodology, we refer to those research institutions that provide their equipment and expert services primarily to industry. To paraphrase the Horizon Europe definition, **research infrastructures** (RIs) are facilities through which researchers from **companies, including start-ups**, gain access to the high-quality resources and services they need to carry out their research, **development, innovation and product** development.¹⁵² Words reflecting the link to innovation and industry are highlighted in bold.

The OP TAC programme defines research infrastructures as facilities, resources and related services used by the scientific community to carry out research in the relevant fields. These include scientific equipment and research materials, knowledge-based resources such as collections, archives and structured scientific information, information and communication technology infrastructures such as GRID networks, computer

¹⁴⁸ Brookings Institution. (n.d.). *Innovation Districts*. <https://www.brookings.edu/innovation-districts/>

¹⁴⁹ Global Institute on Innovation Districts (GIID). (n.d.). *About GIID*. <https://giid.org/about-giid/>

¹⁵⁰ Wikipedia. (2024). *Innovation district*. https://en.wikipedia.org/wiki/Innovation_district

¹⁵¹ Innovation District Copenhagen. (n.d.). *Home*. <https://innovationdistrictcopenhagen.dk/>

¹⁵² Horizon Europe. (n.d.). *Research Infrastructures: Information*. <https://www.horizontevropa.cz/cs/struktura-programu-he/excelentni-veda/vyzkumne-infrastruktury/informace>

and software systems, communication tools, and any other unique elements necessary to carry out research. These infrastructures may be located at a single site or distributed across a network (an organised network of resources) in accordance with Article 2(a) of Council Regulation (EC) No 723/2009 of 25 June 2009 on the Community legal framework for a European Research Infrastructure Consortium (ERIC).

There are many research infrastructures of this type in Czechia. Such services are offered by specialised laboratories and facilities at almost every public university, by all research organisations, and by institutes of the Czech Academy of Sciences. These also include science and technology parks and testing centres.

- Specialised and applied laboratories and research centres of universities, institutes of the CAS and research organisations (AVO)
- **Large research infrastructures**¹⁵³
- Science and technology parks
- Testbeds of research institutions

As the aim of this Methodology is not to provide an exhaustive description of all these infrastructures, only a few examples from the field of large research infrastructures are mentioned.

Large research infrastructures

Large research infrastructures provide scientific research services and facilities to users from research institutions, students, specialists and the private sector on an open access basis. According to the Analysis of the Benefits and Impacts

of Large Research Infrastructures¹⁵⁴ prepared by TC Prague in 2021, thirteen large research infrastructures in the field of physical and technical sciences located in Czechia served 350 companies out of a total of 4,000 users between 2016 and 2020. The group also provided commercial services amounting to CZK 90 million per year.

According to the same analysis, given their expertise and unique knowledge and technical background, LRIs can engage in various forms of regional, national and international collaboration that can have direct economic and societal benefits and impacts.

They can participate in specialised regional clusters and partnerships, platforms and commissions, collaborate with companies, participate in the creation of start-ups and spin-off companies, work with and be members of local innovation centres, cooperate with regions, municipalities and cities, and take part in various forms of cooperation with non-profit organisations or policy makers, thus contributing to the development of the innovation system and society in general beyond the scientific community.

Their role is equally strong in the domains of specialisation and in the supporting horizontal areas focused on research, development and innovation addressing the needs of Czech industry. In Czechia, there are currently 43 such facilities within the ERIC association across six research areas

- Physical sciences and engineering
- Energy
- Environmental sciences

- Health and food / biological and medical sciences
- Social sciences and humanities / social and cultural innovation
- E-infrastructures

Involvement in RIS3

All these RIs are thematically focused.

- Their importance lies in the provision of services and expertise for vertical domains of specialisation through their professional focus, as well as horizontally in research and innovation for companies, helping improve the quality of their new products and services.
- They interact with other Infrastructures (innovation centres, incubators, accelerators) and may form part of living labs.
- They often also function as testbeds and are part of specialised sector-focused clusters.
- Through their expertise and support for the regional innovation ecosystem, they may also contribute to the preparation and updating of RIS3 strategies.

Examples

Brain4Industry¹⁵⁵ — a consortium of leading research institutions and companies based in Central Bohemia that helps small and medium-sized manufacturing companies use innovative digital solutions, additive manufacturing systems, artificial intelligence and related training and advisory services. Its main focus is on engineering (tools and moulds), automotive, defence and security, aerospace, healthcare, energy and renewable sources. It is part of EDIH. The founders are the Institute of Physics of the Czech Academy of Sciences, the HiLase Laser Centre, CARDAM, the Central Bohemian Innovation Centre, the Institute of Thermomechanics of the Czech Academy of Sciences and the STAR science and technology cluster.

IT4Innovations¹⁵⁶ is a large research infrastructure based in Ostrava that provides research institutions and companies with services and expertise related to the use of supercomputing in the fields of high-performance computing (HPC), data analysis (HPDA), artificial intelligence (AI), quantum computing (QC) and their applications in other domains of science, industry and society.

LIST — Luxembourg Institute of Science and Technology¹⁵⁷ is a leading research organisation providing R&D services and expertise to companies and research institutions in the fields of environment, IT and materials. It also establishes spin-off companies. The organisation includes three innovation centres: the Sustainable Composite Materials & Manufacturing (SCMM) Innovation Centre, the IT Centre and the Greentech Innovation Centre.

¹⁵³ Research Infrastructures. (n.d.). Home. <https://www.vyzkumne-infrastruktury.cz/>

¹⁵⁴ Vaverková, I., Pazour, M., Čadil, V., Kostić, M., Vančurová, I. (2021). *Analysis of the Benefits and Impacts of Large Research Infrastructures*. https://stratin.tc.cas.cz/vystupy/2021/M1/Analiza_prinosu_a_dopadu_VVI_final.pdf

¹⁵⁵ Brain4Industry. (n.d.). Home. <https://www.brain4industry.cz/en/>

¹⁵⁶ IT4Innovations. (n.d.). Home. <https://www.it4i.cz/>

¹⁵⁷ Luxembourg Institute of Science and Technology (LIST). (2025). *Research*. <https://www.list.lu/en/research/>

EcoMaT Technology Centre Bremen^{158, 159}

The German city of Bremen has supported the creation of a research and innovation infrastructure aimed at supporting S3 priorities, specifically the establishment of the EcoMaT Technology Centre (Centre for Eco-Efficient Materials and Technologies), which will support several smart specialisation domains. By 2016, the centre achieved regional relevance in the context of S3. In cooperation with Airbus, EcoMaT provides a central, cross-cluster perspective for Bremen-based companies and research organisations in the field of materials and lightweight structures, with particular benefits for the aerospace sector, which is one of the S3 regional areas. More information is available on the Bremen website (German and English): <http://www.efre-bremen.de>.

5.13 Technology Transfer Centres (CTT)

Definition and scope

A Technology Transfer Centre (TTC), often referred to as a Technology Transfer Office (TTO), is an institution or organisational unit of a university, research organisation or public institution that facilitates the transfer of research and development results into practical use.

According to the definition of the International Intellectual Property Organization (WIPO), they are “knowledge and technology transfer organisations — academic or commercial entities that facilitate the management of intellectual property rights and technology transfer by bridging the gap between research and practice. They support collaboration and broker relationships between various innovation stakeholders such as academia and industry.”¹⁶⁰

In the Czech environment, the definition commonly used is that provided by the Technology Agency of the Czech Republic under the conditions of the GAMA programme (2022): “A natural or legal person (internal or contractual), unit or branch of the applicant that ensures for the beneficiary the process of technology transfer, protection of intellectual property and assessment of its usability, administrative arrangements for its commercialisation, securing legal protection of intellectual property, negotiating specific contractual terms with the user of the intellectual property, and provision of legal service in the conclusion of the contract that ensures the protection of intellectual property and the implementation of all designated activities necessary for the entire commercialisation process. The services of a technology transfer centre (TTC) may be provided internally or externally and must be of a non-economic nature pursuant to Framework Article 2.1.1, paragraph 19.”

Position and role in the Czech innovation ecosystem

TTCs are a key component of the infrastructure supporting innovation and the knowledge economy.

There are more than 30 technology transfer centres in Czechia, mainly at universities, research institutes and institutes of the Czech Academy of Sciences. Most of them were established with support from European funds (e.g. OP RDI, OP RDE, OP TAC) and are associated in Transfera.cz and international organisations such as ASTP or EEN (Enterprise Europe Network). Knowledge and technology transfer is also carried out by some private companies, such as UNICO¹⁶¹ and the Technology Centre Prague¹⁶², among others.

TTCs in Czechia have varying levels of professionalisation — from basic licensing support to comprehensive services including proof-of-concept programmes, spin-off creation, intellectual property, and business advisory services.

Their involvement in RIS3 strategic processes has so far been rather informal, mainly through participation in regional working groups or cooperation with regional innovation centres. Nevertheless, they have significant potential to become an important link between academia and applied research in individual RIS3 domains, supporting the establishment of spin-off companies and facilitating the development of new products across a number of sectors.

However, a TA CR study from 2014 aimed at analysing the problems of technology transfer identified the need for transfer centres to specialise as one of its main conclusions¹⁶³.

The National Research and Innovation Strategy for Smart Specialisation also identifies technology transfer as one of the supported areas within the horizontal domain and objective A03 — “Improving the functioning of innovation ecosystems at the national and regional levels”, stating that: “it is also necessary to develop cooperation among companies themselves and between the business and research (academic) sectors and to promote the transfer of technologies and R&D results into practice.” The same is set out under Objective B01 — “Increasing the quality and societal relevance of public research”, which emphasises in particular the need to increase the internationalisation of Czech research, including technology transfer.

Potential for the involvement of TTCs in RIS3:

1. Implementation roles in RIS3 domains — TTCs can act as regional carriers of specialisation in areas such as biotechnology, digital technologies, materials research or the creative industries.
2. Data and analytical support for RIS3 processes — can provide insights into patenting trends, licensing and commercialisation in particular sectors, helping to manage and assess the impact of RIS3.
3. Facilitating collaboration and matchmaking — creating bridges between research institutions and companies in priority areas, for example through proof-of-concept grants.

¹⁵⁸ EcoMat Bremen. (2025). *Home*. <https://ecomat-bremen.de/en/home/>

¹⁵⁹ Gianelle, C., Kyriakou, D., Cohen, C., & Przeor, M. (Eds.). (2016). *Implementing Smart Specialisation Strategies: A Handbook*. Publications Office of the European Union. Available from: [https://publications.jrc.ec.europa.eu/repository/bitstream/JRC102764/jrc102764_s3p-fromdesigntoimplementationfinal\(16-12-016\)web.pdf](https://publications.jrc.ec.europa.eu/repository/bitstream/JRC102764/jrc102764_s3p-fromdesigntoimplementationfinal(16-12-016)web.pdf)

¹⁶⁰ TTO definition. WIPO. (n.d.). *Technology transfer website*. <https://www.wipo.int/en/web/technology-transfer/organizations>

¹⁶¹ UNICO. (n.d.). *Homepage*. <https://www.unicoanalytics.cz/>

¹⁶² TC Prague. (n.d.). *Homepage*. <https://www.tc.cz/cs>

¹⁶³ TA CR. *Problems of Knowledge and Technology Transfer in the Czech Republic*. (n.d.). <https://tacr.gov.cz/metodicka-podpora/problemy-transfere-technologie-a-znalosti-v-ceske-republice/>

4. Creation of spin-off and start-up companies — direct links with incubators and accelerators in RIS3 domains, providing service support for newly established companies.

5. Participation in regional innovation councils and RIS3 working groups — direct involvement in setting priorities and evaluating the implementation of strategies.

Examples of technology transfer centres involved in RIS3:

- Technology Transfer Office of Masaryk University (TTO MU)¹⁶⁴: Actively supports the South Moravian RIS3 Strategy in the domains of biotechnology and the digital economy; member of the JIC platform.
- Technology Transfer Office of Brno University of Technology (CEITEC-TTO)¹⁶⁵: Partner in regional projects in the field of advanced materials and Industry 4.0, connected to RIS3 South Moravian Region.
- Charles University — Centre for Knowledge and Technology Transfer (CKTT UK)¹⁶⁶: Involved in the National RIS3 Strategy in the area of health and biomedicine; coordinator of TA CR GAMA proof-of-concept grants.
- VTP UPOL — Centre for Innovation and Transfer Centre of Palacký University in Olomouc¹⁶⁷ — is involved in regional activities and platforms. It supports regional RIS3 domains such as advanced materials and advanced medicine and pharmaceuticals.
- University of the Basque Country — TTO¹⁶⁸: Implementation partner of RIS3 Euskadi, specialising in advanced manufacturing and HealthTech; linked to the Basque Digital Innovation Hub network.
- Aalto University Innovation Services¹⁶⁹: Actively involved in the national strategy of Finland's Smart Specialisation Framework — focusing on digitalisation and the creative industries.

Recommendations for the further development of TTCs in the context of RIS3

- Formal involvement of TTCs in RIS3 governance structures, such as through membership of domain-specific expert groups.
- Creation of a network of “RIS3 transfer centres” — national coordination similar to the Basque Innovation Hub model, linking university TTCs with regional innovation centres.
- Expansion of financial instruments — proof-of-concept funds, shared licensing funds and incubation grants focused on RIS3 domains.
- Support for the professionalisation of TTCs — systematic training in intellectual property, impact evaluation, spin-off management and matchmaking.
- International benchmarking and the sharing of practice — cooperation with ASTP¹⁷⁰, AUTM¹⁷¹ or EEN¹⁷² to share data on the contribution of TTCs to the smart specialisation of regions.

Technology transfer centres thus represent a bridge between research excellence and the economic utilisation of knowledge. If they are systematically integrated into RIS3 processes at the national and regional level, they can become a key element of the Czech knowledge economy ecosystem, linking science, innovation and entrepreneurship in line with the priority domains of both the national and regional smart specialisation strategies.

¹⁶⁴ CTT MUNI. (n.d.). *Homepage*. <https://www.ctt.muni.cz/>

¹⁶⁵ TT BUT Brno. (n.d.). *Homepage*. <https://www.vut.cz/vav/transfer>

¹⁶⁶ CKTT UK. (n.d.). *Homepage*. <https://cppt.cuni.cz/CPPTN-1.html>

¹⁶⁷ VTP UPOL. (n.d.). *Homepage*. <https://www.vtpup.cz/>

¹⁶⁸ EHU TTO. (n.d.). *Homepage*. <https://www.ehu.eus/en/web/lascarayikergunea/ieeb>

¹⁶⁹ Aalto University TTO. (n.d.). *Homepage*. <https://www.aalto.fi/en/advancing-entrepreneurship-and-innovations/technology-transfer>

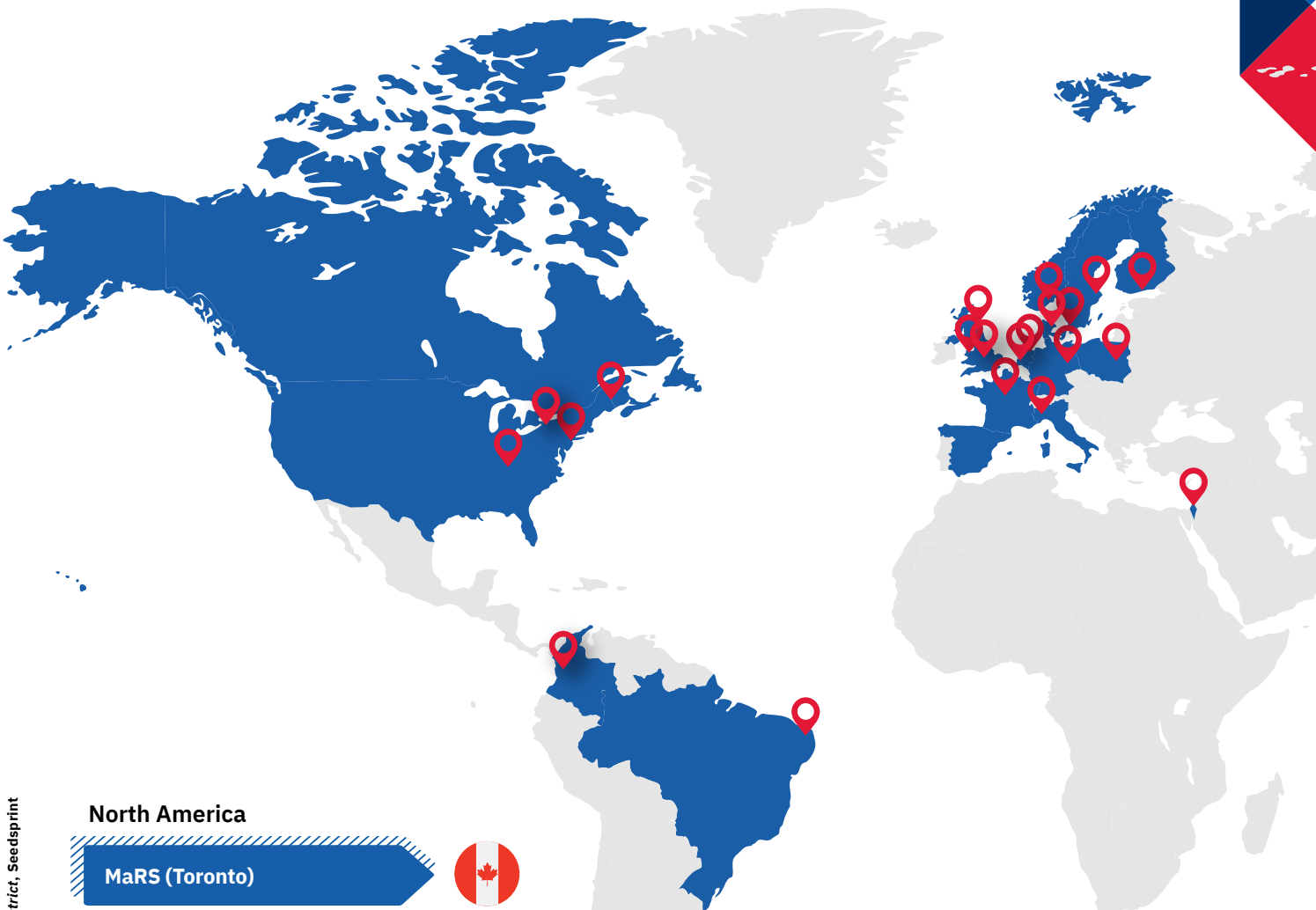
¹⁷⁰ ASTP. (n.d.). *Homepage*. <https://astp4kt.eu/>

¹⁷¹ AUTM. (n.d.). *Homepage*. <https://autm.net/>

¹⁷² EEN. (n.d.). *Homepage*. <https://een.ec.europa.eu/>

Innovation Cities/Districts

Figure 16: Map of Examples of Innovation Districts Worldwide



North America

- MaRS (Toronto)
- Toronto Innovation Acceleration Partners (TIAP) (Toronto)
- Asociace Kendall Square (Cambridge)
- CIC Health (Cambridge)
- Cortex Innovation District (St Louis)
- University City Science Center (Philadelphia)

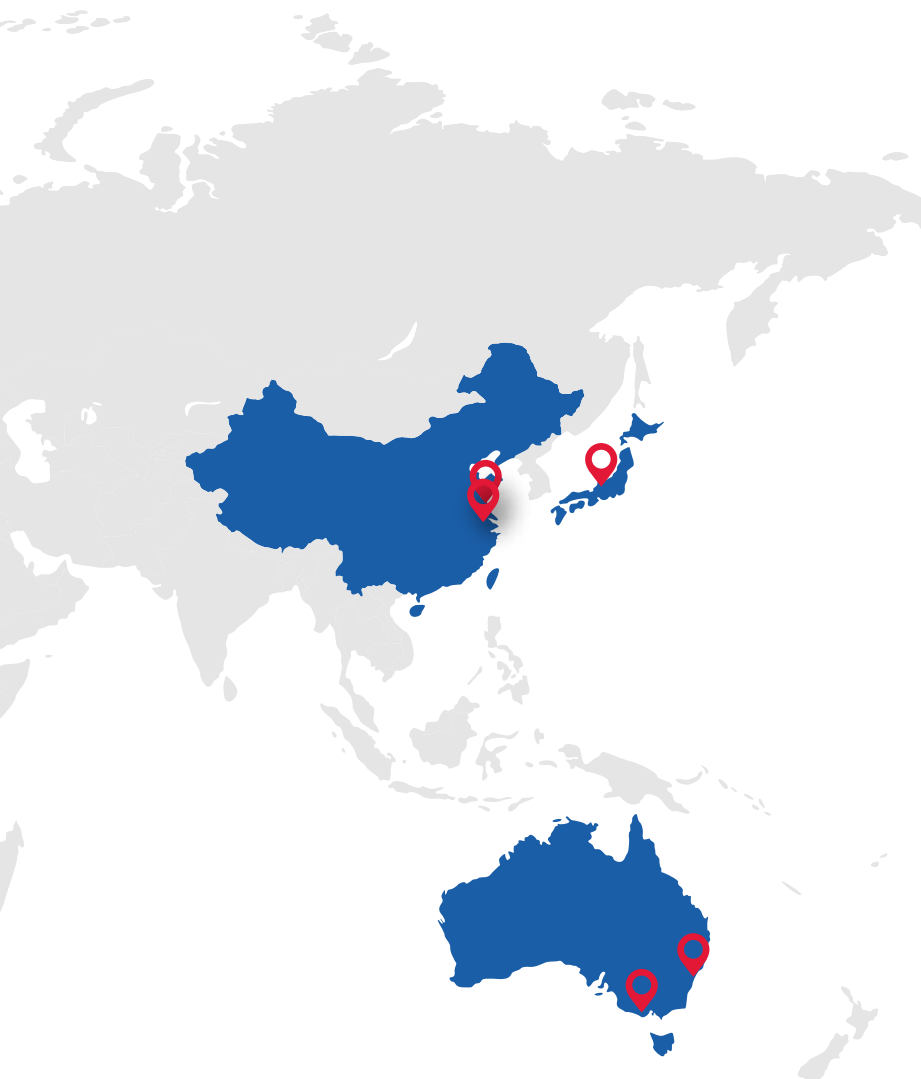
South America

- Porto Digital (Recife)
- Distrito Innovación Ruta N (Medellín)





Europe

- Copenhagen Science City (Copenhagen)
- Helsinki Innovation District (Helsinki)
- Station F (Paris)
- MIND — Milano Innovation District (Milan)
- Be'er Sheva Innovation District (Be'er Sheva)
- Berlin Adlershof (Berlin)




Source: Arthur D. Little (2021), Global Institute on Innovation Districts, Wikipedia. (2024). Innovation district, Seedsprint








Asia

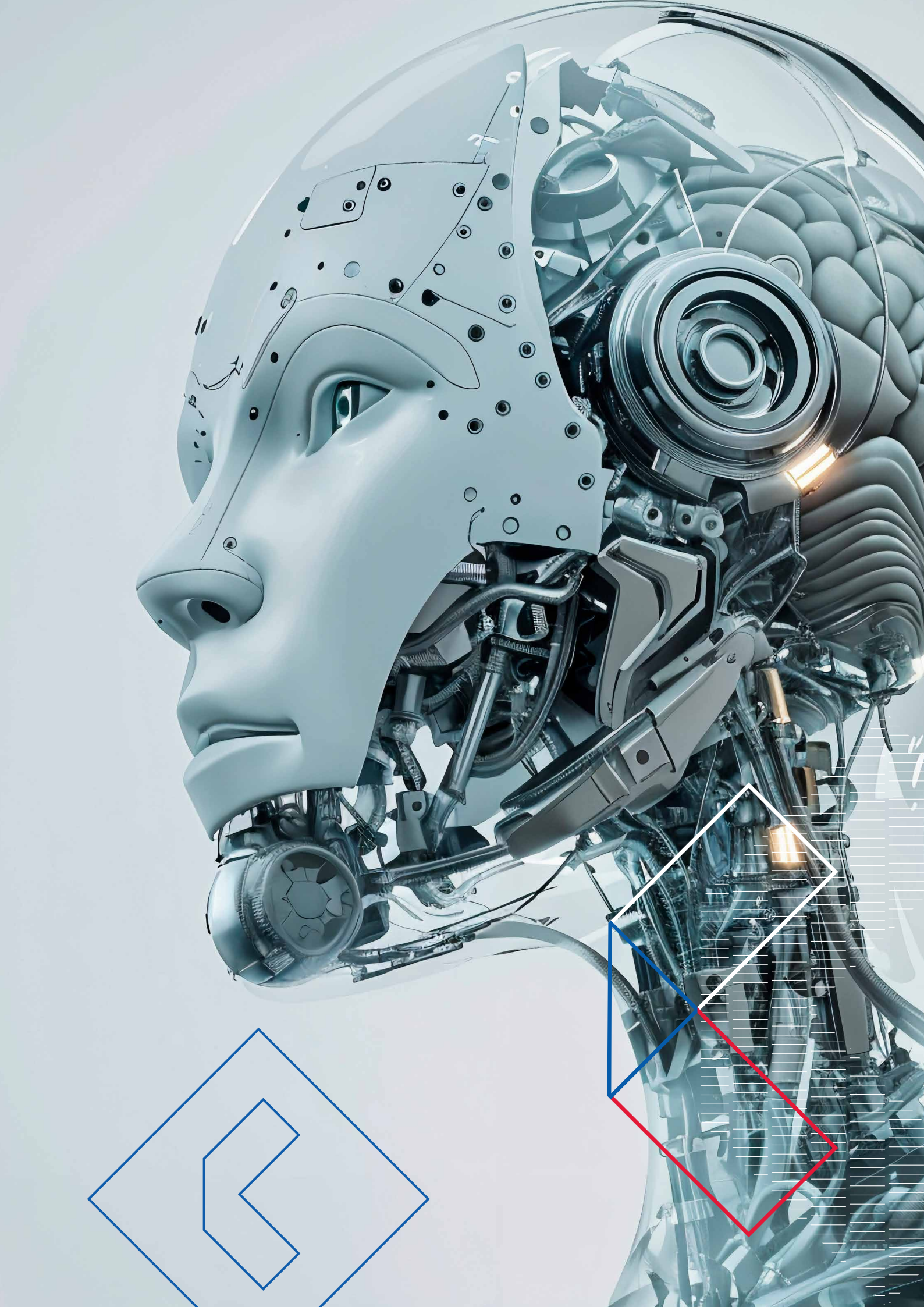
- CHJ Innovation Center (Shanghai) 
- TusCity (Nanjing) 
- Hiroshima University (Hiroshima) 
- Mazda Motor Corporation (Hiroshima) 

Australia

- Melbourne Care Economy Innovation District (Melbourne) 
- Melbourne Innovation Districts (Melbourne) 
- Westmead Health Precinct (Sydney) 

- Central Innovation District (The Hague) 
- InnovationQuarter (Rotterdam) 
- Knowledge Quarter Zuidas (Amsterdam) 
- Oslo Science City (Oslo) 
- Kampus Plus (Warsaw) 
- 22@Barcelona (Barcelona) 

- Lund Innovation District (Lund) 
- Stockholm Science City (Stockholm) 
- Glasgow City Innovation District (Glasgow) 
- ID Manchester (Manchester) 
- Knowledge Quarter Liverpool (Liverpool) 



6. New Trends in Inostructures

The following activities are among the new trends in the development of innovation ecosystems that are already established abroad but still only partially applied or not applied at all in Czechia:

- ▶ **Living labs** – for Czechia, these may represent a key form of cooperation in the implementation of RIS3 and missions, as they are based on connecting quadruple helix actors in the development of innovations.
- ▶ **Innovation districts and innovation areas** (STPs with more than one site, more than half of which share infrastructure with a university and most of which are located on or near university campuses).
- ▶ **Sectoral specialisation of innovation infrastructures** – specialisation of Inostructures in one or more industrial fields and interdisciplinary networking, particularly in incubators, science and technology parks or districts – is common in areas such as green technologies, biotechnologies, the creative industries, deep tech, etc.
- ▶ **Scouting for international talent and start-ups** – incubators and science and technology parks are commonly open and offer their services and incubation programmes to foreign applicants interested in establishing a start-up or to existing start-ups.
- ▶ **Sharing and connecting existing infrastructures and large research infrastructures** – the trend is to make greater use of existing research and testing facilities, equipment, know-how and capacities of various actors within the innovation system across the triple and quadruple helix. Similarly, brownfield sites can be used for the creation of new incubators, science and technology parks, workshops and similar facilities, both across regions and between countries, as demonstrated by initiatives such as Innovation Valley and newly emerging cross-border start-up points.¹⁷³
- ▶ **Artificial intelligence** – Inostructures, in particular (E)DIHs, will play a key role in raising awareness and promoting AI among their clients and within their regions, from start-ups to small, medium-sized and large companies, in offering advisory services on AI law and links to experts and research centres.
- ▶ **Public-private financing of Inostructures** – a model widely used abroad, where Inostructure funding combines company contributions with state grants and may also be largely linked to venture capital funds or paying corporate stakeholders. The option of financial and in-kind support from large multinational companies is also common. A similar business model exists in Czechia, but it is still not as widespread as it could be. With declining support from national grants, this model will become essential for ensuring the sustainability of Inostructures.

¹⁷³ Interreg AT-CZ. (n.d.). *Crossborder Startup Point (ATCZ00090)*. https://interreg.at-cz.eu/cz/katalog-projektu/2021-2027/preshranicni-sprava/atcz00090_crossborder-startup-point

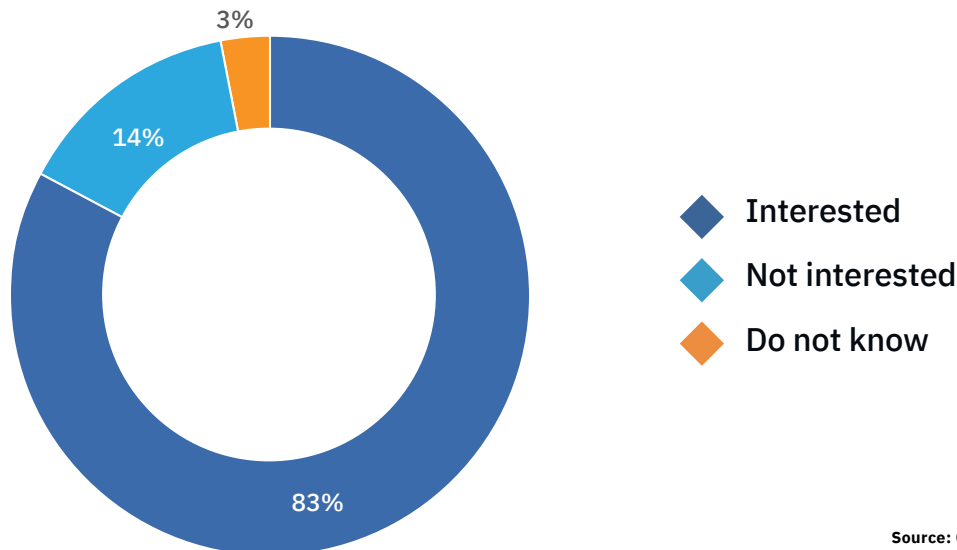


7. Start-ups and Inostructures

An interesting perspective on the role of innovation infrastructures, particularly their sectoral specialisation, can also be gained from the views of those for whom the services of Inostructures are intended, namely early-stage entrepreneurs, start-ups and spin-offs. Within the Technology Incubation Programme, a survey was conducted among both start-ups and individuals interested in establishing a start-up, and the results were also used for this Methodology. A total of 150 responses were received based on projects submitted to and accepted into the Technology Incubation Programme between 2022 and 2024.

The survey yielded the following information:

Figure 17 Interest of Applicants from the Technology Incubation Programme in Cooperation with Innovation Infrastructures



Source: CzechInvest survey (2025)

- The greatest interest in cooperation was with innovation infrastructures such as JIC, Prague/SIC and BIC Plzeň.
- More than half of the applicants also mentioned other potential cooperation partners (universities, venture capital funds, EDIHs, international partners and professional partners).
- Potential cooperation primarily focuses on the following areas:
 - Office space, clean rooms and laboratory facilities.
 - Business development, mentoring, coaching and networking.
 - Consulting and advisory services (finance, venture capital), incubation and acceleration.
 - Technical and technological advisory services (e.g. AI, drones, environmental technologies) and development.
 - Academic cooperation (collaboration with research organisations and testing centres).

Most people interested in starting a start-up are aware of the existence and services of innovation infrastructures and are also interested in using them. A smaller proportion simply does not know whom to contact or which organisation to choose. The majority selected Inostructures in Brno, Prague, the Central Bohemian Region and Plzeň. Applicants must also classify themselves into one of the industrial areas derived from the specialisation domains of the National RIS3 Strategy.

From the RIS3 perspective, it is positive that most start-ups are aware of the possibilities offered by regional innovation infrastructures, but there is still room to increase interest among start-ups in the services and facilities offered by other regional Inostructures so that they can shape and help to strengthen innovation ecosystems across all regions.

Start-ups and awareness of Inostructures

Approximately 1,500 respondents were contacted through questionnaire survey for the purposes of the analysis, including those who did not submit an application, those who submitted an application but were unsuccessful, and those who were successful. Of these, 107 respondents completed the questionnaire, and their responses are included in the analysis. At the time they submitted their applications, 21 respondents were already registered with an innovation infrastructure.

Figure 18 Number of Responses to the Survey on Start-ups and Inostructures

Application stage	Number of applicants	Number of completed questionnaires
Pre-incubation – application not submitted	900	60
Application submitted but unsuccessful	400	16
Incubated	200	32

Responses were collected between March and April 2025 across all sectors (hubs) and in five calls (1 to 5). Questions focused on cooperation with Inostructures, preferred Inostructure services for start-ups and areas for improving services.

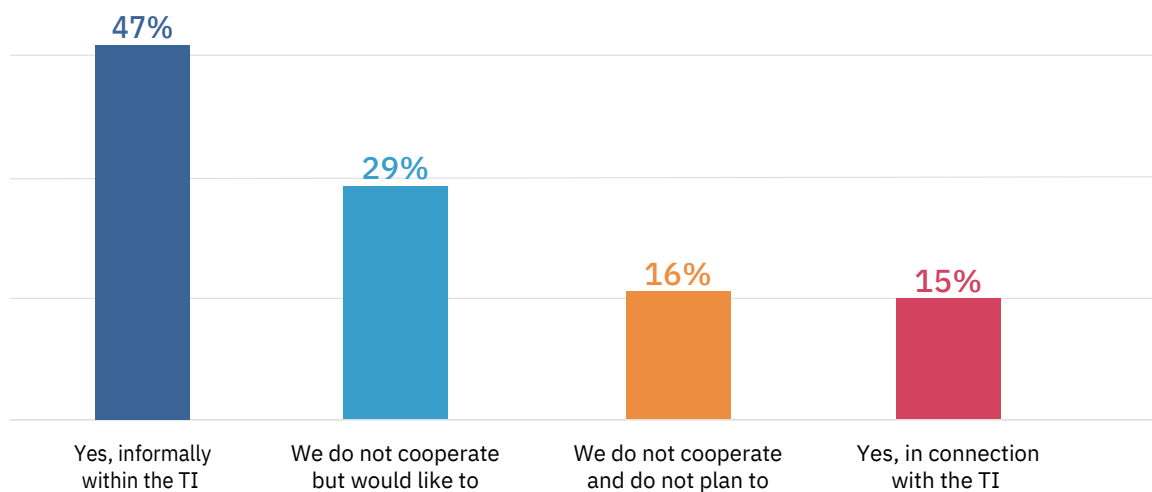
In terms of cooperation between start-ups and Inostructures, as shown in Figure 19, more than half cooperate with them, and most of these do so even independently of the TI programme. Only 16 of the 108 respondents do not seek such cooperation at all. The reasons given included, for example:

- We do not see any added value in it and do not know what they can offer us.
- The company is already advanced and does not need such services.
- These centres only help with simple projects.
- As long as there is no funding, there is no need to consider such cooperation.
- Limited range of services.
- We are not sure whether suitable centres exist.
- Inadequate conditions, high costs, little benefit.
- I do not know how they could help me.
- They usually offer coaching, but I need legal and financial support and connections to investors.
- Very low quality of these organisations in Czechia, with irrelevant and inexperienced consultants.
- They were unable to help me.

Of the respondents who had worked with an Inostructure, twelve said that they were organisations included in the Technology Incubation Whitelist. These are innovation infrastructures verified and recommended by CzechInvest. None of them mentioned reasons for not cooperating.

It can therefore be concluded that more than half of the start-ups that applied to the TI programme were already familiar with Inostructures and had established contacts before submitting their applications.

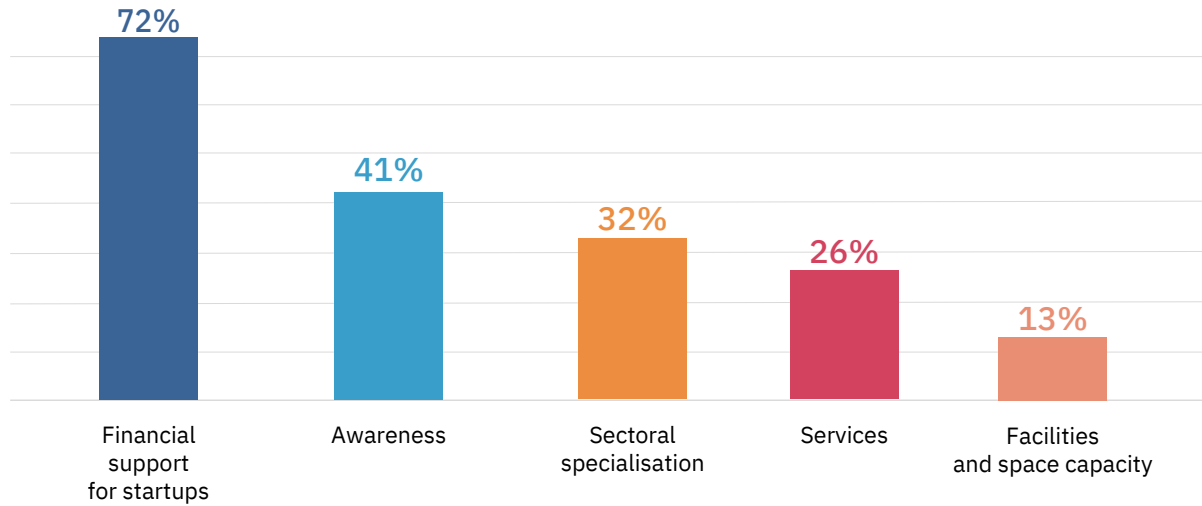
Figure 19 Do you Work with Innovation Infrastructures?



Regarding the services of Inostructures for start-ups and the assessment of their quality, as shown in Figure 20, start-ups most frequently recommended improving financial support services. They would like to see further improvements in relation to information about events, activities and services for start-ups, as well as sectoral specialisation, i.e. expert focus in the specific industry relevant to their business. Surprisingly, the least necessary improvement they mentioned was better facilities and space capacity.

The survey therefore suggests that start-ups are interested in the sectoral specialisation of Inostructures (i.e. RIS3 domains).

Figure 20 In Which Areas Should Infrastructures Improve Their Services?

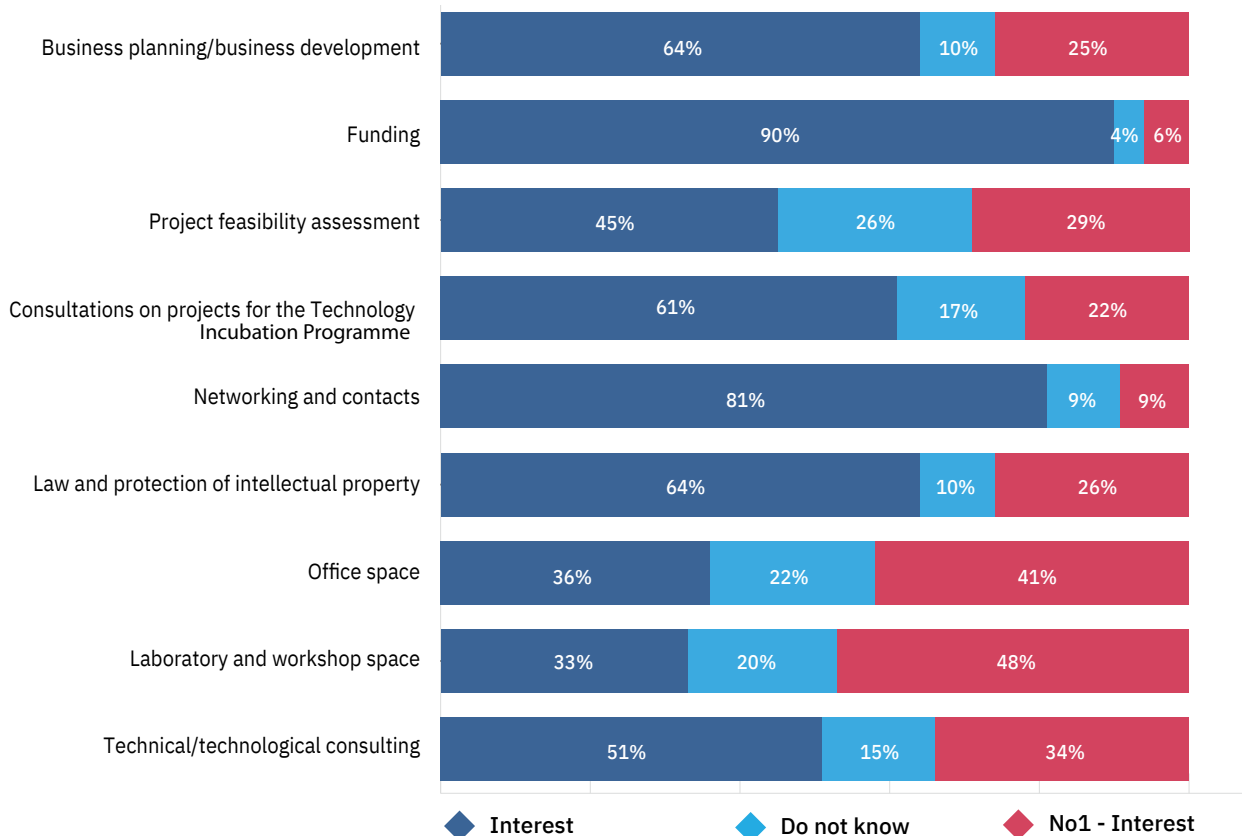


Equally interesting was the view of preferred services, as shown in Figure 21. An overwhelming majority of start-ups (more than 80%) welcome assistance with funding, networking and access to contacts. More than 60% also request assistance with business plans and business development, consultation on Technological Incubation project applications and advice on the protection of intellectual property. More than half are also interested in technical and expert advisory services.

The least interest and need was for space, offices, workshops and laboratories. Start-ups are generally able to secure these on the market themselves.

The survey shows that overall start-ups need financial advice and contacts far more than assistance with workspace.

Figure 21 Preferred Services



Inostructures' perspective on start-ups and RIS3

The analysis of start-ups in relation to RIS3 and Inostructures also looked at how Inostructures themselves view RIS3 specialisation and/or the impact of RIS3 on the selection or involvement of start-ups. Five out of the 24 whitelisted Technology Incubation Inostructures participated in the survey. Of these, three were regional innovation centres, of which there are ten on the whitelist. All regional innovation centres are authors and/or implementers of their regional RIS3 strategies.

The survey showed that 80% of them (4 out of 5) take the regional or national RIS3 Strategy into account in their activities, including one science and technology park. It is only one private coworking centre/hub that does not follow RIS3 (see Figure 22).

The response was the same to the question of whether the Inostructure specialises in particular RIS3 domains. Again, 80% said that it does. In this case, however, the one that did not specialise was surprisingly one of the innovation centres, while the private hub did (see Figure 23).

Figure 24 shows the domains in which they specialise most. The domains were selected from the National RIS3 Strategy and Technological Incubation programme hubs. Three Inostructures indicated three or more domains, while the STP indicated a focus on one domain.

When asked whether they accept start-ups or spin-offs solely according to the RIS3 priorities in which they specialise, 80% answered no. Only the private hub said it did (see Figure 25).

Finally, the question regarding the possible involvement of start-ups in RIS3-based activities provided a clear answer: the majority (80%) do not involve them. Only one innovation centre actively involves its start-ups in RIS3, for example in the preparation of the Strategy, domain-related events or open innovation projects in the case of larger companies (see Figure 26).

Figure 22 Does the Inostructure Follow RIS3?

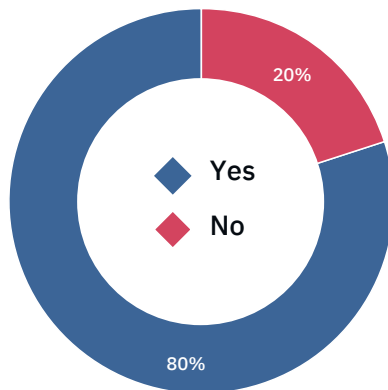


Figure 23 Is the Inostructure Specialised in RIS3 Domains?

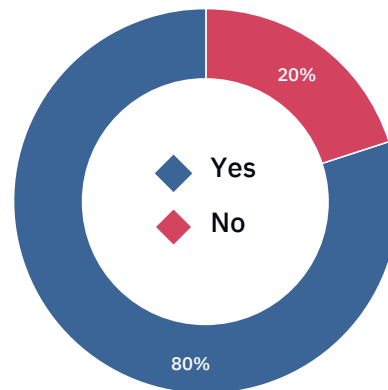


Figure 24 Most Common RIS3 Domain specialisations

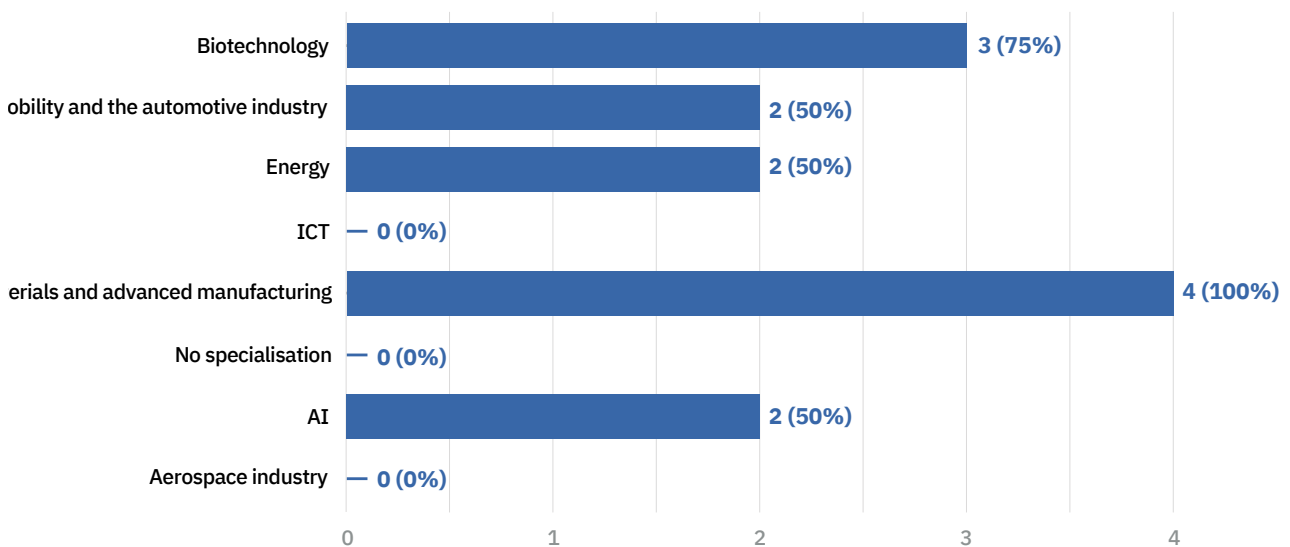


Figure 25 Do Inostructures Support Start-ups According to RIS3 Domains?

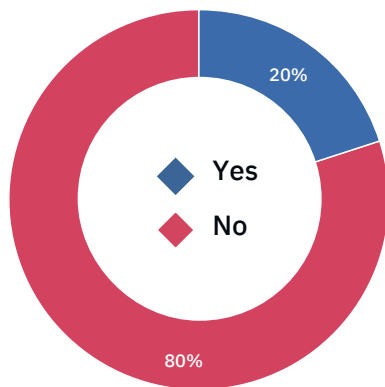
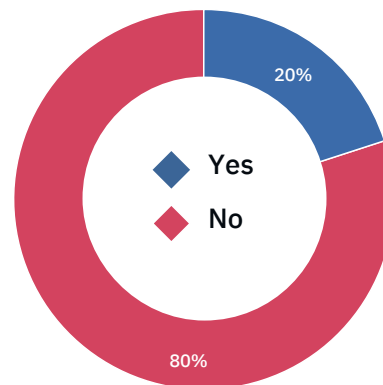


Figure 26 Do Inostructures Involve Their Start-ups in RIS3?



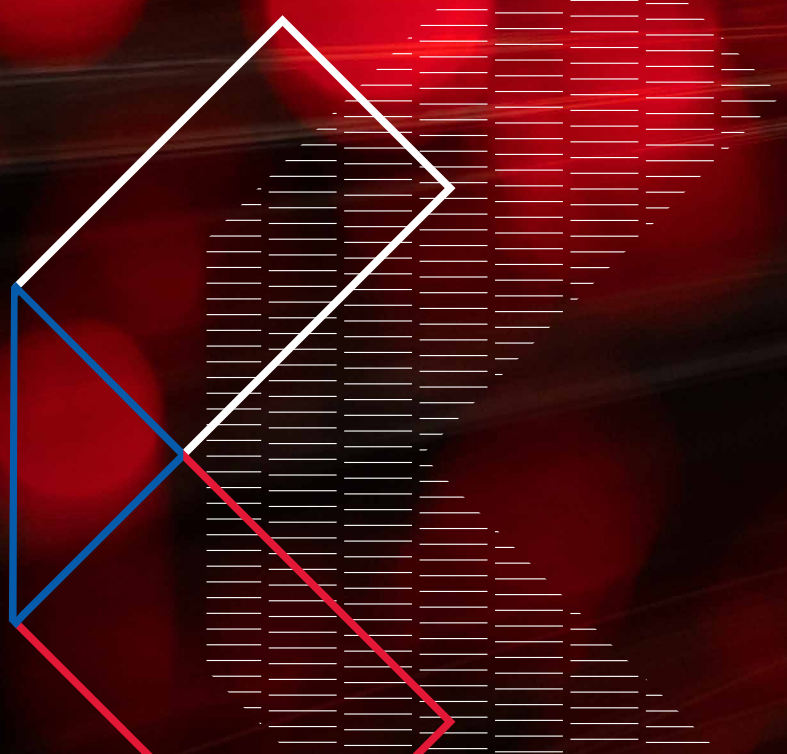
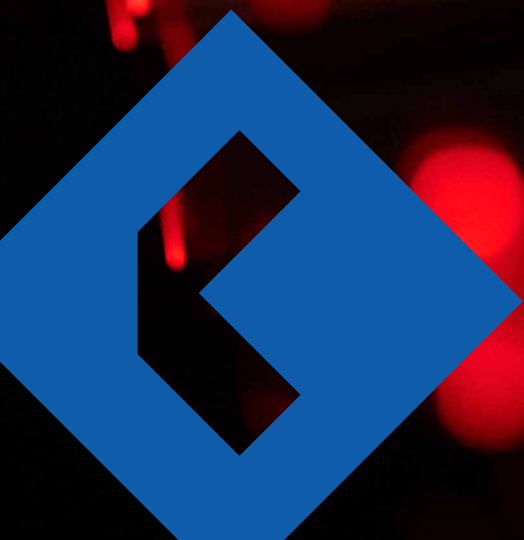
Which types of Inostructures work with start-ups – and how?

Figure 27 Activities of Individual Inostructures for Start-ups

Innovation infrastructure	Does it work with start-ups/spin-offs?	How?
Regional innovation centres and BICs	YES	Through incubation and acceleration programmes
Science and Technology Parks (STP)	Partially	Focus more on more advanced start-ups and scale-ups that are more established on the market. Provide premises and sometimes services such as networking, contacts with clients, investors, consultancy.
Business incubators and accelerators	YES	Through incubation and acceleration programmes similar to BICs. They also provide premises.
Innovation hubs	YES	Through office space and certain advisory services, information and networking.
Coworking centres	YES	Mostly just by providing office space. Some also provide business advisory services and educational workshops.
Open workshops (fab labs and makerlabs)	Partially	Providing workshop space and equipment for prototyping and small-series and prototype production. Abroad they may also offer services similar to acceleration programmes.
Testbeds	YES	Providing specialised testing and product development services.
DIH and EDIH	YES	Education, awareness-raising, consultancy and services related to digitalisation and the introduction of AI.
Living labs	Partially	By creating and coordinating consortia and linking them with other research, industrial and public institutions that jointly develop and test start-up products in real-world environments.
Clusters	Partially	Through active networking with other members, including experienced companies, clients, suppliers and research organisations.
Research infrastructures	Partially	Providing highly professional research services.
Technology transfer offices	YES	By providing comprehensive support for business ideas within academic institutions, through the actual establishment of spin-off companies.

Start-ups and their link to RIS3

Start-ups are not usually directly involved in RIS3, but RIS3 strategies affect them through activities within both vertical and horizontal priorities (support and training for entrepreneurship, incubation programmes, support for the development of regional Inostructures supporting start-ups, focus on certain sectors/domains, the EDP process, etc.). Start-ups and spin-offs are vehicles for business ideas and new products and are the primary entities targeted by RIS3 strategies.



8. Proposed Procedures and Steps for Strengthening Connections

In previous chapters, we examined the role and ways in which individual innovation infrastructures are, or could be, involved in RIS3, particularly at the regional level. This chapter explores how this is being addressed at the national level and how the national level cooperates with the regional level in supporting innovation infrastructures.

How does the process of linking national activities to the regional level currently work and how might it develop in the future to improve our understanding of how regional innovation ecosystems work in relation to the national level?

What steps are being taken today to involve innovation infrastructures in the practical implementation of regional RIS3 strategies through specific steps aimed at strengthening the innovation ecosystem within a given region, with the objective of creating favourable conditions for the development of specific domains of specialisation?

What procedures should be proposed to better link national activities with regional initiatives to improve our understanding of regional innovation ecosystems in relation to the national level?

The current role and options at the national level

With regard to supporting innovation infrastructures and their involvement in RIS3, the national level is currently assisting with a number of programmes and measures. Examples of the most important ones are listed below.

Ministries, the government, Parliament

- They create legislation enabling support for Inostructures and RIS3.
- They prepare strategic and policy documents defining priority areas of national interest.
- They provide funding through grant programmes for Inostructures:
 - National Recovery Plan, component 1.5. Virtual Enterprise (for EDIHs and AI TEFs)¹⁷⁴
OP TAC — The Infrastructure Services subprogramme supports the construction, operation and equipment of science and technology parks and business incubators, as well as services for innovative SMEs. It is also suitable for living lab infrastructure. The activities of the programme are directly linked to the strategic objective of the National RIS3 Strategy to “increase innovation demand in companies (including in the public sector)”. This primarily involves strong links to the typical activities/projects/operations under Specific Objective A1.3 “Strengthen technological cooperation among companies” of the National RIS3 Strategy.¹⁷⁵
 - OP JAC — Smart Accelerators programme. Thanks to OP JAC and its predecessors (OP VAVPI, R&D, etc.) a number of innovation centres have been established and the development of innovation ecosystems, innovation activities and cooperation in the regions has been supported. The programme also funds projects of the national RIS3 team as well as all regional RIS3 activities. Without OP JAC, RIS3 activities would not have emerged within the regions.
 - The TA CR provides funding for applied research projects that enable collaborations to be set up and the emergence of innovations.
 - SEF and OP JT — programmes aimed at the transformation of regions affected by coal mining. They enable the creation of hubs, educational services supporting entrepreneurship, living labs, open workshops and similar initiatives.
- They manage national innovation platforms in the domains of specialisation, bringing together key organisations that influence the future development of these sectors and the emergence of innovation.

The CzechInvest agency provides:

- Consultation and advisory services for new initiatives — individuals, cities and municipalities planning to establish hubs, coworking spaces — with a link to RIS3 (e.g. a specialised hub and coworking space, cooperation with a local investor from the regional RIS3 sector...).
- Advisory services for large companies interested in building an incubator, science and technology park, etc., specialising in a sector of the national or regional RIS3 strategy.
- It organises awareness-raising training in the form of workshops and seminars.
- It facilitates discussions on various topics among innovation infrastructures.
- It participates in meetings at the national and regional level (the NRIS3 team attending regular meetings of regional RIS3 teams — the so-called RIS3 Meet).
- It initiates new Inostructure platforms (e.g. the emerging platform of Czech living lab representatives, the Living Labs platform, and PIPI — the Platform of Innovation and Entrepreneurship Infrastructures of Czechia).
- It has introduced innovation hubs for start-ups thematically related to NRIS3 domains.
- For start-ups, it has created and organised a group of proven innovation infrastructures covering all regions of Czechia that provide services and facilities for start-up incubation.
- It has established cooperation with European associations of Inostructures such as the European Network of Living Labs (ENoLL), the European Business and Innovation Centre Network (EBN) and the International Association of Science and Technology Parks (IASP).
- Etc.

¹⁷⁴ Ministry of Industry and Trade (MIT). (2022, 9 June). *I. Digital Enterprise Call from Component 1.5 of the National Recovery Plan*. <https://mpo.gov.cz/cz/podnikani/narodni-plan-obnovy/vyzvy/i-vyzva-digitalni-podnik-z-komponenty-1-5-narodniho-planu-obnovy--268061/>

¹⁷⁵ Ministry of Industry and Trade (MIT). (2021). *RIS3 Strategies*. https://mpo.gov.cz/assets/cz/podnikani/ris3-strategie/dokumenty/2022/1/RIS3-Strategie-_A_RIS3-Strategie_.pdf

Proposals for procedures for greater involvement of Inostructures in RIS3 – the state, regions and Inostructures

From the perspective of Inostructures

Benefit: more companies and products that strengthen the regional economy, stronger connections with other partners in the region, and greater financial support for their services or infrastructure.

Figure 28 Proposed Procedure for Involving an Inostructure in RIS3



From the perspective of cities, regions and innovation centres

Benefit: faster and more accurate development of competitive companies and products, and an effective regional innovation ecosystem that significantly strengthens the economy of RIS3 sectors.

Figure 29 Proposed Procedure for Involving a City, Region and Regional Innovation Centre



**5.
Promote and
consult**

Inform Inostructures about RIS3 and opportunities for cooperation or involvement in municipalities where such an Inostructure is missing but needed.

**6.
Collaborate**

Interregionally and internationally. Share Inostructures with neighbouring regions and cities as well as abroad, avoid duplication and draw inspiration from successful examples of involvement both internationally and within Czechia.

From the perspective of the state

Benefit: the creation of functional innovation ecosystems and strong RIS3 strategic sectors, generating a greater number of companies in RIS3 domains.

Figure 30 Proposed Procedure for Involving National Institutions

**1.
Analyse**

Analyse infrastructure needs from the perspective of RIS3 (numbers of biotech,greentech or mobility Inostructures (incubators, laboratories and workshop spaces).

**2.
Map**

Map Inostructures in Czechia (collecting and updating data from the regions).

**3.
Communicate**

Set up regular communication with representatives of different categories of Inostructures (associations, networks, platforms, RIS3 teams, Ynovate, etc.), between the state and RIS3 teams, and through functional national innovation platforms, etc.

**4.
Adjust
funding**

Adjust grants conditions (support only infrastructures that fulfil the strategic and RIS3 priorities of the state, support the sharing and linking of Inostructures, create PPP business models, involve experts in project evaluation and use Inostructure platforms when preparing grant calls.

**5.
Inform**

Inform the Inostructure community about the strategic intentions of Czechia and the EU, as well as current trends.

Recommendations for future cooperation between national and regional activities

To increase the involvement of innovation infrastructures in RIS3, the following types of activities and procedures could be implemented at the national and regional level for a better understanding:

The national level could, for example:

- **Map trends and examples of Inostructures in relation to RIS3**

Solution: continue and increase the monitoring and sharing of new global trends and examples of good practice in innovation infrastructures with regional RIS3 teams and Inostructures. Continue to organise study visits to Inostructures abroad and meetings with international experts. To achieve this, the national institutions in charge of the innovation infrastructure development agenda should be members of international organisations, associations, expert groups and projects focused on Inostructures and RIS3. They should also remain in regular contact with Czech RIS3 teams and representatives of Inostructures and their platforms to ensure the mutual exchange of information. For this purpose, for example, a dedicated web section could be created (such as within the CzechInvest website or Czechstartups.org) dedicated to Inostructures, together with a communication platform, as described in the following recommendations. Currently, this role is partly fulfilled by the national RIS3 portal www.ris3.cz, but more from an RIS3 perspective.

- **Support regional cooperation, internationalisation and the sharing of Inostructures**

Solution: government institutions may, through strategic documents, legislative changes, modifications to existing grant programmes and calls, or newly prepared programmes, support greater sharing and use of existing Czech research and technological infrastructures, facilities and capacities for the development of innovations both across regions of Czechia and with regions in other countries, particularly Europe. Examples include targeted networking of large research infrastructures, science and technology parks, incubators, testbeds and companies, as well as innovation centres, fab labs and actors involved in living labs. In general, the national level should aim to bring its agenda, instruments and services more into line with models and tools used by Western innovation agencies. This includes adopting proven good practices such as support programmes, financial instruments, marketing and PR events and activities. In such a case, the state, in cooperation with regions, could highlight opportunities for cooperation and sharing between regions in similar types of Inostructures, particularly those supported from public funds, thereby reducing the risk of underused spaces or services and encouraging synergies.

- **Harmonise terminology and definitions of Inostructures**

Solution: the authority responsible for innovation infrastructures should be tasked with mapping the existing official innovation infrastructure terminology used in Europe and worldwide and, in coordination with other ministries, harmonise the terms and definitions of the various types of innovation infrastructure so that they are used consistently and align with international terminology.

- **Set up a regular communication channel with Czech Inostructures**

Solution: national authorities responsible for innovation infrastructures should create a common, unified communication channel or platform for communication with representatives of all Czech Inostructures, ideally through associations and networks representing existing types of Inostructures and their founders (National Cluster Association, Ynovate, SVTP, AIPCR, associations of towns and municipalities, etc.) or by supporting the creation of new associations or those that are currently emerging (the living labs platform, Make More association, or associations of coworking spaces and hubs). The existing PIPi (Platform of Innovation and Entrepreneurship Infrastructures of Czechia) could be used for this. This role could be performed by CzechInvest. Communication should focus on the various needs and issues of the Inostructure, which the responsible body would relay to the relevant ministries for resolution. The responsible body should actively listen to the needs of regional Inostructures and take their deep regional knowledge seriously. This knowledge can then be subsequently reflected in policies related to incubation and the design of grant programmes financed from EU structural funds, such as OP TAC, OP JAC and OP JT, as well as national programmes such as the National Recovery Plan, TA CR programmes, and projects of the national and regional RIS3 strategies. Standardised communication and coordination of Inostructures should ultimately ensure effective national support, insight into current issues and assistance in addressing them. Such communication should also include personal meetings and visits to regional Inostructures by representatives of the national level.

- **Promote awareness of Inostructures**

Solution: the national institution responsible for communication with Inostructures can create a separate section on its website presenting information about Inostructures, examples of good practice, domain specialisation and sustainable business models, as well as appropriate financial support, including commercial sources. Produce information materials providing clear information on the types, roles, operation and importance of the different Inostructures, accompanied by expert articles. The website will also include online maps of innovation infrastructures in Czechia, with a search option. In cooperation with regional RIS3 teams, it can then present and promote the concept of supporting and integrating Inostructures into RIS3 in selected regional cities around the country, such as through roadshows).

- **Participate in international platforms**

Solution: the national authority responsible for Inostructure policy should work closely at a strategic level with other international platforms and associations similar to the Community of Practice for RIS3, such as EBN, TAFTIE, IASP, ENoLL and ERRIN, contributing to national strategies that introduce new trends in the planning and development of the Czech innovation ecosystem. These networks and associations address RIS3-related issues and offer assistance to European governments in supporting their respective Inostructures.

- **Align public funding more closely with RIS3 priorities**

Solution: government institutions will continue to provide accessible funding and support programme aimed at developing both physical infrastructure and services. In cooperation with representatives of the Inostructure community, they could adjust the conditions of future grant

programmes and calls supporting the development and services of innovation infrastructures so that they more strongly support domain-specialised Inostructures aligned with national and regional RIS3 priorities. At the same time, they should ensure compliance with the definitions of supported Inostructures and monitoring and enforcement mechanisms while encouraging the emergence of larger shared Inostructures and partnerships. Grant programmes should also support the use of brownfield sites to create innovation infrastructure that provides spaces such as offices, laboratories, workshops and fab labs, as well as housing for employees of resident companies, start-ups, spin-offs and established innovation companies.

- **Promote the involvement of large Czech companies and clusters**

Solution: government institutions should motivate and support the involvement of large Czech companies, investors, developers and clusters in the construction and development of sector-specific science and technology parks, incubators, districts and areas. This can be achieved through both financial and non-financial instruments. Financial instruments may include non-investment grants linked to the provision of land and brownfield sites for the development of Inostructures as well as PPP instruments. Non-financial tools may include presenting examples of good practice from abroad that demonstrate economic and social benefits, cooperation with associations of entrepreneurs, clusters, investors, etc.

- **Facilitate the needs of regions**

Solution: government institutions should continue to act as facilitators and intermediaries in discussions between regions on various cross-regional topics related to RIS3 (missions, specialisation domains, funding conditions for innovation infrastructures), and on cooperation, such as the sharing of Inostructures and capacities.

The regional level could, for example:

- **Systematically cooperate with Inostructures in the region**

Solution: where appropriate, the regional RIS3 team and/or innovation centre should seek to cooperate more actively and systematically with regional coworking spaces, hubs, incubators, science and technology parks and similar Inostructures, so as to connect them in a way that creates synergies rather than competition and to involve them in the development of the regional innovation ecosystem and in the preparation, updating and implementation of RIS3. For the reasons described in Chapter 4.4, it is not realistic to involve all of them. However, it is important to work with Inostructures that have forward-thinking management with ambitions to support innovation, start-ups and the development of their region and that actively work towards these goals.

- **Establish a regional central innovation centre**

Solution: each regional authority that has not already done so should establish and long-term financial and institutional support for a regional innovation centre coordinating the activities of the regional RIS3 strategy, business support and the development of innovation infrastructure and the regional innovation ecosystem. The national level should assist by launching appropriate grant instruments.

- **Map regional Inostructures and share information with the national level**

Solution: the regional RIS3 team or innovation centre should regularly map and update an overview of exist-

ing and planned Inostructures within their region. This information should be shared with the national authority responsible for the Inostructure agenda through the established communication channels, RIS3 managers, managers responsible for the development of innovation infrastructure, etc.

- **Initiate the creation of Inostructures in smaller municipalities**

Solution: regional institutions, innovation centres and RIS3 teams should motivate stakeholders in smaller localities and municipalities to establish or develop some type of Inostructure where it makes economic sense. They should raise awareness, connect interested parties with experts in the field, provide advisory services in assessing the suitability of a particular Inostructure, provide information on examples of good practice, financial support, etc. Instruments could include projects such as the Smart Accelerator or other programmes with funds that regions could use to support the creation of Inostructures in smaller towns (cascade funding).

- **Share and connect Inostructures between regions**

Solution: the regional RIS3 team should have an overview of innovation infrastructures in neighbouring regions and, where mutually agreed, should offer and use neighbouring Inostructures, spaces, services and equipment. The goal is not necessarily to build a new incubator if another specialised incubator (e.g. in biotechnology) is already operating successfully within a reasonable distance in a neighbouring region, but equally to make use of hubs or incubators in neighbouring municipalities spanning two regions. For this purpose, regions should be able to strengthen their RIS3 team by adding coordinators dedicated specifically to inter-regional cooperation in the development of Inostructures, ideally as part of the RIS3 team.

- **Share information with the national level**

Solution: in the same way as national level institutions, regional RIS3 teams should share their Inostructure needs, problems, good practice and trends with national level institutions through established communication channels. Similarly, regions should set up a standardised communication channel with the national level through RIS3 teams and innovation centres, either individually or through a common platform.

- **Create financial instruments to support innovation infrastructures at the regional level**

Solution: regions should focus more funding on creating and/or targeting regional grant programme supporting the development and specialisation of regional Inostructures and facilitating collaboration and connections with companies, research institutions and research infrastructures.

- **Involve major local companies**

Solution: regional RIS3 teams, in cooperation with regional authorities, should prepare offers and instruments for involving the largest employers, as well as investors, developers and clusters in the region, in financing, building and developing specialised science and technology parks, incubators, districts and other Inostructures wherever suitable conditions exist and where this makes economic sense.



9. Conclusion

A survey of the involvement of different types of innovation infrastructures in RIS3 has shown that each type of Inostructure has an important role to play in implementing RIS3, and it makes sense to involve any Inostructure that is interested not only in its own commercial benefit but also in the genuine economic and social development of its surroundings. In Czechia there is still a relatively low number of domain-specialised Inostructures that are important for the development of industrial sectors. On the other hand, it is necessary to maintain Inostructures without a specific specialisation, such as university incubators, as well as coworking spaces, which serve as the breeding ground for motivating and supporting entrepreneurship in general.

- The most important role in the design and implementation of a smart specialisation strategy at the regional level will always be played by **strong regional public and private institutions** with the mandate or potential to significantly influence the local innovation ecosystem. These include innovation centres, clusters, science and technology parks, large research infrastructures, innovation hubs and, in the future, living labs.
- However, it is equally important **to work with the potential of smaller entities** such as coworking spaces and open workshops, which can be directed towards selected industrial sectors or specialisation domains and linked to other Inostructures in the region (hubs, incubators, accelerators, science and technology parks). Examples from abroad show that such cooperation is possible. Open workshops and coworking centres may form part of or cooperate with incubators, accelerators and science and technology parks where potential entrepreneurs tend to concentrate.
- What is crucial for RIS3 is **sharing Inostructures within the region and neighbouring regions**. The combination of science and technology parks, testbeds, living labs and incubators and the creation of entire innovation zones, campuses and districts is a common model abroad.
- Regional innovation centres should play an active role as coordinators and linking elements for local Inostructures, as demonstrated by the Zlín, Central Bohemian and Olomouc Regions.
- Large cities such as Prague, Brno, Ostrava, Plzeň, Olomouc and others, where research institutions, innovative companies and Inostructures are concentrated, can **create innovation zones and districts** or develop into “science cities”, representing a genuine approach to building and managing innovation ecosystems and connecting actors within cities.
- Similarly, **living labs are also proving to be a successful model**, with increasing support from national and regional funding providers, largely due to growing demand and popularity among cities, municipalities and universities and their links to smart cities and agile piloting. Funding providers, ideally in a coordinated manner, will need to provide financial support for the creation of these platforms as well as the know-how required to set them up and manage them.
- The role of large institutions and companies **is also crucial**, from regional research institutions and universities to large companies and industrial clusters. International examples such as Phillips, ASML, TNO in the Netherlands, IKEA, AstraZeneca and Ericsson in Sweden, NovoNordisk in Denmark and Arcelor Mittal in Luxembourg have shown that large companies and clusters tend to be most successful in starting and developing new companies and sectors, sometimes with primary goals such as the Sustainable Development Goals, not just profit.
- **In Czechia, there are still very few innovation infrastructures specialising in a single sector.** This is partly due to a lack of awareness and partly to low demand from start-ups. For an incubator without a link to a nearby innovation ecosystem with other actors such as research institutions, universities and companies, such a venture is a risky and costly matter. However, this situation is beginning to change for the better, with developers taking the initiative and projects such as the construction of biomedical parks and incubators being planned in some regions. Support for sector-specialised Inostructures should be much more strongly emphasised in ministerial grant programmes. Regions and the state should work together to improve this situation, particularly in areas such as transport and mobility, advanced materials, advanced medicine and pharmaceuticals, biotechnology and green technologies. These are areas supported by the state and defined in documents such as the National Research and Innovation Strategy for Smart Specialisation¹⁷⁶, the Economic Strategy of the Czech Republic¹⁷⁷ and other materials focused on strategic technologies such as semiconductors¹⁷⁸, artificial intelligence¹⁷⁹ and quantum technologies.
- However, both for the development of larger and specialised Inostructures and for ensuring their long-term sustainability and operation, it is essential that they are at least **partly self-financing** and increasingly use private funding alongside public resources. The degree of self-financing will depend on the type of Inostructure. It may follow a model such as 30% state or regional funding, 30% from grant projects and 40% from investors, venture capital funds, fundraising or service and rental fees, or another similar model. Examples of such models exist both in Czechia and abroad.
- One of the main steps at the national and regional level should be **the creation of a permanent communication channel** and forms of closer and more regular cooperation, including in-person meetings. Their aim is to share ideas, visions and needs between representatives of regional innovation centres, RIS3 teams and other Inostructures and representatives of the relevant national institutions responsible for supporting innovation and innovation ecosystems.

¹⁷⁶ RIS3 portal (n.d.). *Basic documents*. <https://www.ris3.cz/analyzy-a-dokumenty/zakladni-dokumenty>

¹⁷⁷ Office of the Government and Ministries of the Czech Republic (2024). *Economic Strategy of the Czech Republic*. https://mpo.gov.cz/assets/cz/rozcestnik/pro-media/tiskove-zpravy/2024/10/Hospodarska-strategie-Ceske-republiky_Cesko-do-top-10---ebook.pdf

¹⁷⁸ Ministry of Industry and Trade. (2024). *National Semiconductor Strategy*. Strategy Database. <https://www.databaze-strategie.cz/cz/mpo/strategie/narodni-polovodicova-strategie-2024?typ=tab>

¹⁷⁹ Ministry of Industry and Trade. (2019). *National Artificial Intelligence Strategy of the Czech Republic*. <https://www.databaze-strategie.cz/cz/mpo/strategie/narodni-polovodicova-strategie-2024?typ=tab>

List of Abbreviations

AI	Artificial Intelligence	OECD	Organisation for Economic Co-operation and Development
AIPCR	Association of Innovative Entrepreneurship of the Czech Republic	OP TAC	Operational Programme Technology and Applications for Competitiveness
API	Business and Innovation Agency	OP JAC	Operational Programme Jan Amos Comenius
CAS	Czech Academy of Sciences	OP RDI	Operational Programme Research and Development for Innovation
AVO	Association of Research Organisations	OP JT	Operational Programme Just Transition
BIC	Business and Innovation Centre	PIPI	Platform of Innovation and Entrepreneurship Infrastructures of Czechia
TTC	Technology Transfer Centre	PPP	Public Private Partnership
E/BSO	Entrepreneurial/Business Support Organisations	RIS3	Research and Innovation Smart Specialisation Strategy
EBN	European Business and Innovation Centre Network	S3	Smart Specialisation Strategy
EDIH	European Digital Innovation Hub	SA	Smart Accelerator
EDP	Entrepreneurial Discovery Process	SIC	Central Bohemian Innovation Centre
EIT	European Institute of Technology	SDGs	Sustainable Development Goals
EC	European Commission	SEF	State Environmental Fund
ENoLL	European Network of Living Labs	STP	Science and Technology Park
ERRIN	European Regions Research and Innovation Network	SVTP	Association of Science and Technology Parks of the Czech Republic
ESIF	European Structural and Investment Funds	TA CR	Technology Agency of the Czech Republic
GBER	General Block Exemption Regulation	TAFTIE	European Network of Leading National Innovation Agencies
IASP	International Association of Science Parks and Areas of Innovation	TI	Technological Incubation
II	Innovation infrastructures	TIC Zlín	Technology and Innovation Centre Zlín
ICOK	Innovation Centre of the Olomouc Region	TP	Technology Park
ICUK	Innovation Centre of the Ústí Region	TRL	Technology Readiness Level
Ino-structures	Innovation infrastructures	R&D	Research and Development
IoT	Internet of Things	TTO	Technology Transfer Office
JIC	South Moravian Innovation Centre	VC	Venture Capital
LL	Living Lab	RO	Research Organisations
MIT	Ministry of Industry and Trade of the Czech Republic	STP	Science and Technology Park
SME	Small and medium-sized enterprise	ZČU	University of West Bohemia in Plzeň

Sources

Online documents

- Commission: Directorate-General for Research and Innovation. (2019). *Technology infrastructures: Commission staff working document*. Publications Office. <https://doi.org/10.2777/83750>
- Drori, G. S., & Yue, Y. (2009). *The Innovation Centre: A Global Model for Entrepreneurship in the Era of Globalization*.
- European Commission: Directorate-General for Research and Innovation, Viscido, S., Strauka, O., & Coroler, E. (2024). *Policy landscape supporting technology infrastructures in Europe – Final report*. Publications Office of the European Union. <https://doi.org/10.2777/504517>
- European Commission & OECD. (2019). *Policy Brief on Incubators and Accelerators that Support Inclusive Entrepreneurship*. ISBN: 978-92-79-96682-8.
- European Union. (2025). *A new European Innovation Agenda: Regional Innovation Valleys*. ISBN: 978-92-9412-089-2. <https://op.europa.eu/en/publication-detail/-/publication/b02bcdee-e389-11ef-be2a-01aa75ed71a1>
- FIRS. (2020). *Skåne's Innovation Strategy for Sustainable Growth*. https://utveckling.skane.se/siteassets/publikationer/firs_innovationsstrategi_2019_eng_220128_final-komprimerad.pdf
- Foray, D., Goddard, J., Beldarrain, X. G., Landabaso, M., McCann, P., Morgan, K., Nauwelaers, C., & Ortega-Argilés, R. (2012). *Guide to Research and Innovation Strategies for Smart Specialisations (RIS3)*. European Commission. ISBN: 978-92-79-25094-1. 51-57(59). <https://doi.org/10.2776/65746>
- Gianelle, C., Kyriakou, D., Cohen, C., & Przeor, M. (Eds.). (2016). *Implementing Smart Specialisation Strategies: A Handbook*. Publications Office of the European Union. Available from: [https://publications.jrc.ec.europa.eu/repository/bitstream/JRC102764/jrc102764_s3p-fromdesignto-implementationfinal\(16-12-016\)web.pdf](https://publications.jrc.ec.europa.eu/repository/bitstream/JRC102764/jrc102764_s3p-fromdesignto-implementationfinal(16-12-016)web.pdf)
- IASP Global Survey Report 2024. <https://www.iasp.ws/activities/news/iasp-global-survey-report-published>
- Joost Hagens (Bureau BUITEN), Maarten Kruger (Bureau BUITEN), Jos van Heest (Bureau BUITEN), Steven Knotter (IDEA Consult), Björn Koopmans (IDEA Consult) *Innovating and Achieving with Impact – RIS3 South Netherlands 2021-2027* <https://www.stimulus.nl/opzuid/wp-content/uploads/sites/4/2020/11/Regional-Innovation-Strategy-South-Netherlands-2021-2027-English.pdf>
- Krůta, F. (2022). *Methodology for Cooperation with Clusters*. https://www.ris3.cz/sites/default/files/2023-02/Methodika_spoluprace_s_klastry_web.pdf
- Ligenzowska, J. (2016). *Regional Innovation Systems in Sweden*. https://www.researchgate.net/publication/315341912_Regional_Innovation_Systems_in_Sweden
- Makerspaces.com. (n.d.). *Makerspace directory*. <https://makerspace.com/>
- Ministry of Industry and Trade. (2023). *Managing Authority of the Operational Programme Technology and Applications for Competitiveness 2021–2027. Infrastructure Services – Call I. sluzby-infrastruktury-vyzva-i-op-tak.pdf*
- Ministry of Industry and Trade (MIT). (2022, 9 June). *I. Digital Enterprise Call from Component 1.5 of the National Recovery Plan*. <https://mpo.gov.cz/cz/podnikani/narodni-plan-obnovy/vyzvy/i--vyzva-digitalni-podnik-z-komponenty-1-5-narodniho-planu-obnovy--268061/>
- Ministry of Industry and Trade (MIT). (2021). *RIS3 Strategies*. https://mpo.gov.cz/assets/cz/podnikani/ris3-strategie/dokumenty/2022/1/RIS3-Strategie-_A_RIS3-Strategie_.pdf
- Øresundsinstitutet, Sørensen, K. D., Eriksson, S., Neve Lieknins, C., & E. Persson. (2020). *Life science in Skane: A survey of companies in the sector*. https://mva.org/wp-content/uploads/2020/11/20201118_Life_science_in_Skane.pdf
- Paulsson, D. (2019). *Report on the implementation of smart specialisation in Sweden*. https://www.centraweden.se/wp-content/uploads/Report-on-smart-specialisation-final_.pdf
- Samek, R. (2022). *Methodology for the Development of Innovation Infrastructures in Czechia*. <https://mpo.gov.cz/assets/cz/podnikani/ris3-strategie/projekty-na-podporu-ris3/operacni-program-vyzkum-vyvoj-a-vzdelavani/2023/2/Methodika-rozvoje-inovacnich-infrastruktur-v-CR.pdf>
- Stimulus. (2020). *Regional Innovation Strategy South Netherlands 2021-2027*. <https://www.stimulus.nl/opzuid/wp-content/uploads/sites/4/2020/11/Regional-Innovation-Strategy-South-Netherlands-2021-2027-English.pdf>
- TRINNO INTEREG. (2017). *Business Support Ecosystem*. https://projects2014-2020.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/TRINNO-D.01-BusinessSupportEcosystemReport_FIN.pdf
- Office of the Government and Ministries of the Czech Republic (2024). *Economic Strategy of the Czech Republic*. https://mpo.gov.cz/assets/cz/rozcestnik/pro-media/tiskove-zpravy/2024/10/Hospodarska-strategie-Ceske-republiky_Cesko-do-top-10---ebook.pdf
- World Bank. (n.d.). *Business Incubation Definitions and Principles Trainee Program*. <https://documents1.worldbank.org/curated/en/717091562157862660/pdf/BIM-Module-1-Business-Incubation-Definitions-and-Principles.pdf>

Online articles

- BDC. (n.d.). *What is a business incubator?* <https://www.bdc.ca/en/articles-tools/entrepreneur-toolkit/templates-business-guides/glossary/business-incubators>
- BusinessInfo.cz. (2019). *Shared offices are growing in popularity in Czechia*. <https://www.businessinfo.cz/clanky/v-cesku-roste-obliba-sdilenych-kancelari/>
- EIT Digital. (2024). *First-wave Regional Innovation Valleys announced: EIT Digital to lead UNITE to improve healthcare through deep tech digital innovation*. <https://www.eitdigital.eu/newsroom/news/2024/first-wave-regional-innovation-valleys-announced-eit-digital-to-lead-unite-to-improve-healthcare-through-deep-tech-digital-innovation/>
- Kancelareinfo.cz. (2018). *Brands of other coworking networks are heading to Czechia*. <https://www.kancelareinfo.cz/clanek/novinky/do-cr-miri-znacky-dalsich-coworkingovych-siti-1>
- Vinnova. (2020). *Continued effort at BioVentureHub: A unique innovation hub in life science*. <https://www.vinnova.se/en/news/2020/01/continued-effort-at-bioventurehub---a-unique-innovation-hub-in-life-science/>

Websites

- AA Mulehti. (n.d.). *Photo*. <https://www.aamulehti.fi/tampere/art-2000008885467.html>
- Aalto University TTO. (n.d.). *Homepage*. <https://www.aalto.fi/en/advancing-entrepreneurship-and-innovations/technology-transfer>
- Aerospace Valley. (n.d.). *Homepage*. <https://www.aerospace-valley.com/en>
- AI-Matters. (n.d.). *AI in Manufacturing for EU Industries*. <https://ai-matters.eu/>
- Buccaneer Accelerator TU Delft. (n.d.). *Home*. <https://buccaneerdelft.com/>
- AM-LAB. (n.d.). *Home*. <https://www.am-lab.hu/>
- Andorra Living Lab. (n.d.). *Home*. <https://andorralivinglab.ad>
- Angers Technopole. (n.d.). *Profile on the EBN website*. <https://ebn.eu/member/angers-technopole/>
- Arthur D. Little (2021), <https://www.adlittle.com/en/insights/prism/future-innovation-districts> ASTP. (n.d.). *Homepage*. <https://astp4kt.eu/>
- AUTM. (n.d.). *Homepage*. <https://autm.net/>
- B. Amsterdam. (n.d.). *Cowork*. <https://b-amsterdam.com/en/work/cowork/>
- BioValley. (n.d.). *Homepage*. <https://www.biovalley.de/en/>
- Brain4Industry. (n.d.). *Home*. <https://www.brain4industry.cz/en/>
- Brain4Industry. (n.d.). *Homepage*. <https://www.brain4industry.cz/>
- Brainport Eindhoven. www.brainporteindhoven.com/int/bussines/campuses
- Brainport Industries Campus. (n.d.). *Brainport Industries*. <https://www.brainportindustriescampus.com/en/>
- Brainport Industries Campus. (n.d.). *Home*. <https://www.brainportindustriescampus.com/en/>
- Brno Living Lab. (n.d.). *Homepage*. <https://webcentrum.muni.cz/rcx-monet>
- Brno šije. (n.d.). *Home*. <https://www.brnosije.cz/>
- Brookings Institution. (n.d.). *Innovation Districts*. <https://www.brookings.edu/innovation-districts/>
- Buccaneer TU Delft. www.buccaneerdelft.com/meeting-rooms/
- Bundl. (2024). *AstraZeneca's BioVentureHub: A catalyst for science innovation*. <https://www.bundl.com/articles/examples-astrazenecas-bioventurehub-a-catalyst-for-science-innovation>
- Business Vies Magazine. (n.d.). *Peachtree Corners article*. <https://businessviewmagazine.com/peachtree-corners-georgia-driving-innovation/>
- BVV Living Lab. (n.d.). *Homepage*. <https://www.bvv.cz/living-lab>
- Citigroup. (2019). *Celebrating 10 Years of Our Citi Innovation Labs*. <https://www.citigroup.com/global/news/perspective/2019/celebrating-10-years-of-our-citi-innovation-labs>
- Clean Tech Delta cluster. (n.d.). *Homepage*. <https://upcycleyourwaste.com/team/clean-tech-delta/>
- Corda Campus. (n.d.). *Home*. <https://www.cordacampus.com/en/>
- CKTT UK. (n.d.). *Homepage*. <https://cppt.cuni.cz/CPPTN-1.html>
- Creative Valley. (n.d.). *Utrecht CS*. <https://www.creativevalley.nl/en/utrecht-cs/>
- CTT MUNI. (n.d.). *Homepage*. <https://www.ctt.muni.cz/>
- Curiosity Lab. (n.d.). *Home*. <https://curiositylabptc.com/>
- Cybersecurity Innovation Hub. (n.d.). *Homepage*. <https://www.cybersecurityhub.cz/>
- Czech Stone Cluster. (n.d.). *Homepage*. <https://www.czechstonecluster.eu/>
- CzechImplant. (n.d.). *Homepage*. <https://czechimplant.cz/>
- CzechInvest. (n.d.). *Cluster Guide*. <http://old.czechinvest.org/data/files/pruvodce-klastrem-63.pdf>
- Czech Optical Cluster. (n.d.). *Homepage*. <https://www.optickyklastr.cz/>
- DB Mindbox. (n.d.). *Home*. <https://www.dbmindbox.com/mindbox>
- DFKI. (2022). *Europas größtes Testbed für verteilte Produktion von CIIRC und DFKI gestartet*. <https://www.dfki.de/en/web/news/europas-groesstes-testbed-fuer-verteilter-produktion-von-ciirc-und-dfki-gestartet>
- EcoMat Bremen. (2025). *Home*. <https://ecomat-bremen.de/en/home/>
- EDIH CTU. (n.d.). *Homepage*. <https://www.edihctu.eu/>
- EDIH DIGIMAT. (n.d.). *Homepage*. <https://www.edih-digimat.cz/>
- EDIH Northern and Eastern Bohemia. (n.d.). *Homepage*. <https://www.edih-northeast.cz/>
- EDIH Ostrava. (n.d.). *Homepage*. <https://www.edihostrava.cz/>
- EEN. (n.d.). *Homepage*. <https://een.ec.europa.eu/>
- EHU TTO. (n.d.). *Homepage*. <https://www.ehu.eus/en/web/lascarayikergunea/ieeb>
- EIT Climate — KIC Open Accelerator. (n.d.). *EIT Climate Accelerator*. <https://eit.europa.eu/our-activities/opportunities/eit-climate-kics-open-accelerator>
- EIT Community. (n.d.). *Testbeds*. <https://testbeds.eitcommunity.eu/>
- EIT Health. (n.d.). *Promoting Innovation in Health*. <https://eithealth.eu/>
- Enel Green Power. (n.d.). *Innovation Hub&Lab*. <https://www.enelgreenpower.com/who-we-are/innovation/innovation-hub-lab>
- EnergyVille, www.energyville.be/en/about-us/
- EnergyVille. (n.d.). *Home*. <https://energyville.be/en/>
- ENoLL. (n.d.). *Homepage*. <https://enoll.org/>
- Envibooster. (n.d.). *Introduction*. <https://envibooster.com/>
- ERRIN. (n.d.). *Region Skåne*. <https://errin.eu/members/region-skane>
- EU-BIC and EDIH Atlanpole. (n.d.). *Profile on the European Commission's EDIH network website*. <https://european-digital-innovation-hubs.ec.europa.eu/edih-catalogue/atlanpole>
- European Business and Innovation Centre Network (EBN). (2023). *EUBIC Innovation Ecosystem Framework (web version)*. <https://ebn.eu/wp-content/uploads/2023/07/EUBIC-Innovation-Ecosystem-Framework-Web-version-1.pdf>
- European Cluster Collaboration Platform (ECCP). (n.d.). *Home*. <https://www.clustercollaboration.eu/>
- European Commission. (n.d.). *Cluster policy*. https://single-market-economy.ec.europa.eu/industry/cluster-policy_en
- European Week of Regions and Cities. (2023). *Session 33466: Engaging Regions and Cities in Policy*. <https://regions-and-cities.europa.eu/programme/2023/sessions/33466>
- FabLab Brno. (n.d.). *Home*. <https://www.fablabbrno.cz/>
- FabLab Brno. (n.d.). *KUMST — Creative Hub*. <https://wiki.fablabbrno.cz/kumst>

- Fajná dílna. (n.d.). *Home*. <https://fajnadilna.cz/>
- Foodvalley. (n.d.). *Food Innovation Hub Europe*. <https://foodvalley.nl/en/food-innovation-hub-europe/>
- Global Coworking Unconference Conference. (n.d.). *Home page*. <https://gcuco.co/>
- Global Institute on Innovation Districts (GIID). (n.d.). *About GIID*. <https://giid.org/about-giid/>
- GoCo Health Innovation City. (n.d.). *Our Story*. <https://goco.se/our-story>
- Grand Garage. (n.d.). *Home*. <https://grandgarage.eu/>
- Green Energy Park. (n.d.). *Facilities*. <https://www.greenenergypark.be/en/what-we-offer/facilities/>
- GreenBizz Brussels Incubator. (n.d.). *Home*. <https://greenbizz.brussels/en/>
- Greenbizz Brussels. (n.d.). *Accueil*. <https://greenbizz.brussels/fr/>
- Greenbizz Brussels. (n.d.). *Cityfab1: Le paradis des makers*. <https://greenbizz.brussels/en/2019/11/04/cityfab1-le-paradis-des-makers-3/>
- GreenBizz. www.greenbizz.brussels/en/workshop/
- GreenEnergyPark Zellik. (n.d.). *About us*. <https://www.greenenergypark.be/en/about-us/>
- GreenTech Innovation Hub. (n.d.). *Home*. <https://www.greentech.fr/en/greentech-an-innovation-hub/>
- Health Valley. (n.d.). *About Us*. <https://www.healthvalley.nl/en/about-us/>
- High Tech Campus Eindhoven. (n.d.). *About Us*. <https://www.hightechcampus.com/about-us>
- HighTechXL Accelerator. (n.d.). *HighTechXL*. <https://hightechxl.com/>
- Horizon Europe. (n.d.). *Research Infrastructures: Information*. <https://www.horizontevropa.cz/cs/struktura-programu-he/excelentni-veda/vyzkumne-infrastruktury/informace>
- ICOK. (n.d.). *Introduction*. <https://www.inovaceok.cz/>
- IncubaThor. (n.d.). *Home*. <https://www.incubathor.be/en/>
- InHub Přerov. (n.d.). *Home*. <https://inhubprerov.eu/>
- Inno2Grid. (n.d.). *Home*. <https://inno2grid.com/en/>
- Innovation District Copenhagen. (n.d.). *Home*. <https://innovationdistrictcopenhagen.dk/>
- Innovation Centre of the Ústí Region. (n.d.). *DIGILAB*. <https://icuk.site/sluzby/digilab/>
- INTEMAC. (n.d.). *Testbed: Experience Industry 4.0 First-Hand*. <https://www.intemac.cz/co-nabizime/test-before-invest/testbed/>
- Interreg AT-CZ. (n.d.). *Crossborder Startup Point (ATCZ00090)*. https://interreg.at-cz.eu/cz/katalog-projektu/2021-2027/preshranicni-sprava/atcz00090_cross-border-startup-point
- iQLANDIA. (n.d.). *IQFABLAB*. <https://iqlandia.cz/iqfablab>
- IRT Jules Verne. (n.d.). *IRT Jules Verne*. <https://www.irt-jules-verne.fr/en/irt-jules-verne/>
- IT4Innovations. (n.d.). *Home*. <https://www.it4i.cz/>
- ITV. (n.d.). *Press release on the creation of the Studio 55 accelerator*. <https://www.itv.com/presscentre/media-releases/itv-launches-studio-55-ventures>
- ITV. (n.d.). *Web Studia 55*. <https://www.itv.com/studio-55ventures/>
- JIC. (n.d.). *JIC – Looking for Premises*. <https://www.jic.cz/cz/potreby-a-sluzby/hledam-prostory>
- Joint Research Centre. (n.d.). *Innovation territories*. https://joint-research-centre.ec.europa.eu/scientific-activities/innovation-territories_en
- JPMorgan Chase & Co. (n.d.). *Home*. <https://www.jpmorgan-chase.com/>
- JVMA. (n.d.). *Home*. <https://www.jvma.fr/>
- Kabinet CB. (n.d.). *Home*. <https://www.kabinetcb.cz/>
- KUMST Brno. (n.d.). *Homepage*. <https://www.kumstbrno.cz/>
- Laval Mayenne Technopole. (n.d.). *Profile on the EBN website*. <https://ebn.eu/member/laval-mayenne-technopole/>
- LIVERUR Pošumaví. (n.d.). *Homepage*. <https://www.uhlava.cz/index.php?page=580&pages=542&id-p=0&lang=cz&sm=0&view=on>
- Living Lab Prague. (n.d.). *Homepage*. <https://livinglabs.cz/prague/>
- Living Labs Prague. (n.d.). *Home*. <https://livinglabs.cz/prague/>
- Luxembourg Institute of Science and Technology (LIST). (2025). *Research*. <https://www.list.lu/en/research/>
- Lyyli LL. (n.d.). *Homepage*. <https://www.tampereenratikka.fi/en/lyyli-living-lab/>
- Malmö stad. (n.d.). *Regional work: Greater Copenhagen and the Skåne Committee*. <https://malmo.se/Sa-arbeta-vi-med.../Omvarld/In-English---EU-and-International-Cooperation/Regional-work/Greater-Copenhagen-and-the-Skane-Committee.html>
- Masaryk University. (n.d.). *RCX MONET: Brno Living Lab*. <https://webcentrum.muni.cz/rcx-monet>
- MassChallenge. (n.d.). *Switzerland Programs*. <https://masschallenge.org/programs-switzerland/>
- Mayo Clinic Innovation Exchange. (n.d.). *Homepage*. <https://innovationexchange.mayoclinic.org/>
- Mechatronika Cluster. (n.d.). *Homepage*. <https://www.klastrmechatronika.cz/>
- Ministry of Industry and Trade. (© 2005–2022). *RIS3*. <https://www.ris3.cz/>
- MIT (n.d.). *News. Article about the Andorra national living lab*. <https://news.mit.edu/2017/european-nation-andorra-living-lab-media-lab-urban-innovation-1013>
- MojeDilna.com. (n.d.). *Home*. <https://mojedilna.com/>
- Moravian-Silesian Automotive Cluster. (n.d.). *Homepage*. <https://autoklastr.cz/cs/>
- Moravian Aerospace Cluster. (n.d.) *Homepage*. (<https://www.czech-aerospace.cz/>)
- MotionLab Berlin. (n.d.). *Home*. <https://motionlab.berlin/>
- MVA. (n.d.). *Digital health*. <https://mva.org/membership/members/digital-health/>
- Nanoprogress. (n.d.). *Homepage*. <https://www.nanoprogress.eu/cs/>
- National Cluster Association (NCA). (n.d.). *Home*. <https://nca.cz/>
- NESTA (2017). Department for Business, Energy & Industrial Strategy. (2019). *Business Incubators and Accelerators: The National Picture*. <https://assets.publishing.service.gov.uk/media/600ed7838fa8f56551364ffd/business-incubators-accelerators-uk-report.pdf>
- Next Zone. (n.d.). *Home*. <https://www.nextzone.io/>
- NOI Techpark Bolzano. (n.d.). *Homepage*. <https://noi.bz.it/en>
- Olomoucká dílna. (n.d.). *Home*. <https://olomoucka-dilna.cz/>
- Omnipack cluster. (n.d.). *Homepage*. <http://www.klastromnipack.cz/>
- OpenThor. (n.d.). *Home*. <https://www.openthor.be/en>
- Pannon Business Network. (n.d.). *Introduction*. <https://www.pbn.hu/main.php?Lang=EN>

- PilotInnCities. (n.d.). *Information about the project on the MIT website*. https://mpo.gov.cz/cz/zahranicni-obchod/podpora-exportu/pilotinncities-_mezinarodni-projekt-s-financni-podporou-evropske-unie--281676/
- PilsLab. (n.d.). *Homepage*. <https://www.techtower.cz/pros-tory/pilslab/>
- Plug and Play (n.d.). *Partner profile Vienna Airport*. <https://www.plugandplaytechcenter.com/partner/vienna-airport>
- Plug and Play (n.d.). *Website of P&P branches*. <https://www.plugandplaytechcenter.com/locations/vienna>
- PowerHUB. (n.d.). *Homepage*. <https://powerhub.cz/>
- PROBIO LL. (n.d.). *Homepage*. <https://www.eco-ready.eu/living-labs/probio/>
- Railway News. (n.d.). *Article about DB Mindbox incubator*. <https://railway-news.com/db-mindbox-inhouse-innovation/>
- REFRESH. (n.d.). *Homepage*. <https://www.smaragdova.cz/refresh/>
- REFRESH. (n.d.). *Homepage*. <https://www.smaragdova.cz/refresh/>
- Rural Urban. (n.d.). *Helsinki Living Lab*. <https://rural-urban.eu/living-lab/helsinki>
- Seedsprint. (n.d.). *5 European Innovation Districts You Need to Know*. <https://seedsprint.com/5-european-innovation-districts-you-need-to-know/>
- SIC (2023), <https://s-ic.cz/cs/podnikatelske-inkubatory-vedecko-technicke-parky-i-coworky-vyuzijte-inovacni-infrastrukturu-sck/>
- Silversquare. (n.d.). *Coworking Locations: Brussels*. <https://silversquare.eu/en/coworking-locations/brussels>
- SIT Port. (n.d.). *Home*. <https://sitport.cz/>
- Southeastern Universities Research Association (SURA). (n.d.). *What Is a Testbed?* <https://sura.org/programs/coastal/coastal-history/what-is-a-testbed/>
- StartLife Accelerator. (n.d.). *Home*. <https://startlife.nl/>
- Start-up Spark. (n.d.). *Invest in Lodz SEZ*. <https://invest-in-poland.eu/lodz-special-economic-zone/>
- Station F. (n.d.). *World's Biggest Startup Campus*. <https://stationf.co/>
- Central Bohemian Innovation Centre. (n.d.). *Invest in Lodz SEZ*. <https://invest-in-poland.eu/lodz-special-economic-zone/>
- Tabakfabrik Linz (n.d.). *Article*. <https://tabakfabrik-linz.at/2018/01/meilenstein-fuer-eine-neue-linzer-landmarkentscheidung-im-bieterverfahren-zum-neubau-3/>
- Tabakfabrik Linz. (n.d.). *Home*. <https://tabakfabrik-linz.at/>
- TA CR. (n.d.). *Problems of Knowledge and Technology Transfer in Czechia*. <https://tacr.gov.cz/metodicka-podpora/problemy-transferu-technologie-a-znalosti-v-ceske-republice/>
- Tampere Ratikka. (n.d.). *Profile of Lyylä LL*. <https://www.tampereenratikka.fi/en/lyyli-living-lab/>
- TC Prague. (n.d.). *Homepage*. <https://www.tc.cz/cs>
- Technologický klastr. (n.d.). *Homepage*. <https://www.technologickyklastr.cz/>
- Technology Park Brno. (n.d.). *Introduction*. <https://www.technologypark.cz/>
- Technopolis Group & ERAC. (2020). *Smart Specialisation Strategy (RIS3) East Netherlands 2021-2027*. https://www.s3vanguardinitiative.eu/sites/default/files/2021-06/RIS3_Oost-Nederland_V1_0_engels.pdf
- Techstart Sustainability Accelerator. (n.d.). <https://www.nature.org/en-us/about-us/who-we-are/how-we-work/technology-and-innovation/techstars-sustainability-accelerator/>
- The Green Village. (n.d.). *Home*. <https://www.thegreenvillage.org/>
- Tillväxtanalys. (n.d.). *Hur kan staten bidra till innovation i nya och små företag genom inkubatorer?* <https://www.tillvaxtanalys.se/en-GB/publikationer/ramprojekt/ramprojekt-genomforda/genomfordaramprojekt/hurkanstatenbidratill-innovationinyaochsmaforetaggenominkubatorer.4289.html>
- Tillväxtanalys. (n.d.). *Tillväxtanalys*. <https://www.tillvaxtanalys.se/>
- Transformation Centre of the Ústí Region. (n.d.). *Home*. <https://tcuk.cz/>
- TT BUT Brno. (n.d.). *Homepage*. <https://www.vut.cz/vav/transfer>
- TTO definition. WIPO. (n.d.). *Technology transfer website*. <https://www.wipo.int/en/web/technology-transfer/organizations>
- UNICO. (n.d.). *Homepage*. <https://www.unicoanalytics.cz/>
- University of Twente. (n.d.). *Partners & Networks*. <https://www.utwente.nl/en/digital-society/innovation/partners-networks/>
- Tomas Bata University in Zlín. (n.d.). *ROBOTA*. <https://robota.utb.cz/>
- UPPER UTB. (n.d.). *Introduction*. <https://upper.utb.cz/>
- VTP Plzeň. (n.d.). *Introduction*. <https://vtpplzen.cz/>
- VTP UPOL. (n.d.). *Introduction*. <https://www.vtpup.cz/>
- VTP UPOL. (n.d.). *Homepage*. <https://www.vtpup.cz/>
- Research Infrastructures. (n.d.). *Home*. <https://www.vyzkumne-infrastruktury.cz/>
- WeWork. (n.d.). *What is Coworking?* <https://www.wework.com/ideas/workspace-solutions/flexible-products/what-is-coworking>
- WFMG – Wirtschaftsförderung Mönchengladbach. (n.d.). *Innovation Valley Garzweiler*. <https://www.wfmg.de/en/projekt-details/innovation-valley-garzweiler/>
- Wikipedia. (2024). *Innovation district*. https://en.wikipedia.org/wiki/Innovation_district
- Wikipedia. (n.d.). *Profile of NOI Techpark*. https://en.wikipedia.org/wiki/NOI_Techpark
- YES!Delft Incubator TU Delft. (n.d.). *Home*. <https://yesdelft.com/>
- YES!Delft TU DELFT (2025), <https://www.innovationquarter.nl/en/yesdelft-and-utrechtinc-in-top-10-global-business-incubators/>
- Zevo Vráto. (n.d.). *Home*. <https://www.zevovrato.cz/>
- Zukunftsorte Berlin. (n.d.). *Profile of Motion Lab*. <https://zukunftsorte.berlin/en/motionlab/>

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Annex 3 Terminology of Innovation Infrastructures

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ANNEX 1

Overview of the Involvement of Inostructures in RIS3

Figure 31 Possibilities for Involving Individual Inostructures in RIS3

Innovation infrastructure	Role in RIS3	Examples of involvement	Recommendations
Regional Innovation Centres and BICs	Preparation and implementation of regional RIS3 strategies in their entirety.	SIC and ICOK map regional Inostructures and work with municipalities.	Introduce a systematic approach, regular mapping of Inostructures, communication, consultation and a programme for their development.
Science and Technology Parks (STP)	Specialised infrastructure supporting RIS3 sectors. Local RIS3 orchestrator of EDP processes. Generator of key innovations and start-ups for local and regional RIS3 innovation ecosystems.	NOI Techpark Bolzano specialised in four RIS3 sectors; VTP UPOL monitoring RIS3 sectors; VTP Plzeň, TP Brno; Brainport Eindhoven; Thor Park in Genk; Technopoli Emilia-Romagna (IT) — a network of parks managed according to RIS3 domains.	Strengthen the thematic specialisation of parks according to regional RIS3 strategies (e.g. energy, mobility). Identify STPs that meet these criteria and support them financially.
Business incubators and accelerators	Create start-ups in RIS3 business areas. Link them with investors, research institutions, clients within the EDP process. Education and training.	YES!Delft university incubator; GreenBizz municipal incubator in Brussels. HighTechXL is a PPP incubator, accelerator and venture fund focused on SDGs; BIC Bizkaia (ES) — an incubator focused on biotech and nanotech in line with RIS3 Euskadi; EIT Health Accelerator (EU) — focused on health and biotech.	Provide greater support for and reward innovations focused on RIS3 and societal challenges. Set up incubation programmes and metrics for this purpose (e.g. number of start-ups in RIS3 domains). Introduce regional accelerators with RIS3 profiling (e.g. HealthTech, AgriTech). Involve them more in the preparation and implementation of regional RIS3 strategies.
Innovation hubs	Linking actors and the EDP process. Building communities and collaboration platforms in RIS3 domains. Education and awareness-raising. Sectoral specialisation. Management of living labs.	Impact Hubs with premises and networking services, or specialising in smart cities, circularity, the environment or mobility; Corporate hubs such as Enel, JP Morgan, CityGroup or Škoda MB.	Link hubs with regional RIS3 teams as "community nodes" for the diffusion of innovation. Involve them in the preparation and implementation of regional RIS3 strategies. Strengthen their role in living labs — facilitators, connectors, coordinators and collectors of ideas.
Coworking centres	Initial awareness-raising and channeling of business ideas into RIS3 areas. Training and workshops. Cooperation with other infrastructures and actors.	IncubaThor in Ghent, Belgium, as part of an STP; Meandr Řevnice with an incubation programme; B. Amsterdam, specialising in mobility and urban sustainability.	Like hubs, link coworking spaces with other Inostructures and regional RIS3 teams as "community nodes" for the diffusion of innovation, particularly in RIS3 areas. Create an association of coworking spaces and hubs to represent their interests and communicate with the national level.
Open workshops (fab labs and makerlabs)	Provision of specific equipment for certain RIS3 sectors. Creation of initial prototypes and products for testing. They may form part of other Inostructures.	Grand Garage on the Tabakfabrik site in Linz; MotionLab in Berlin for start-ups and scale-ups and active work with the community; CityFab1 in Brussels focused on textiles; Mojedilna in Zlín focused on ceramics.	Support, at the national and regional level, the establishment and equipment of RIS3-oriented workshops in all regions and at least in district towns.

Innovation infrastructure	Role in RIS3	Examples of involvement	Recommendations
Testbeds	<p>Sectoral specialisation and creation of sector-specific innovations.</p> <p>Support for cooperation among academia, industry and other Inostructures.</p>	<p>Brain4Industry — advanced manufacturing and materials;</p> <p>IT4I in Ostrava — supercomputers, AI, quantum technologies;</p> <p>INTEMAC JIC;</p> <p>RICAIP — robotics;</p> <p>TEF AI MATTERS — AI and IT.</p>	<p>Map Czech testbeds. Link and promote them.</p> <p>Build regional testing capacities across RIS3 domains and open them up to SMEs.</p>
DIH and EDIH	<p>Digital transformation and AI — one of the key RIS3 priorities.</p> <p>Service and training for industry.</p> <p>Cooperation with other Inostructures.</p>	<p>EDIH Ostrava;</p> <p>EDIH Northeast;</p> <p>EDIH CTU;</p> <p>EDIH Brain4Industry.</p>	<p>Promote greater awareness among SMEs and industry. Link activities more closely with other Inostructures, particularly in the areas of AI, quantum technologies, etc.</p>
Living labs	<p>Testing and development of innovations in a particular segment.</p> <p>Work with the 3-4-5 helix EDP and connecting actors RIS3 missions.</p>	<p>BVV LL — mobility;</p> <p>VSU TUO LL — mobility, energy, environment, social sector;</p> <p>PROBIO LL — organic food;</p> <p>Lyyli LL Tampere — Škoda Digital LL;</p> <p>Andorra LL — state-run LL.</p>	<p>Establish thematic living labs (e.g. energy, mobility, health) in each region.</p> <p>Provide public financial support (region, city, state) for a dedicated team of facilitators and for the construction of infrastructure (e.g. testing track, testbed, fab lab).</p>
Clusters	<p>RIS3 domain specialisation and cross-sector cooperation.</p> <p>The greatest potential for the development of a particular regional sector.</p> <p>EDP process — networking and collaboration.</p> <p>Orchestrator of the regional innovation ecosystem.</p> <p>Ecosystem mapping</p> <p>Regional innovation platforms, national innovation platforms and strategic documents.</p> <p>Internationalisation.</p>	<p>MECHATRONIKA Cluster;</p> <p>Nanoprogress Cluster;</p> <p>Moravian-Silesian Automotive Cluster;</p> <p>Czech Optical Cluster;</p> <p>BioValley — an international biotechnology and RIS3 cluster;</p> <p>CleanTechDelta in the Netherlands — clean energy.</p>	<p>Strengthen the role of clusters as expert platforms and leaders for each regional RIS3 domain.</p>
Regional innovation valleys and innovation districts	<p>Support for green and digital RIS3 transition.</p> <p>Cooperation and EDP.</p> <p>Sectoral focus.</p> <p>Coordination and development of the urban innovation ecosystem.</p>	<p>High Tech Campus Eindhoven (HTCE);</p> <p>Innovation District Copenhagen (IDC);</p> <p>Kalamata Helsinki;</p> <p>Lund Innovation District;</p> <p>Berlin Adlershof.</p>	<p>Analyse urban innovation ecosystems in Czechia with the aim of creating innovation districts/science cities in RIS3 segments, establish a team and systematically coordinate this area.</p>
Research infrastructures	<p>Provision of cutting-edge research services in a particular sector.</p> <p>Key actors in RIS3 policy.</p> <p>International dimension.</p>	<p>LIST — Luxembourg Institute of Science and Technology;</p> <p>IT4Innovations in Ostrava;</p> <p>Czech-BioImaging;</p> <p>CZ-OPENSREEN.</p>	<p>Ensure better access for companies to research capacities through RIS3 platforms.</p>
Technology transfer offices	<p>Support for knowledge transfer in RIS3 sectors.</p> <p>Linking actors</p> <p>EDP process — custom development for companies.</p> <p>Establishment of spin-offs.</p> <p>Contribution to RIS3 missions.</p>	<p>CTT MUNI;</p> <p>VTP UPOL;</p> <p>CETTAV;</p> <p>TTO VSB-TUO;</p> <p>KU Leuven LRD;</p> <p>TTO Lund university.</p>	<p>Map R&D projects in areas relevant to national or regional RIS3 priorities (e.g. missions). Create a fund or programme to support innovation with links to RIS3 and regional innovation and economic priorities.</p>

ANNEX 2

Questionnaire

Questionnaire on the involvement of innovation infrastructures in Czechia

1. In what ways, and which regional Inostructures, do you involve in RIS3, including in relation to domains of specialisation?
For example:

- a. participation in the preparation of RIS3,
- b. consultations,
- c. involvement in projects within RIS3,
- d. linking with industry, research institutions and infrastructures, start-ups, etc,
- e. inclusion in working groups and boards,
- f. other activities — please specify,
- g. we are not involved.

2. Do you involve Inostructures in your region beyond the regional RIS3 framework, and if so, how (*activities not planned and described in this strategy, ad hoc initiatives, etc.*)?

3. Which tools, methodologies and information provided at the national level do you use when involving your local Inostructures, including your organisation, in RIS3?

4. What could the national level do to help your region better involve Inostructures in RIS3? (measures, activities.)

5. What tool, programme or form of cooperation with infrastructures have you developed that may be unique within Czechia and useful for other regions?

6. What tools or projects in cooperation with local infrastructures have you adopted based on inspiration from other regions of Czechia or from abroad?

7. What else do you think the ZIIRIS3 Methodology should include to make it useful and relevant for you?

8. Can you recommend any sources or links where we could find relevant information related to the topic of this Methodology?

A series of horizontal red lines of varying lengths, arranged in a pattern that suggests a funnel or a series of steps, positioned above two overlapping triangles (one blue, one red) at the bottom of the page.

ANNEX 3

English Terminology in the Field of Innovation Infrastructures

Figure 32 English Terminology

Czech	English
Inovační infrastruktura	Innovation Infrastructure
Technologická infrastruktura	Technology Infrastructure
Organizace na podporu podnikání	Business Support Organisation / Entrepreneurial Support Organisation ¹⁵⁹
(Podnikatelské) a Inovační centrum	Business and Innovation Centre
Podnikatelský inkubátor	Business Incubator
Technologický park	Technology Park
Vědecko-technický park	Science and Technology Park
Vědecký park	Science Park
Coworkingové centrum	Coworking Centre
Inovační hub	Innovation Hub
Akcelerátor	(Business) Accelerator
Otevřená dílna	Maker Lab/ Fab Lab
Živá laboratoř	Living Lab
Testbed	Testbed
Regulatorní sandbox	Regulatory Sandbox
Digitální inovační hub (DIH)	Digital Innovation Hub (DIH)
Evropský digitální inovační hub (EDIH)	European Digital Innovation Hub (EDIH)
Nový evropský Bauhaus	New European Bauhaus
Inovační město/čtvrť	Innovation City/District
Inovační vesnice	Innovation Village
Inovační údolí	Innovation Valley
Výzkumná infrastruktura	Research Infrastructure
Zařízení pro experimenty a testování	Testing and Experimentation Facilities (TEF)

¹⁵⁹ Bergman, B. J., & McMullen, J. S. (2021). *Helping Entrepreneurs Help Themselves: A Review and Relational Research Agenda on Entrepreneurial Support Organizations*. *Entrepreneurship Theory and Practice*, 46(3),688-728. <https://doi.org/10.1177/10422587211028736>



ANNEX 4

International Examples of Good Practice

YES!Delft TechStart-up incubator (Netherlands)

www.yesdelft.com

Characteristics

University incubator (Delft University of Technology) with an incubation programme originally adopted from Stanford University in the USA. Three branches in the Netherlands. Works closely with mentors (start-up alumni, corporations); introduced a validation lab (testing ideas with customers) and a "Tinder" for start-ups (talent matchmaking). Located in a former logistics hall. YES!Delft also includes sector-specialised development and testing sites such as RobotValley and GreenVillage. Member of the Deeptech Alliance.

Business model

Annual budget: EUR 3 million. Revenue: 25% from shareholders, 75% from founders and corporate partners.

Involvement in RIS3

Through domain areas such as greentech, ecotech, living labs and testbeds such as GreenVillage and RobotValley

Figure 33 Atrium YES!Delft



Source: YES!Delft TU DELFT (2025)

HighTechXL incubator and fund (Netherlands)

www.hightechxl.com

Characteristics

A globally oriented incubator (deep-tech venture builder) focused on deep tech, agritech, clean technologies and global societal challenges based on the 17 United Nations Sustainable Development Goals. "Deep-tech ventures to solve grand societal challenges".

An incubator and fund focused on deep-tech start-ups addressing societal challenges. The incubator does not focus strongly on S3, but it does emphasise the SDGs.

Its main partners include Phillips, ASML and TNO, as well as BMO (local CzechInvest equivalent).

Close cooperation with the Singapore Deep-Tech Alliance, Rise Europe and countries such as the Netherlands, Canada, Switzerland, France and Poland.

Shared facilities and labs for start-ups available within the campuses of other companies.

They are actively seeking co-founders.

Business model

Generating and exiting start-ups.

Involvement in RIS3

Through addressing SDGs and global challenges.

Domain areas include deep-tech, agrifood and greentech.

Figure 34 HighTechXL incubator building



Source: Photo J. Hriška

Figure 35 High Tech Campus Eindhoven



Source: High Tech Campus Eindhoven

Buccaneer accelerator and incubator TU Delft (Netherlands)

www.buccaneerdelft.com

Characteristics

Delft University of Technology's accelerator for start-ups and scale-ups in the marine and energy transition sectors.

Only supports start-ups with physical innovations (not software, etc.) at least at TRL3 level.

Originally founded by a Czech entrepreneur in the crane industry. Located in a former military barracks site.

Measures company progress twice a year. Connects start-ups with customers. Offers office space. Focused on urban solution innovation. Organises the Energy Talks & Drinks event. Management includes people from TNO. The pilot production facilities and testing equipment are provided by large companies from the nearby port of Rotterdam.

Collaborates with other Inostructures in the Netherlands (YES!Delft incubator, GreenVillage living lab and testbed, NEXTDelft, FieldLab, the TNO research institute, the PORTXL port accelerator, Delft University, FemaleVentures and dozens of other organisations).

Business model

Funded solely through contributions from approximately 20 corporate sponsor members, rental income and acceleration fees. Partners must have experience with start-ups (not just financial).

Involvement in RIS3

The accelerator focuses on start-ups in renewable energy, marine technologies and energy, which form part of the RIS3 Strategy of the Southern Netherlands.

Figure 36 Buccaneer TU Delft



Source: Buccaneer TU Delft

Startlife agrifood accelerator Wageningen (Netherlands)

www.startlife.nl

Characteristics

University accelerator and incubator focused on agri-food technologies, start-ups and scale-ups (2,500 m²). Part of the Wageningen Campus with 200 organisations (R&D, companies such as Unilever, the university, BSOs), a science and technology park, Fab Lab and others. Strong emphasis on cooperation. The building also houses the university's TTO. Recently opened to international applicants and start-ups. Cooperation with experienced start-ups à la carte. Cooperates with other countries. Start-ups may relocate abroad if appropriate. Cooperation with FoodValley, investors, partners, research organisations and consultancy companies. Helps start-ups find a market. Self-evaluation based on start-up feedback through Net Promoter Score with 88 parameters.

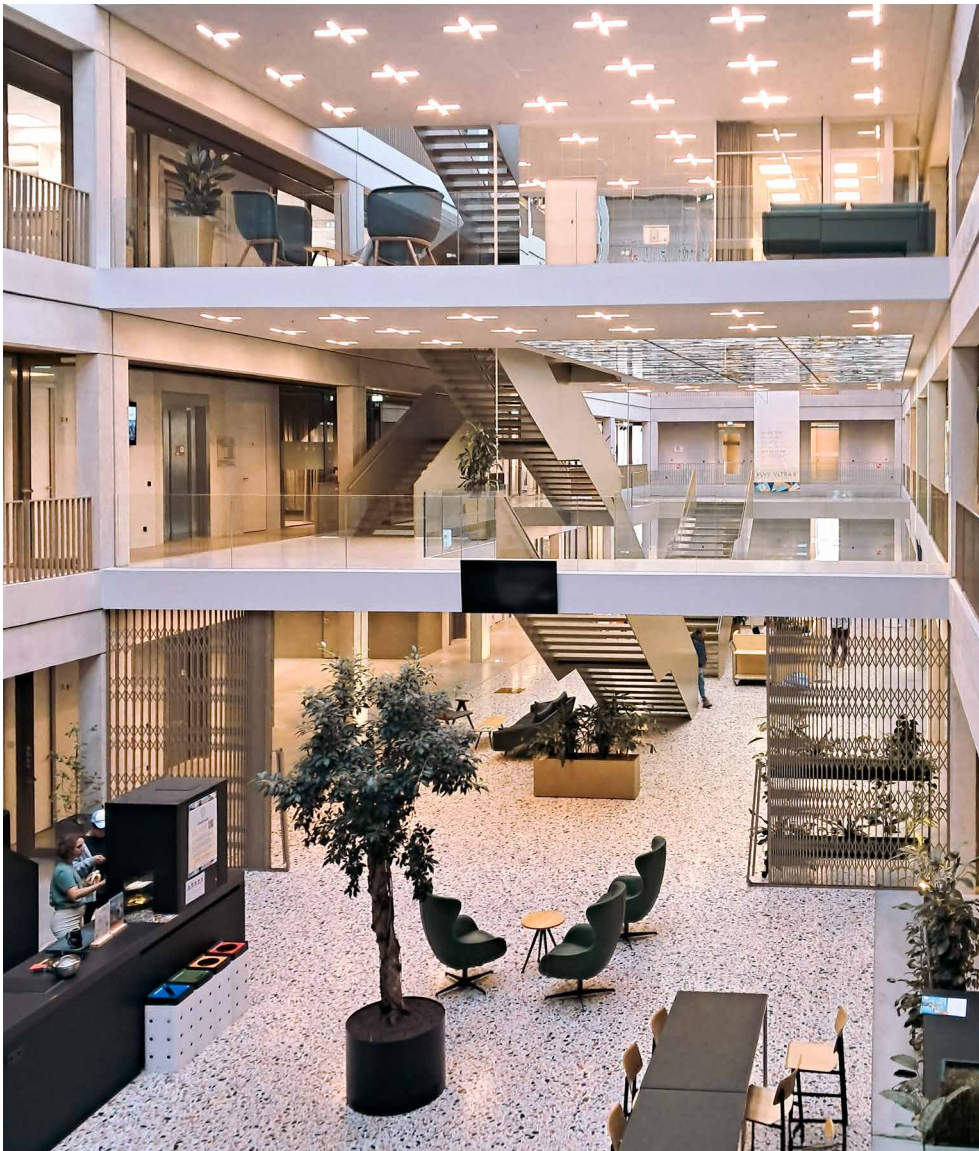
Business model

Funded by Wageningen University, corporations and investors. Grants represent only 10%. Equity and shares are not accepted.

Involvement in RIS3

Domestically through support for food, agriculture and nutrition start-ups. Food valley.

Figure 37 Atrium StartLife Wageningen



Source: Photo J. Hruška

Brainport Industries testing and training centre (Eindhoven, Netherlands) www.brainportindustries.com/en

Characteristics

A large building containing testbeds, pilot lines, training spaces, fab labs and companies.

Specialises in deep-tech, energy and renewable energy.

Corporation founded by Phillips. Develops innovations from design through system integration. Has an open innovation network founded by companies. NXTGEN – autonomous factory (not only) for BI members. AI testbed. Experimental testing facilities and pilot manufacturing lines (for chips). Field labs. Development, manufacturing and education under one roof. Electricity supplied by PV panels and batteries. No gas. BI staff handle project management.

85% of the equipment used comes from local suppliers.

Business model

Funded by cluster members and EU projects (DIH, EDIH, AI REGIO).

Involvement in RIS3

Through the deep-tech domain.

Figure 38 Brainport Industries Eindhoven building



Source: Brainport Eindhoven

EnergyVille science and technology park Genk (Belgium)

www.energyville.be/en

Characteristics

A science and technology park near Genk, based in the former Waterschei deep coal mine, focusing on the development of innovative energy technologies, smart grids and intelligent energy systems. The Thor Park includes research and testing centres for AC/DC, PV systems and battery technologies, a living lab and a business incubator located in two environmentally sustainable buildings. Development started in 2016 on the initiative of partners KU Leuven, the sustainability research institution VITO, the prestigious nanoelectronics and microchip hub Imec and UHasselt University. The city built streets and parks in the area. The park is open to the public and city residents. Cultural events are also held here.

Business model

The park was created with funding from the Limburg region and its investment company LRM, which finances start-ups as well as innovative real estate and Inostructures, KU Leuven, the Flemish government and structural funds.

Involvement in RIS3

Specialises in smart energy. Operates a living lab, incubator and innovation ecosystem.

Figure 39 Thor Park and EnergyVille Genk



Source: EnergyVille

GreenBizz Brussels incubator (Belgium)

www.greenbizz.brussels/en

Characteristics

An urban incubator with manufacturing and storage facilities. Focuses exclusively on start-ups and innovations in sustainability and the circular economy, particularly products produced and consumed within the city and the surrounding area. Offers offices, coworking space, a fab lab and also production and storage facilities (workshops).

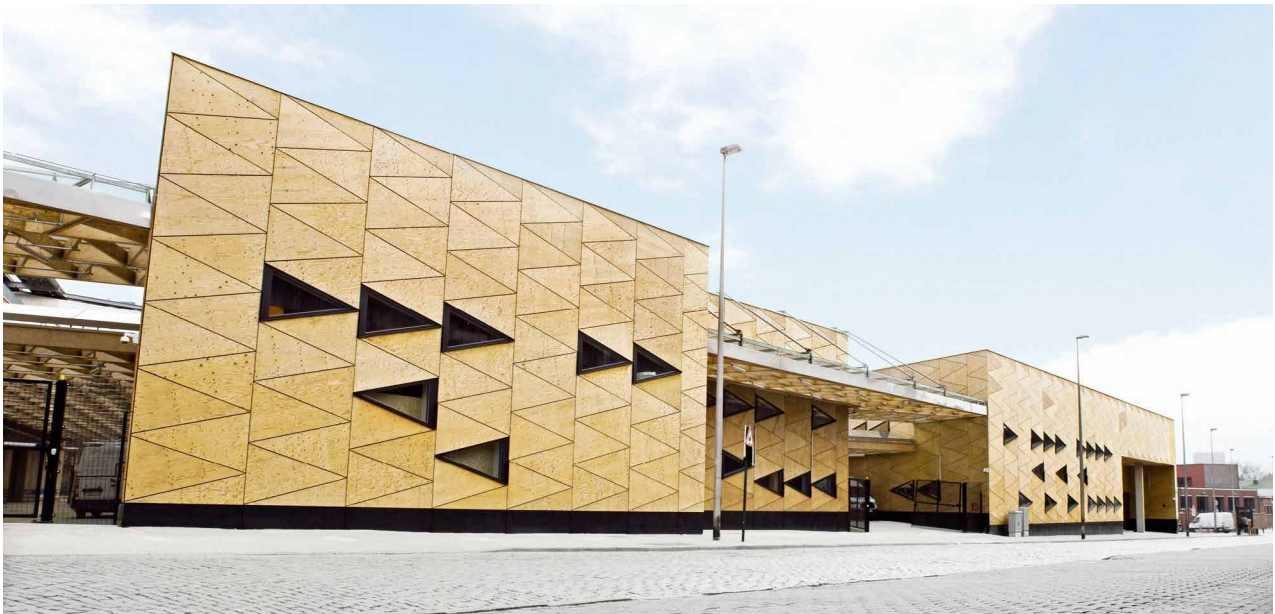
Business model

Funded through from company membership fees.

Involvement in RIS3

Through specialisation in the circular economy and sustainability.

Figure 40 GreenBizz Brussels building



Source: GreenBizz

Green Energy Park testbed and living lab Zellik (Belgium)

www.greenenergypark.be/en

Characteristics

Living lab with a testbed established in 2019 by two universities, Vrije Universiteit Brussel (VUB) and Universitair Ziekenhuis Brussel (UZB), in the Zellik Research Park. Equipped with laboratories and large-scale testbeds operating in simulated real-world conditions for energy, digital and health technologies. Also serves as a training centre for companies implementing new solutions. Own smart home lab, battery storage system and supercomputer. NEXUS data centre (server heat is used to heat buildings). Solar panels. Develops platform technologies. Training for secondary school and university students.

Business model

Lease of land and buildings, R&D projects, university and TESLA.

Involvement in RIS3

Through the smart energy and digital transformation domains.

Figure 41 Energy Park testbed Zellik



Source: EP Zellik presentation

Figure 42 NEXUS Data Centre



Source: EP Zellik presentation

PeachTree Corners Living Lab – Curiosity Lab (Georgia, USA)

www.curiositylabptc.com

Characteristics

Peachtree Corners Living Lab, known as Curiosity Lab, is a unique urban testing environment for smart cities, 5G, autonomous vehicles and the Internet of Things. Founded by the city of Peachtree Corners in cooperation with technology companies and universities to create an open ecosystem for developing and testing innovations in real urban environments. Along a five-kilometre stretch of roads with intelligent infrastructure, start-ups and large companies can test their solutions in safe conditions. The project includes a demonstration zone for smart buildings, charging infrastructure and drone technologies. Curiosity Lab has gained internationally recognition as a model urban innovation lab supporting digital transformation and sustainable mobility.

Business model

Based on shared infrastructure, testbed usage fees, corporate partnerships and support for regional economic development.

Involvement in RIS3

Digital transformation, smart and sustainable mobility and the transfer of innovation from research to practice.

Figure 43 Peachtree Corners Curiosity Lab



Source: Business View Magazine, <https://businessviewmagazine.com/peachtree-corners-georgia-driving-innovation/>

Andorra Living Lab (Andorra la Vella, Andorra)

www.andorralivinglab.ad

Characteristics

Andorra Living Lab is an innovation platform managed by the national agency Andorra Research + Innovation (AR+I). It was set up to bring together research, public administration and business in developing innovations in environment, energy, smart cities and tourism. The living lab offers the entire territory of Andorra as an open testing ground where technologies ranging from environmental monitoring and mobility to digital services for citizens can be tested. The initiative includes projects such as air quality monitoring, avalanche prediction and digital management of mountain tourism flows. The platform has made Andorra a small but fully connected laboratory capable of rapidly testing and deploying new approaches to sustainability and innovation at a national scale.

Business model

Funded by public resources but operating under a public-private model, with companies and research teams developing and testing new technologies in the real conditions of a small mountain state. Based on project funding, grant schemes and cooperation with regional partners.

Involvement in RIS3

The living lab contributes to the RIS3 strategy of the Pyrenean region, particularly in ecological innovation, smart tourism and economic diversification.

Figure 44 Andorra Living Lab



Source: MIT Media Lab, news, <https://news.mit.edu/2017/european-nation-andorra-living-lab-media-lab-urban-innovation-1013>

Lyyli Living Lab (Tampere, Finland)

www.tampereenratikka.fi/en/lyyli-living-lab

Characteristics

Lyyli Living Lab in Tampere is a unique combination of transport infrastructure and research. It uses the city's real tram network as a testing environment for autonomous driving technologies, smart stops, energy-saving systems and user interfaces. A collaboration between the city of Tampere, VTT Technical Research Centre, Tampere University and Tampere Tramway Ltd. It aims to develop and test solutions that increase efficiency and comfort in public transport. Lyyli also serves as an educational and demonstration platform for students and industry partners and is one of the most high-profile smart mobility projects in Finland, which is considered a leader in this field.

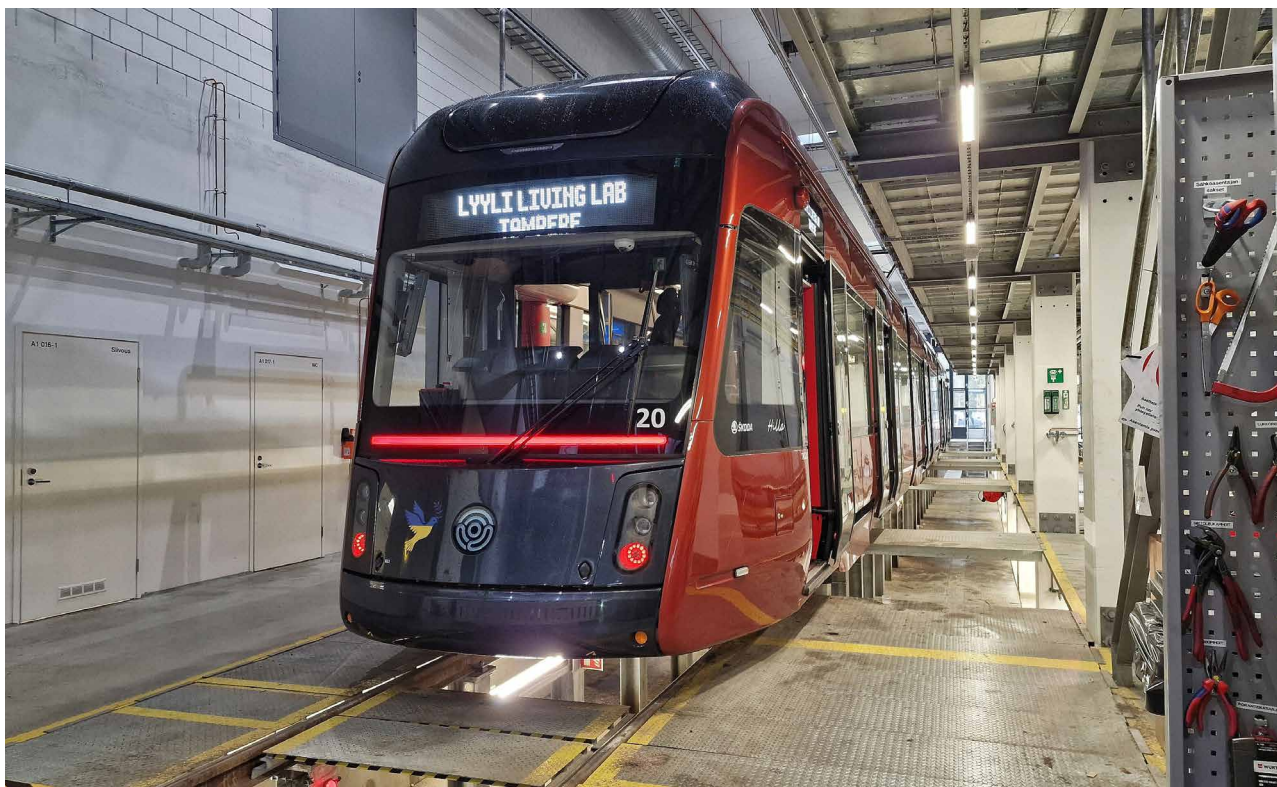
Business model

Funded by Business Finland (RRF) and partners. Combines shared infrastructure, joint research projects and licensing of results.

Involvement in RIS3

Lyyli fulfils the RIS3 objectives of the Pirkanmaa region in smart mobility, digital cities and sustainable transport.

Figure 45 Lyyli Depot Living Lab Tampere



Source: AAMulehti, <https://www.aamulehti.fi/tampere/art-2000008885467.html>

Tabakfabrik Urban Innovation Hub Linz (Austria)

www.tabakfabrik-linz.at

Characteristics

Tabakfabrik Linz is a cultural and innovation complex created through the conversion of a former tobacco factory from the 1930s. The city of Linz purchased the site in 2009 and turned it into one of the most important creative hubs in Central Europe. Hundreds of companies, start-ups, architectural studios and cultural institutions share space and ideas in the area. Tabakfabrik is an example of the successful urban regeneration of industrial heritage and symbolises Linz's transition from a manufacturing city to a centre of the digital and creative economy. Its development is also part of the city's broader strategy focused on innovation, inclusion and sustainable urbanism.

Business model

Funding is a combination of rental income, municipal support and project grants.

Involvement in RIS3

Supports the creative economy, urban digitalisation and social innovation connecting culture and business.

Figure 46 Tabakfabrik after future completion



Source: Tabakfabrik, <https://tabakfabrik-linz.at/2018/01/meilenstein-fuer-eine-neue-linzer-landmark-entscheidung-im-bieterverfahren-zum-neubau-3/>

Makerspace MotionLab Berlin (Germany)

www.motionlab.berlin

Characteristics

MotionLab.Berlin is an innovation centre focused on physical technologies — from electromobility and robotics to industrial design. It offers shared labs, prototyping workshops, 3D printing sponsored by Prusa Research and mentoring programmes. It connects start-ups with large industry partners, universities and investors. MotionLab has created a dynamic community space where many German deep-tech companies have emerged. It is part of the wider Berlin innovation ecosystem and supports international collaboration through accelerator programmes and events. The campus is designed to enable a rapid transition from idea to prototype, making MotionLab one of the most active hardware innovation centres in Europe.

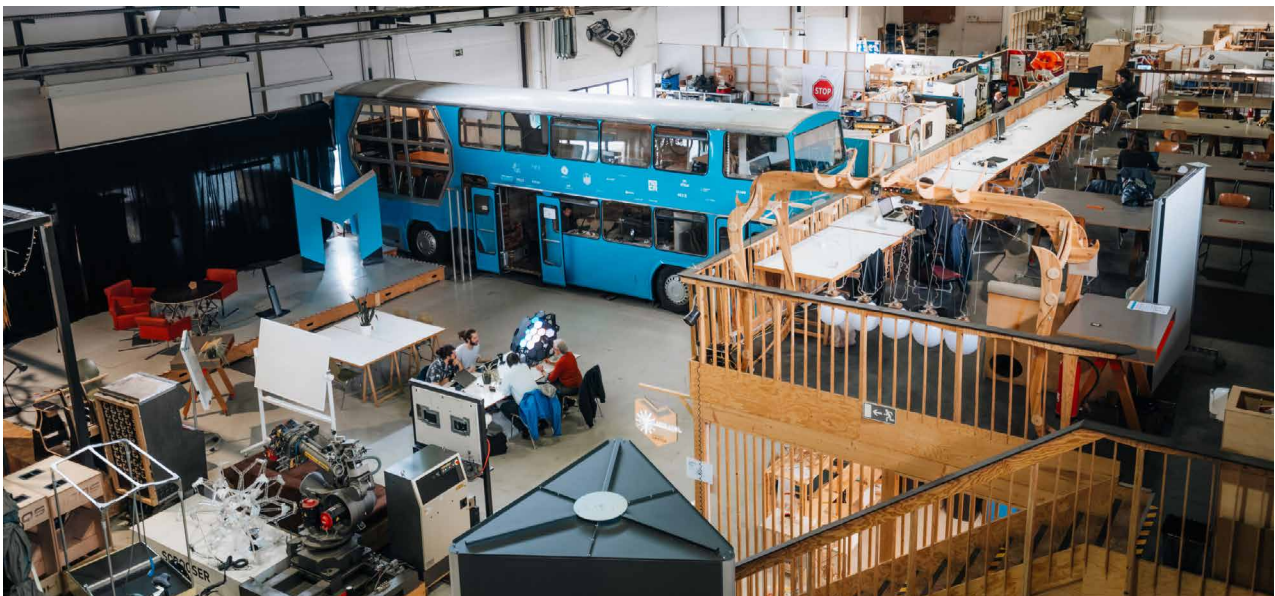
Business model

CodeL combines membership fees, partner programmes and services for corporations seeking innovation in physical technologies.

Involvement in RIS3

Supports Industry 4.0, sustainable mobility and the development of high-value technological development.

Figure 47 MotionLab Berlin



Source: Zukunftsorte Berlin, <https://zukunftsorte.berlin/en/motionlab/>

Inno2Grid transformation centre (Berlin, Germany)

www.inno2grid.com/en

Characteristics

Inno2Grid GmbH is a Berlin-based company focused on the energy and transport transformation of cities. Established as a joint venture between Schneider Electric and DB Energie, it specialises in the design and implementation of smart energy systems, charging infrastructures and sustainable campuses. Founded in 2010, the company operates as a PPP platform that connects research, industry and cities to develop smart campuses and charging systems. It works with cities, developers and industry partners on projects combining renewable energy, electromobility and digital networks. Inno2Grid is active in European projects and also acts as a policy advisor in smart city development. Based at the former EUREF Campus, one of the main sustainable energy demonstration centres in Germany.

Business model

Based on consulting services, system integration and pilot projects, some co-funded by EU public programmes.

Involvement in RIS3

Inno2Grid supports the RIS3 goals of Berlin and Brandenburg in energy transition, transport decarbonisation and digital solutions for cities.

Figure 48 Inno2grid



Source: Inno2grid, <https://inno2grid.com/en/>

Deutsche Bahn DB Mindbox incubator (Berlin, Germany)

www.dbmindbox.com/mindbox

Characteristics

DB Mindbox is Deutsche Bahn's innovation platform and incubator, connecting a large corporation with the agile start-up ecosystem. It offers three-month acceleration programmes in which start-ups test their products directly on railway infrastructure — from predictive maintenance and digital signalling to passenger services. It also serves as a centre for internal DB employee innovation and open hackathons. Mindbox is known for its emphasis on practical validation of ideas in real operations and linking engineering know-how with digital technologies to help modernise one of Europe's largest transport networks.

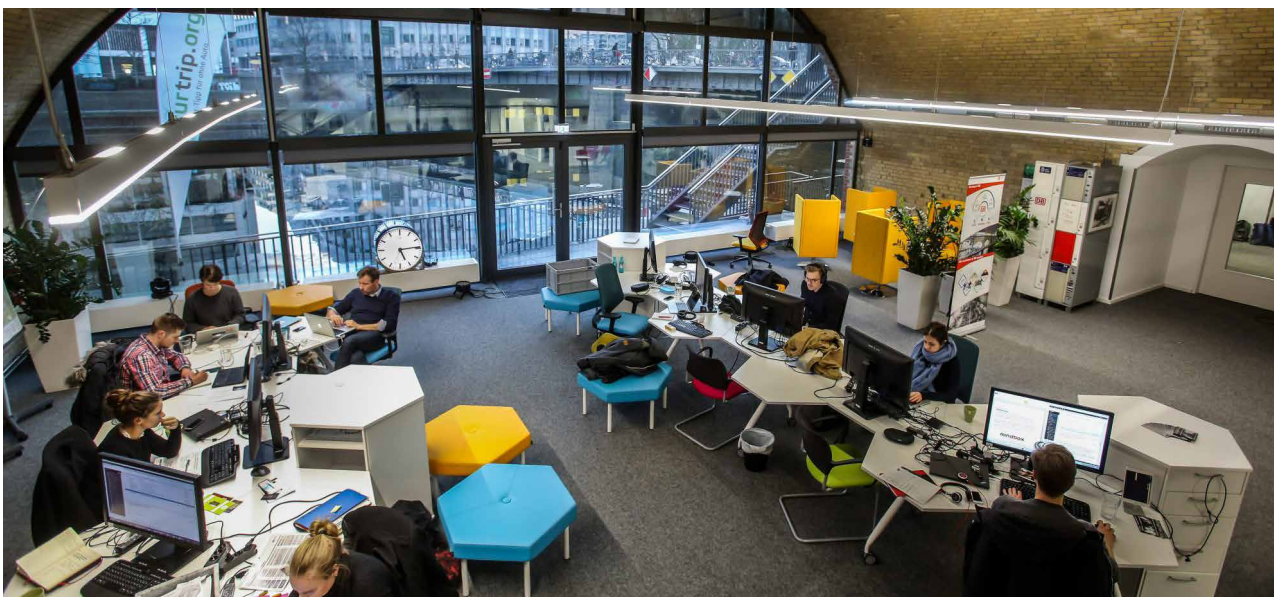
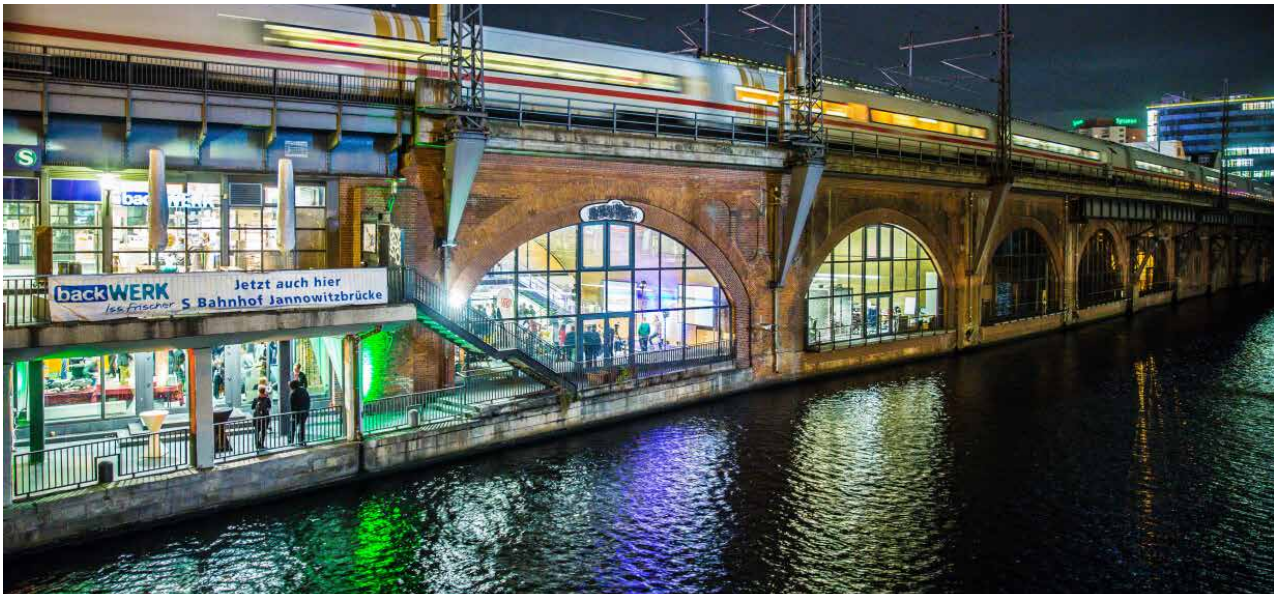
Business model

Combines internal innovation, venture collaboration and partnerships with public institutions such as the city of Berlin and EIT Urban Mobility.

Involvement in RIS3

Through intelligent transport, automation and the digitalisation of public services.

Figure 49 DB Mindbox Berlin



Source: Railway News, <https://railway-news.com/db-mindbox-inhouse-innovation/>

ITV “Studio 55 Ventures” accelerator (United Kingdom)

www.itv.com/studio55ventures

Characteristics

Studio 55 Ventures is a start-up and innovation studio of the British media group ITV, focused on exploring new forms of content, technologies and business models for the digital era. It acts as a platform for internal and external creators to test ideas in areas such as interactive formats, artificial intelligence in production and personalised streaming. The studio connects media professionals with start-ups and researchers, offering access to ITV data and broadcast channels. This creates space for the creation of new products capable of redefining how audiences consume media content.

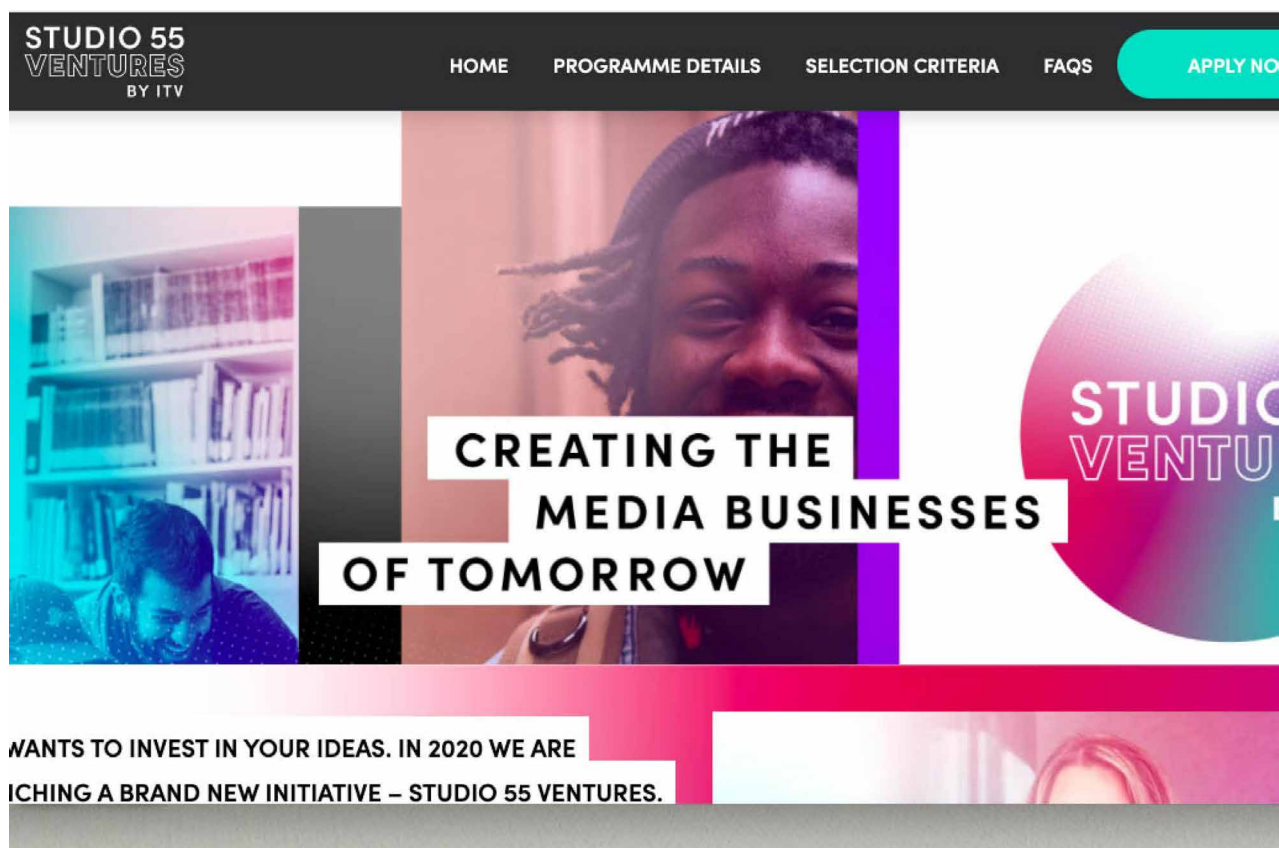
Business model

Commercial – ITV invests in selected projects in exchange for a stake and subsequently integrates them into its media strategy.

Involvement in RIS3

Supports RIS3 objectives in the UK Creative Industries Cluster Programme, particularly in the digital economy, cultural innovation and the development of media technology.

Figure 50 Studio 55 Ventures ITV



Source: ITV, <https://www.itv.com/presscentre/media-releases/itv-launches-studio-55-ventures>

Vienna Airport Plug and Play (Austria)

www.plugandplaytechcenter.com/partner/vienna-airport

Characteristics

Vienna Airport Plug and Play is an international accelerator that combines innovation, aviation and technology. Established in 2019 as a partnership between Flughafen Wien AG and the US innovation platform Plug and Play Tech Center, one of the world's largest accelerators. Based directly at Vienna Airport, it attracts start-ups in aviation technologies, mobility, logistics and customer experience. In addition to mentoring and investment, it also offers access to real airport data and the opportunity to test new services with passengers. The project connects the regional innovation ecosystem with a global network of investment and technology partners.

Business model

Combination of a PPP model, sponsorship and venture capital.

Involvement in RIS3

Through smart mobility, digitalisation and sustainable transport.

Figure 51 Plug and Play Vienna Airport Centre



Source: Plug and Play Tech Center, <https://www.plugandplaytechcenter.com/locations/vienna>

NOI Techpark Bolzano (Italy)

www.noi.bz.it/en

Characteristics

NOI Techpark Südtirol / Alto Adige is a science and technology park and innovation district in Bolzano, established in 2017 on the site of the former ALOX aluminium plant. The initiator and main investor is the Autonomous Province of Bolzano, which manages the park through NOI S.p.A. (Nature of Innovation). Key partners include the city of Bolzano, EURAC Research, the Free University of Bozen-Bolzano, Fraunhofer Italia and Agenzia CasaClima. The site covers more than 12 hectares and integrates over 80 laboratories, research centres and more than 100 companies active in green energy, smart mobility, foodtech, ICT and alpine technologies.

Business model

Based on a combination of public funding (investment support from the province and EU funds such as ERDF), rental income, corporate membership fees, shared services, technology transfer and project funding.

Involvement in RIS3

The park is a key instrument for the implementation of South Tyrol's regional RIS3 strategy, which focuses on smart specialisation in five priority areas: energy and the environment, mobility and logistics, food and agriculture, ICT and automation, and alpine technologies. NOI Techpark acts as an implementation platform and coordination centre between research and the economy, supporting the region's transition to a sustainable knowledge economy. It also serves as a living lab where technologies are tested in real conditions — from energy-positive buildings to smart solutions for mountainous regions.

Figure 52 NOI Techpark Bolzano



Source: Wikipedia, https://en.wikipedia.org/wiki/NOI_Techpark

