



EUROPEAN CLUSTER  
COLLABORATION PLATFORM

## Cluster Collaboration Lab (C2LAB)

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Input paper

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## Introduction

**The primary aim of this Input Paper is to provide a relevant information that will support the innovative efforts of the participants of the Cluster Collaboration Lab (C2Lab) held in Ljubljana/Brdo pri Kranju, Slovenia, on the 25<sup>th</sup> and 26<sup>th</sup> October 2023.** This C2Lab offers a valuable opportunity for attendees from cluster organisations, companies, research organisations, civil society, and other interested parties to discover potential partners for collaboration, advance project concepts, and create business cases for innovative solutions within the Danube region.

**The C2Lab project proposals should align with the priority areas of the Danube Region Strategy and bolster the twin EU transition whilst also enhancing the resilience of the European industry.** The main emphasis is on developing cutting-edge and inventive solutions in mobility and transport, sustainable energy and energy security, and water management. A particular focus is also placed on fostering business collaboration with Ukraine and on developing the knowledge, skills, networks, and empowerment of women and youth. Additionally, any other innovative solutions for the challenges faced in the Region are welcomed.

**In light of the above, the main aim of this paper is to provide appropriate support and practical advice for the creation and execution of innovative projects promoting greener, more digital, and resilient economies, with a primary focus on existing funding opportunities for innovation.** As the C2Lab is taking place alongside the 12th Annual Forum of the EU Strategy for the Danube Region, **Chapter 1** provides insight into the economies and innovation performance of Slovenia and the Danube Region. **Chapter 2** focuses on identifying main challenges, assessing interregional collaboration, and highlighting the role of cluster organisations in the Danube Region. **Chapters 3 and 4** have a slightly different focus, demonstrating how to put innovative project ideas into practice. **Chapter 3** takes the readers through a range of public funding programmes at the EU, national, and intergovernmental levels. The guide provides an overview of specific calls for proposals, funded topics, search platforms for partners, advisory services, and an array of support tools. **Chapter 4** examines various sources of private funding, including venture capital, corporate venture capital, business angels, banks, and impact investors that can support the development of research outputs into market-ready products.



**01**

## **Context: Slovenia and the Danube Region**



**EUROPEAN CLUSTER  
COLLABORATION PLATFORM**

Strengthening the European economy through collaboration



## 1. Context: Slovenia and the Danube Region

Slovenia is located on the cross border of central Europe and southeastern Europe and shares borders with Italy, Austria, Hungary and Croatia. The country has a population of around 2.1 million<sup>1</sup> as of 2023 making it one of the smaller European countries. Slovenia is part of the Danube Region which inhabits a total population of around 150 million people and constitutes approximately one third (33.6%) of the EU 27 population<sup>2</sup>. Germany is hereby accountable for more than 50% of the region's total population. Besides Slovenia, the Danube Region consist of the following eight other EU member states (see also Figure 1):

- Austria
- Bulgaria
- Czechia
- Croatia
- Germany
- Hungary
- Romania
- Slovakia

Moreover, three current or potential candidates for EU membership: Bosnia and Herzegovina, Montenegro and Serbia; two countries covered by the European Neighbourhood Policy (ENP): Moldova and Ukraine (Odessa, Ivano-Frankivsk, Chernivtsy and Zakarpatya) are also covered by the Danube Region but are not in the focus of this paper.

*Figure 1: Overview of the Danube Region countries*



Source: <https://danube-region.eu/wp-content/uploads/2019/12/dmap.jpeg> (last access 21.09.2023)

<sup>1</sup> Eurostat (2023): Population on 1 January: Slovenia. Available under <https://ec.europa.eu/eurostat/databrowser/view/tps00001/default/table?lang=en> (last access 20.09.2023).

<sup>2</sup> Eurostat (2023). Population on 1 January. Available under <https://ec.europa.eu/eurostat/databrowser/view/tps00001/default/table?lang=en%20> (last access 21.09.2023)

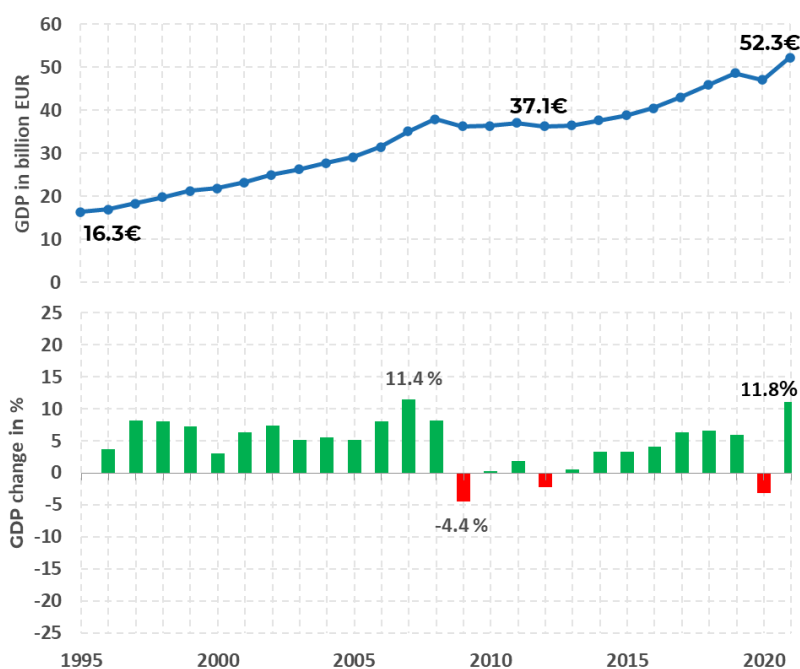




## Macroeconomic profile of Slovenia & the Danube Region

Although Slovenia is a small European economy due to its small population, the country had a strong economic performance during the last two decades with a recent GDP of 52.3 billion EUR<sup>3</sup>. This results in a real GDP per capita of 21.800€<sup>4</sup>, which lies below the EU 27 average of 28.860€ but the country remains as one of the strongest economies in the Danube European region. As shown in Figure 3, the **Slovenian economy** had a strong performance in economic growth from 1995 onwards. The country has faced occasional dips in growth, such as the global economic slowdown after the financial crisis in the late 2000s, resulting in a 4.4% annual growth downturn in 2009. The financial crisis slowed down economic growth and Slovenia reached its pre-crisis level in 2014. From 2016 onwards, the country faced strong economic growth around 6% per year. In recent years, Slovenia's GDP has continued to grow to EUR 52.3 billion in 2021. After the covid 19 crisis, the country entered another recession in 2020 but surpassed the pre-crisis level in 2021 with a strong economic growth of 11.8%. Overall, Slovenia's sustained economic growth over the years is a testament to its resilience and adaptability in the face of global challenges.

**Figure 1: GDP at market prices in billion \$ and GDP change in % over time in Slovenia**



Source: Eurostat (2023), GDP and main components (output, expenditure, and income). Available under: [https://ec.europa.eu/eurostat/databrowser/view/nama\\_10\\_gdp/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/nama_10_gdp/default/table?lang=en) (last access: 20.09.2023).

<sup>3</sup> Eurostat (2023): GDP and main components (output, expenditure and income): Slovenia. Available under [https://ec.europa.eu/eurostat/databrowser/view/nama\\_10\\_gdp/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/nama_10_gdp/default/table?lang=en) (last access 20.09.2023).

<sup>4</sup> Eurostat (2023): Real GDP per capita. Available under: [https://ec.europa.eu/eurostat/databrowser/view/sdg\\_08\\_10/default/table](https://ec.europa.eu/eurostat/databrowser/view/sdg_08_10/default/table) (last access 20.09.2023).



Moreover, Slovenia's strategic geographic location at the crossroads of central and southeast Europe and its access to the Adriatic Sea as well as its connectivity with neighbouring European countries, plays a pivotal role in shaping its trade capacity. The nation's advantageous position facilitates both imports and exports, thereby influencing its trade balance. As of the latest available data in 2022, Slovenia reported imports of goods and services amounting to €66.356 billion<sup>5</sup>, and exports of goods and services reaching €66.411 billion, reflecting a balanced trade balance of negative 55 million. Slovenia's integration into the single market is evident, with 62.9% of its exports being intra-EU, demonstrating the significance of European Union member states as key trading partners. Similarly, 51.9% of Slovenia's imports originate from other EU member states, indicating strong economic ties within the European Union. The openness of Slovenia's trade is further evidenced by foreign trade's substantial share in the nation's GDP which represented more than 150% in recent years<sup>6</sup>.

The **Danube Region's combined GDP** is significant, reaching over EUR 5.3 trillion in 2022<sup>7</sup> and represents one third (33.9%) of the EU27 GDP. The strategic location of the region provides easy access to global markets, making it a hub for trade, as reflected by its trade capacity, with imports amounting to EUR 2.84 trillion<sup>8</sup> and exports to EUR 3.19 trillion<sup>9</sup> from the EU 27. Latter makes up around one third (30.3%) of the EU 27 export capacity. The Danube region has experienced solid economic growth over the past decades. Despite the economic development, the region faces common challenges like the transition towards sustainability. The Danube Region builds on its cooperation to address these common challenges. The EU Strategies for the Danube region includes "Connecting the Region"<sup>10</sup>, "Protecting the Environment", "Building Prosperity" and "Strengthening the Region". The strategy aims (among other things) to foster innovation and secure long term economic growth, improve the connectivity withing the region and to combat climate change. The Danube Region Strategy will further be discussed in Chapter 2.

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<sup>5</sup> Eurostat (2023): Intra and Extra-EU trade by Member State and by product group. Available under: [https://ec.europa.eu/eurostat/databrowser/view/EXT\\_LT\\_INTRATRD\\_custom\\_7528262/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/EXT_LT_INTRATRD_custom_7528262/default/table?lang=en) (last access 21.09.2023)

<sup>6</sup> World Bank (2023): Trade (% of GDP) – Slovenia. Available under: <https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS?locations=SI> (last access 21.09.2023)

<sup>7</sup> Eurostat (2023): GDP and main components (output, expenditure and income). Available under [https://ec.europa.eu/eurostat/databrowser/view/nama\\_10\\_gdp/default/table?lang=en%20](https://ec.europa.eu/eurostat/databrowser/view/nama_10_gdp/default/table?lang=en%20) (last access 20.09.2023)

<sup>8</sup> World Bank (2023) Imports of goods, services and primary income (BoP, current US\$) - Germany, European Union, Austria, Bulgaria, Croatia, Hungary, Romania, Slovak Republic, Slovenia, Czechia. Available under. [https://data.worldbank.org/indicator/BM.GSR.TOTL.CD?locations=DE-EU-AT-BG-HR-HU-RO-SK-SI-CZ&name\\_desc=false](https://data.worldbank.org/indicator/BM.GSR.TOTL.CD?locations=DE-EU-AT-BG-HR-HU-RO-SK-SI-CZ&name_desc=false) (last access 21.09.2023)

<sup>9</sup> World Bank (2023) Imports of goods, services and primary income (BoP, current US\$) - Germany, European Union, Austria, Bulgaria, Croatia, Hungary, Romania, Slovak Republic, Slovenia, Czechia. Available under. [https://data.worldbank.org/indicator/BX.GSR.TOTL.CD?locations=DE-EU-AT-BG-HR-HU-RO-SK-SI-CZ&name\\_desc=false](https://data.worldbank.org/indicator/BX.GSR.TOTL.CD?locations=DE-EU-AT-BG-HR-HU-RO-SK-SI-CZ&name_desc=false) (last access 21.09.2023)

<sup>10</sup> Danube Region Strategy (2019): EU Strategy for the Danube Region. Available under. [https://danube-region.eu/wp-content/uploads/2020/04/EUSDR-Cooperation-one-can-see\\_EN.pdf](https://danube-region.eu/wp-content/uploads/2020/04/EUSDR-Cooperation-one-can-see_EN.pdf) (last access 21.09.2023).



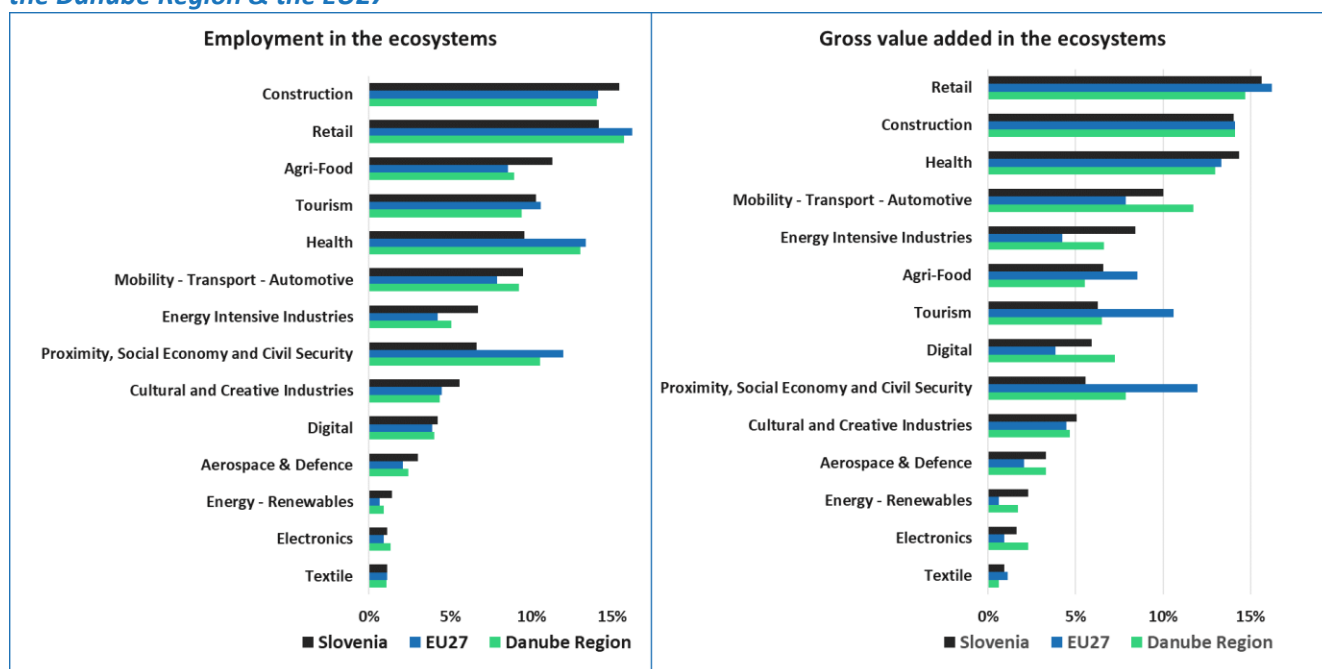
To gain a more comprehensive understanding of Slovenia's and the Danube Region's economic profile, it is helpful to assess its positioning in the **14 industrial ecosystems** defined by the European Commission<sup>11</sup> in terms of both employment and gross value added (GVA), as shown by Figure 2Figure 4. Among the 14 industrial ecosystems, the "Construction" ecosystem takes the lead in terms of employment and represents a larger share of the Slovenian economy than the EU27 and the Danube region, implying a specialisation in construction-related sectors within the EU and the region. Similarly, the "Agri-Food", "Mobility – Transport - Automotive", and "Energy Intensive Industries" ecosystems have a higher share of employment compared to the EU27 and the Danube region levels across the ecosystems. On the contrary, ecosystems such as "Retail", "Health" and "Proximity, Social Economy and Civil Security" play a comparatively smaller role in the Slovenian economy. A similar picture can be drawn when looking at the largest ecosystems in terms of GVA. Here the specialisation of industrial ecosystems like "Mobility - Transport - Automotive" and "Energy Intensive Industries" become more discernible, with both exceeding EU27 levels significantly, thus indicating their importance for the Slovenian economy. The "Energy Intensive Industries" are also above the Danube regional level while the "Mobility - Transport - Automotive" level of Slovenia is lower than the regional value which can be explained by Germany being by far the largest economy in the region and its strong automotive sector. Overall, these statistics highlight Slovenia as an industry-driven economy, with a notable specialisation in Mobility – Transport - Automotive and Energy Intensive Industries but services in Digital related sectors are also above the European average while the agricultural and tourism sectors are relatively less significant. All in all, Slovenia and the Danube Region have a well-diversified economy which can provide resilience for further economic challenges.

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<sup>11</sup> EU Commission (2021): Annual Single Market Report 2021: Available under <https://op.europa.eu/en/publication-detail/-/publication/6355326c-ae95-11eb-9767-01aa75ed71a1/language-en> (last access 20.09.2023).



**Figure 2: Employment and gross value added at basic prices per industrial ecosystem, in Slovenia, the Danube Region & the EU27**



Source: ECCP (2023), own elaboration based on Eurostat.

## Innovation performance of Slovenia & the Danube Region

With regards to **Slovenia's innovation performance**, the country is classified as a 'Moderate Innovator' and its performance is slightly below the European average in the European Innovation Scoreboard (2023). Within the group of 'Moderate Innovator', Slovenia's performance is above the group average. On the national level, Slovenia's performance is above the EU average in a few fields like "Public-private co-publication", "Lifelong learning", "International scientific co-publications", "Enterprises providing ICT training" and "Product innovators"<sup>12</sup>. Over the last years, Slovenia's innovation ecosystem has seen increases also in the areas of "Business process innovators", "Lifelong learning", "Venture capital expenditure", "Public-private co-publications", "Foreign doctorate students", and "Job-to-job mobility of HRST". The 2022 European Semester country report for Slovenia explains that the country steadily improves its business, research and innovation environment by implementing new reforms<sup>13</sup>.

Slovenia has a strong difference in innovation performance between its two regions Zahodna Slovenija (Western Slovenia) and Vzhodna Slovenija (Eastern Slovenia). While the Zahodna Slovenija is classified as a "Strong innovator" and performs above the EU average, Vzhodna Slovenija is classified as a

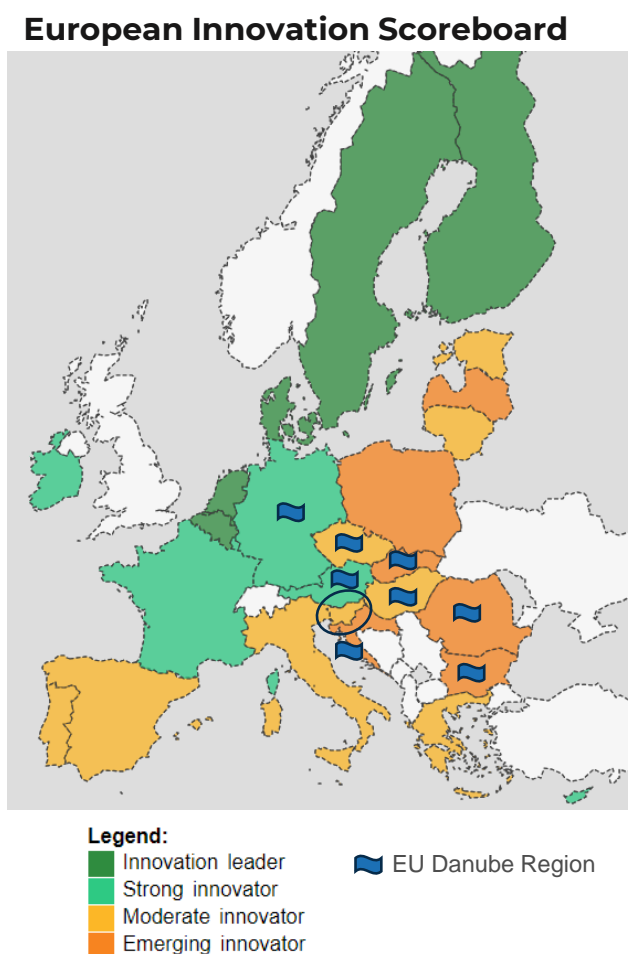
<sup>12</sup> European Commission (2023): European Innovations Scoreboard – Country profile Slovenia. Available under [https://ec.europa.eu/assets/rtd/eis/2023/ec\\_rtd\\_eis-country-profile-si.pdf](https://ec.europa.eu/assets/rtd/eis/2023/ec_rtd_eis-country-profile-si.pdf) (last access 22.09.2023).

<sup>13</sup> European Commission (2022): 2022 Country Report – Slovenia. Available online [https://commission.europa.eu/system/files/2022-05/2022-european-semester-country-report-slovenia\\_en.pdf](https://commission.europa.eu/system/files/2022-05/2022-european-semester-country-report-slovenia_en.pdf) (last access 22.09.2023).



“Moderate Innovator” with a performance below the EU average<sup>14</sup>. While most of the Slovenian innovation fields that perform above the EU level are in the Zahodna Slovenija like “Lifelong learning” and “Public-private co-publications”, the Vzhodna Slovenija performs well in “Sales of innovative products” which lies above the country and EU average<sup>15</sup>. However, it can be said that the strength of the Slovenian innovation ecosystem lies in its western Zohodna region.

**Figure 3: Slovenia & the Danube Region in the European Innovation Scoreboard**



Source: European Innovation Scoreboard 2023. Available online: <https://ec.europa.eu/research-and-innovation/en/statistics/performance-indicators/european-innovation-scoreboard/eis> (last access 22.09.2023); note: Slovenia is encircled in the map and also part of the EU Danube Region.

The **Danube region** shows some diversity in terms of its innovation performance, while Germany and Austria are the strongest countries in the region and classified as “Strong Innovators”, Slovenia,

<sup>14</sup> European Commission (2023): Regional Innovation Scoreboard - Regional profiles Slovenia. Available under. [https://ec.europa.eu/assets/rtd/ris/2023/ec\\_rtd\\_ris-regional-profiles-slovenia.pdf](https://ec.europa.eu/assets/rtd/ris/2023/ec_rtd_ris-regional-profiles-slovenia.pdf) (last access 22.09.2023).

<sup>15</sup> European Commission (2023): Regional Innovation Scoreboard - Regional profiles Slovenia. Available under. [https://ec.europa.eu/assets/rtd/ris/2023/ec\\_rtd\\_ris-regional-profiles-slovenia.pdf](https://ec.europa.eu/assets/rtd/ris/2023/ec_rtd_ris-regional-profiles-slovenia.pdf) (last access 22.09.2023)



Hungary and Czechia are classified as “Moderate Innovators”<sup>16</sup>. With Slovenia having the highest score amongst those three “Moderate Innovators” it ranks third within the Danube region. The other four countries of the region: Bulgaria, Croatia, Romania and Slovakia are classified as “Emerging Innovators”.

## Cluster landscape in Slovenia & the Danube Region

This section provides a brief outline of cluster actors in Slovenia and in the Danube region since cluster organisations as intermediaries play a central role in innovation ecosystems. Here, the number of registered cluster organisations on the ECCP gives a first impression of the cluster landscape in Slovenia and the larger Danube Region.

### Cluster organisations in Slovenia

Currently, there are **19 cluster organisations** on the ECCP that are located in Slovenia. Figure 1Figure 3 displays the geographical distributions of the Slovenian cluster organisations as well as their correspondence with the EU Industrial Ecosystems.<sup>17</sup> This figure shows a relatively strong concentration of those ECCP-registered cluster organisations in the capital since 10 out of the 19 Slovenian ECCP cluster organisations are located in Ljubljana. Four ECCP-registered cluster organisations are placed in the city of Maribor.

Moreover, these Slovenian ECCP-registered cluster organisations can be linked to **10 out of the 14 EU Industrial Ecosystems**. The majority of those Slovenian cluster organisations are operating in the Industrial Ecosystems ‘Agri-food’ (3 cluster organisations), ‘Construction’ (3 cluster organisations) and ‘Digital’ (3 cluster organisations).

Besides, these Slovenian ECCP-registered cluster organisations, there is also the Slovenian Meta-Cluster “SEESARI - South East Europe Strategic Alliance for Rail Innovation”<sup>18</sup> registered on the ECCP. This organisation is operating in the EU Industrial Ecosystem ‘Mobility-Automotive-Transport’ and has the aim of supporting rail and transport development in South-East Europe. Thereby, the organisation focuses on identifying and developing innovative solutions in the railway sector.

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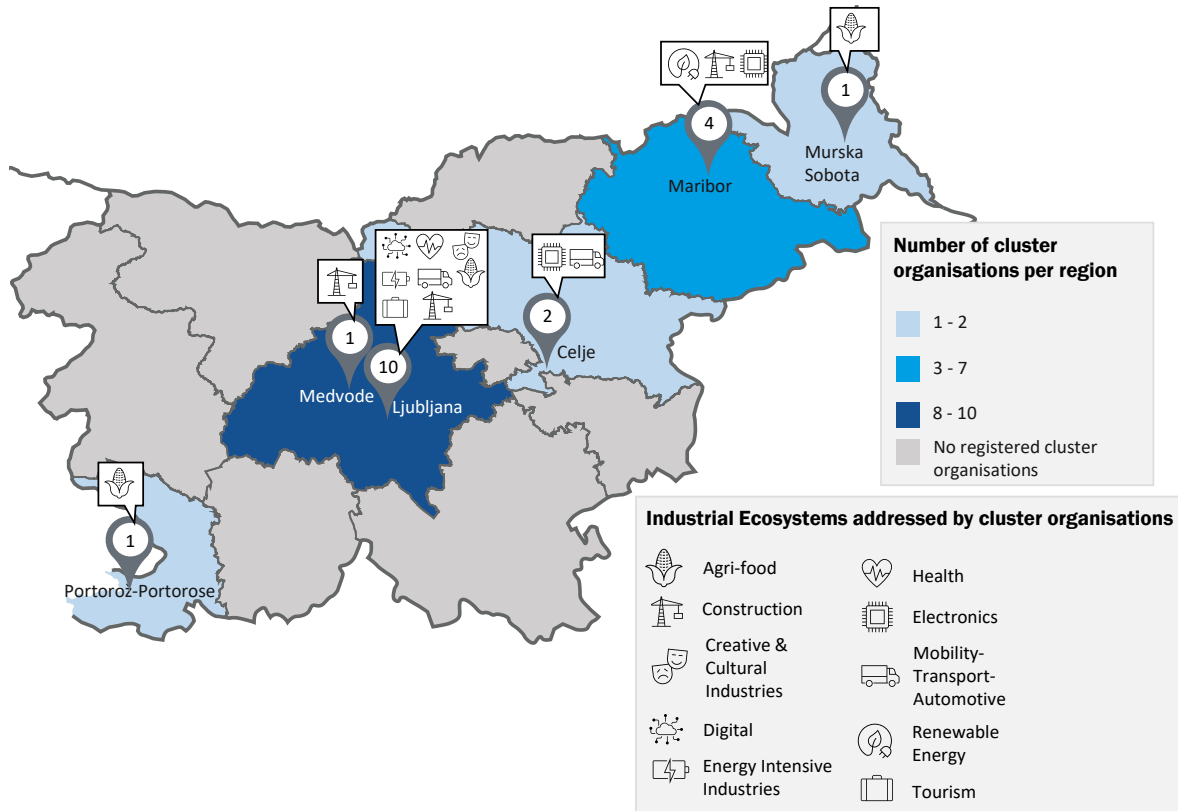
<sup>16</sup> European Commission (2023). Regional Innovation Scoreboard 2023. Available under: <https://op.europa.eu/en/publication-detail/-/publication/c849333f-25db-11ee-a2d3-01aa75ed71a1/language-en/format-PDF/source-289680093> (last access 22.09.2023).

<sup>17</sup> <https://clustercollaboration.eu/in-focus/industrial-ecosystems> (last access 04.09.2023)

<sup>18</sup> <https://seesari.org/> (last access 04.09.2023)



**Figure 3: Overview of Slovenian cluster organisations registered on the ECCP, by their regional and sectoral distribution**



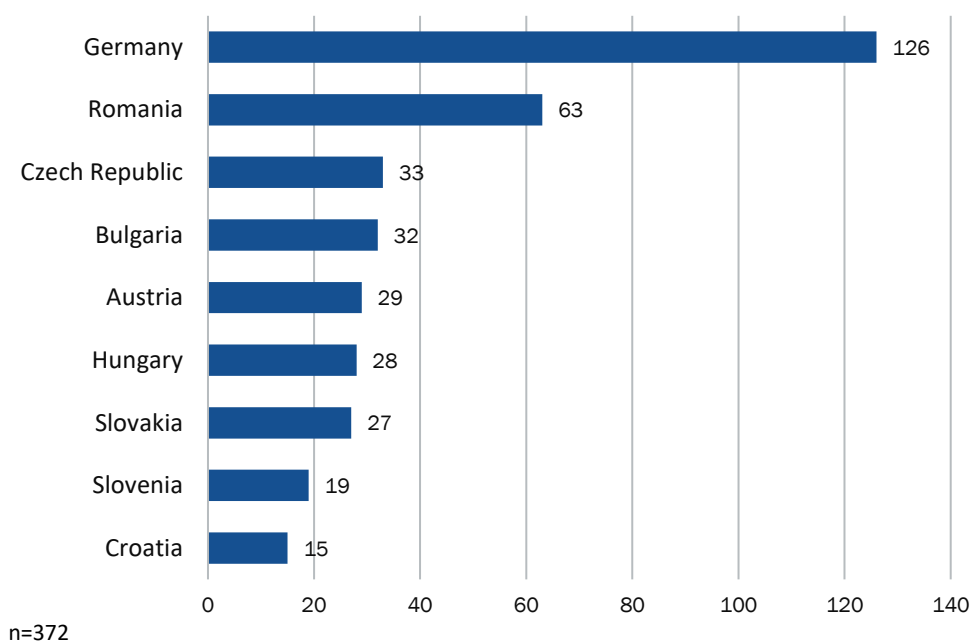
Source: ECCP (2023), own elaboration based on <https://reporting.clustercollaboration.eu/all> (last access 04.09.2023). A full overview of the Slovenian ECCP registered clusters is provided in Table 1 in the Annex.



### Cluster organisations in the Danube Region

Complementing the previous assessment of cluster organisations, Figure 4 displays the number of ECCP-registered cluster organisations in the Danube Region by country. Overall, **around 370 out of around 1150 cluster organisations (32%)** on the ECCP are located in the Danube Region. The majority of the cluster organisations in the Danube Region and profiles on the ECCP are located in Germany (126 cluster organisations), followed by Romania with 63 cluster organisations. Slovenia has the second lowest number of cluster organisations registered on the ECCP in the Danube region.

**Figure 4: Number of cluster organisations with profiles on the ECCP in the Danube Region, by country**



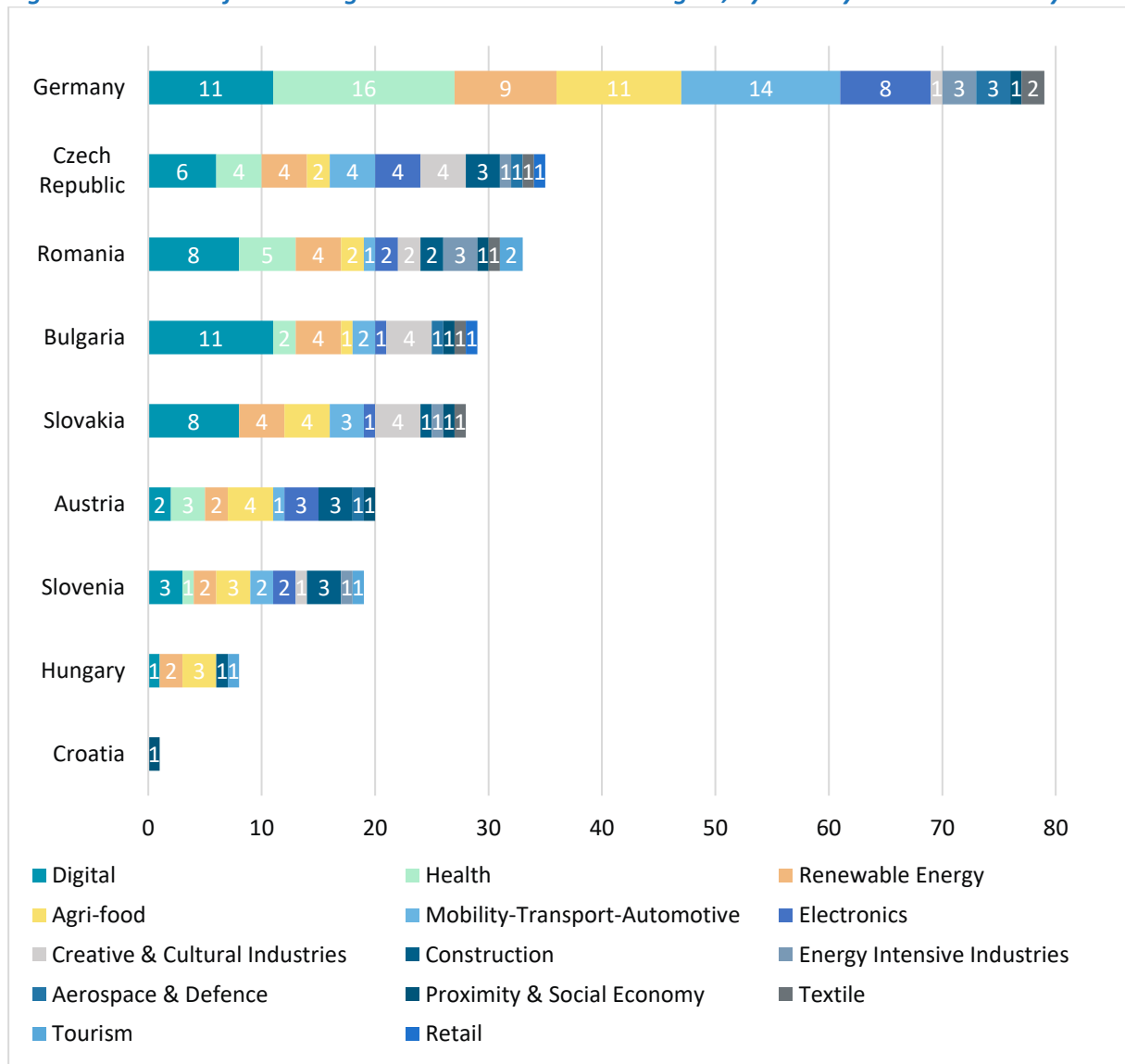
Source: ECCP (2023)

Overall, the cluster organisations in the Danube Region with profiles on the ECCP are operating in **all 14 EU Industrial Ecosystems** (See Figure 5). However, the EU Industrial Ecosystems in which the most ECCP-registered cluster organisations of the Danube Region are active in are “Digital” (50 cluster organisations), “Health”, “Renewable Energy” (31 cluster organisations both) and “Agri-food” (30 cluster organisations).





**Figure 5: Number of cluster organisations in the Danube Region, by country & Industrial Ecosystem**



Source: ECCP (2023), note: cluster organisations can be active in multiple Industrial Ecosystems. Not all cluster organisations have provided information about the Industrial Ecosystem in their profile.

# 02

## Challenges of the Danube Region, interregional collaboration & the role of cluster organisations





## 2. Challenges of the Danube Region, interregional collaboration and the role of cluster organisations

This chapter starts by outlining the strategic challenges of the Danube Region. Thereby, a key pillar is the Danube Region Strategy<sup>19</sup>. In addition, the role of cluster organisations for the Danube Region in addressing these challenges is highlighted and interregional collaboration is examined.

### Challenges of the Danube Region

The Danube Region Strategy addresses a wide range of issues; these are divided into 4 pillars and 12 priority areas (see Figure 6)<sup>20</sup>. Challenges and opportunities in the Danube Region are constantly changing and include among others<sup>21</sup>:

- Environmental threats (water pollution, floods, climate change)
- Untapped shipping potential and lack of road and rail transport connections
- Insufficient energy connections
- Uneven socio-economic development
- Uncoordinated education, research and innovation systems
- Shortcomings in safety and security

**Figure 6: The 4 pillars and 12 priority areas of the Danube Region Strategy**



Source: <https://danube-region.eu/> (last access 22.09.2023)

<sup>19</sup> See <https://danube-region.eu/about/priority-areas/> (last access 21.09.2023).

<sup>20</sup> See <https://danube-region.eu/about/priority-areas/> (last access 21.09.2023).

<sup>21</sup> <https://doi.org/10.7767/dedo.2019.59.3-4.201> (last access 22.09.2023).



A more detailed consideration of the 12 priority areas and the various targets/actions undertaken, identifies the following challenges in each area, where due to the nexus nature of the challenges and the interdependencies among the different priorities, these should be viewed in a holistic/synergetic way, as for example improving mobility needs to ensure environmental compliance and access to sustainable energy.

### **PA 1A Waterways Mobility**

- Improve the fairway conditions and shoreside infrastructure along the Danube and its navigable tributaries.
- Ensure the online provision, availability and interoperability of up-to-date Fairway Information Services in the Danube Region.
- Foster frequent transnational business-to-business (B2B) interactions.
- Modernize the vessel fleet by mobilizing EU and national funding schemes.
- Facilitate the implementation of EC directives regarding professional qualifications in inland navigation in all Danube riparian states, including non-EU states.
- Improve administrative procedures, especially border controls, in inland navigation on the Danube and its navigable tributaries.

### **PA 1B Rail-Road-Air Mobility**

- Integrate into the Trans-European Transport Network the rail and road networks crossing the Danube Region.
- Address multimodal transport issues in synergy with Waterways mobility and solve operational and technical barriers for rail and road transport including support for the deployment of traffic management systems, as well as develop efficient multimodal terminals at sea, river and dry ports in the Danube Region and ensure their connectivity and access through the creation of multimodal “hubs” and efficient logistics services.
- Support the full implementation of the Single European Sky ATM Research (SESAR) program in the Danube Region.
- Identify relevant and innovative approaches for safe and green urban mobility, facilitate knowledge transfer and exchange of best practices and reduce traffic injuries.

### **PA 2 Sustainable Energy**

- Promote the sustainable use of biomass, solar energy, geothermal, hydropower and wind power to increase the energy independency and to promote and support multipurpose cross-border RES utilization projects that contribute to the collaborative target of EU 30% renewable energy in the overall use by 2030, while complying with the National Emission Ceilings.



- Promote energy efficiency and use of renewable energy in buildings and transform/modernize fossil-fuel based district heating and cooling systems and combined heat and power facilities, including identification of potential locations for subsurface energy storage.
- Promote defossilisation and reduction of air pollutants in the transport sector, by developing the infrastructure for alternative fuels.
- Reduce energy poverty and increase the protection of vulnerable consumers.

### **PA 3 Culture & Tourism**

- Develop joint projects and tourism products building on the common heritage of the people in the region, transversing diverse histories, cultures, ethnicities, religions, markets, societies and states.
- Promote sustainable tourism and create better infrastructures for tourism.

### **PA 4 Water Quality**

- Prevent and reduce water pollution from point and diffuse sources in the Danube Region, especially related to organic substances, nutrients, hazardous and emerging substances inter alia by enhancing wastewater treatment and by promoting best management practices.
- Protect water resources and safeguard drinking water supply.
- Enhance conservation measures of Danube migratory fish species.
- Enhance climate change adaptation measures related to water quality, including a Danube Delta management plan.
- Develop integrated monitoring, modelling and management of hazardous substances pollution in the Danube.
- Decouple pollution and water scarcity from agricultural development.
- Improve water demand management in agriculture by smart irrigation and water reuse in order to reduce water abstraction needs.
- Identify means to finance infrastructure projects, especially in EU Member States that have joined after 2007 and non-EU countries.
- Focus on investments in maintenance and rehabilitation of the existing infrastructure.

### **PA 5 Environmental Risks**

- Address the challenges of water scarcity and droughts in line with the Danube River Basin Management Plan and the ongoing work in the field of climate adaptation.
- Support the implementation of the Danube Flood Risk Management Plan.
- Continuously update the existing database of accident hazard spots (AHS Inventory), contaminated sites and tailing management facilities.



- Support the assessment of disaster risks in the Danube Region, encouraging actions to promote disaster resilience, preparedness and response activities in line with the European Union Civil Protection Mechanism.
- Establish common minimum standards for civil protection organisations and fire and rescue services involved in international or cross-border disaster response in the Danube Region.

#### **PA 6 Biodiversity, Landscapes and Air & Soil Quality**

- Develop a Danube Masterplan for the Conservation and Restoration of Biodiversity Values, including improved management of Natura 2000 sites and other protected areas through transnational cooperation and capacity building.
- Strengthen the efforts to halt the deterioration in the status of species and habitats occurring in the Danube Region and covered by EU nature legislation and in particular to continue the ongoing work and efforts to securing viable populations of Danube sturgeon species (sturgeons play an important ecological role as indicators of healthy ecosystems and the Danube River Basin preserves some of the most important wild sturgeon populations and functional habitats in the world today).
- Reduce the introductions and spread of Invasive Alien Species (IAS) in the Danube Region.
- Strengthen horizontal knowledge transfer and access to environmental data between national authorities responsible for nature conservation (especially those of neighbouring countries) and maintain and restore Green and Blue Infrastructure elements through integrated spatial development and conservation planning.
- Improve and/or maintain the soil quality in the Danube Region including development harmonised soil maps for the Danube Region.
- Decrease air pollution in the Danube Region by developing an Air Protection Programme for the Danube Region, aiming to develop and disseminate appropriate tools for air quality assessment and management, and propose actions to enhance air quality.

#### **PA 7 Knowledge Society**

- To support education, research and ICT in the Danube Region by improvement of framework conditions for building a knowledge society.
- To contribute to an increasing level and quality of network activities, strengthening the existing links and fostering new cooperation in the Danube Region.
- Promote investment in research and innovation infrastructures, capacities and skills, creating projects that aim at making the Danube Region more attractive for especially young and female researchers, to strengthen the realization of the European Research Area in the Danube Region, revert brain drain and foster brain circulation.
- To further implement Smart Specialisation Strategies in all Danube countries.



## PA 8 Competitiveness of Enterprises

- Foster cooperation and exchange of knowledge between SMEs, academia and the public sector in areas of competence in the Danube Region.
- Improve business support to strengthen the capacities of SMEs for cooperation and trade.
- Support enterprises through high-performing training and qualification schemes, such as improving digital skills of entrepreneurs.
- Prioritize the effective implementation of measures provided for under the Small Business Act for Europe.
- Improve the competitiveness of rural areas and in particular of the agricultural sector.
- Eliminate cross border barriers and bottlenecks to people and business.
- Improve framework conditions for SMEs in areas where competitive infrastructure is missing.
- Improve the current system and overcome the current gap between regional strategies and cluster strategies, especially in terms of S3 implementation.

## PA 9 People & Skills

- Tackle youth and long-term unemployment to increase employment rates in the region.
- Improve educational outcomes, skills and competencies, focusing on learning outcomes for employability, entrepreneurship, innovation, active citizenship and well-being.
- Increase quality, efficiency and inclusiveness of education, training and labour market systems with equal opportunities and non-discrimination as well as promotion of civic competencies and lifelong learning opportunities for all.
- Foster closer cooperation between educational, training and labour market and research institutions, strengthening regional exchange, peer learning and cooperation in projects and networks.

## PA 10 Institutional Capacity & Cooperation

- Strengthen institutional capacities to improve decision-making and administrative performance.
- Increase involvement of civil society and local actors for effective policymaking and implementation.
- Enhance coordination and knowledge for better use of funding and to develop needs-based funding instruments.

## PA 11 Security

- Enhance police cooperation with the aim of improving security and tackling serious and organised crime in Danube Region countries.
- Develop strategic long-term cooperation between law enforcement actors along the Danube river.
- Improve the systems of border control, document inspection management and cooperation on consular related issues in the Danube Region.



- Promote the rule of law and fight corruption.

## The role of cluster organisations for the Danube Region in addressing the challenges

This section provides a short elaboration on the relevance of cluster organisations in organising and rebuilding regional supply chains. As a starting point for this one can refer to the fundamental activities and the role of cluster organisations in promoting collaboration. The following figure presents the central activities of cluster organisations which are also pivotal for addressing the challenges Danube Region mentioned before<sup>22</sup>.

Cluster organisations act as networkers and knowledge brokers in the innovation ecosystem. These tasks are also summarised in Figure 7 below. In the area of knowledge transfer, cluster organisations play an important role by providing their members with relevant market information (e.g., in the form of studies) or by offering training on specific issues. By identifying suitable partners for their member organisations within or outside the cluster organisations, important networking tasks are performed. In this context, it can also be said that cluster organisations act as intermediaries between companies, research and education institutions, research and education institutions, so that they are also part of the training and education infrastructure in the innovation ecosystem<sup>23</sup>.

When accompanying projects, which can result from providing information and establishing contacts, for example, there is usually also an important contribution to technology transfer in the innovation ecosystem. For the implementation of projects, cluster organisations can also take on an important steering role for funding and subsidies and thus also provide additional incentives for cooperation and knowledge exchange. An example of this is cascade funding, in which cluster organisations act as intermediaries in approved projects to forward the awarded funds to companies.<sup>24</sup>

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<sup>22</sup> European Cluster Observatory (2014): Cluster Collaboration and Business Support Tools to Facilitate Entrepreneurship, Cross-sectoral Collaboration and Growth. Available under:

[https://clustercollaboration.eu/sites/default/files/eu\\_initiatives/cluster-collaboration-and-business-support-tools-to-facilitate-entrepreneurship-cross-sectoral-collaboration-and-growth\\_en\\_0.pdf](https://clustercollaboration.eu/sites/default/files/eu_initiatives/cluster-collaboration-and-business-support-tools-to-facilitate-entrepreneurship-cross-sectoral-collaboration-and-growth_en_0.pdf) (last access 04.09.2023)

<sup>23</sup> European Expert Group on Clusters (2020): Recommendation Report. Available under:

[https://clustercollaboration.eu/sites/default/files/news\\_attachment/European%20Expert%20Group%20on%20Clusters%20-%20Recommendation%20Report.pdf](https://clustercollaboration.eu/sites/default/files/news_attachment/European%20Expert%20Group%20on%20Clusters%20-%20Recommendation%20Report.pdf) (last access 13.09.2023)

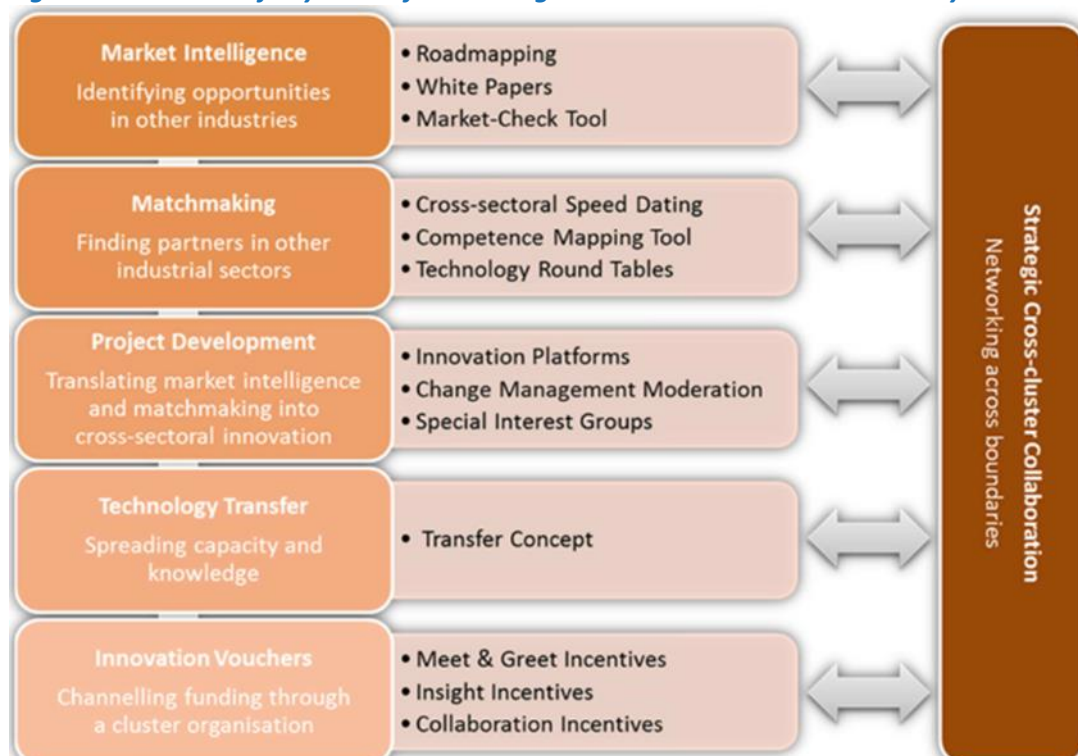
<sup>24</sup> Prognos et al. (2021): Evaluation Study of and Potential Follow-Up to Cluster Initiatives under COSME, H2020 and FPI. Available under:

<https://op.europa.eu/o/opportal-service/download-handler?identifier=a2c3e9e1-3deb-11ec-89db-01aa75ed71a1&format=pdf&language=en&productionSystem=cellar&part=> (last access 13.09.2023)





**Figure 7: Overview of key roles of cluster organisations in the innovation ecosystem**



Source: European Cluster Observatory (2014): Cluster Collaboration and Business Support Tools to Facilitate Entrepreneurship, Cross-sectoral Collaboration and Growth.

Based on these considerations about the key roles of cluster organisations, their (possible) **contribution to the challenges of the Danube Region** emerges. For instance, many of the beforementioned Priority Areas of the Danube Region Strategy mention activities that fall under the area of market intelligence. An example of this is the identification of relevant and innovative approaches for safe and green urban mobility under PA 1B Rail-Road-Air Mobility. Also, the promotion of knowledge can be highlighted here, and one can link cluster organisation support to activities such as the promotion of the sustainable use of biomass (PA 2 Sustainable Energy) of the Danube Region Strategy. As mentioned before, cluster organisation can play important roles in the training and education infrastructure. Against this background, cluster organisations can be relevant actors for the priority areas PA 9 People & Skills & PA 10 Institutional Capacity & Cooperation. With regards to technology transfer, cluster organisations are well suited to engage in activities such as the strengthening of horizontal knowledge transfer and access to environmental data between national authorities responsible for nature conservation which is part of PA 6 Biodiversity, Landscapes and Air & Soil Quality of the Danube Region Strategy. From a more general perspective, cluster organisations can be strongly linked to the PA 8 Competitiveness of Enterprises of the Danube Region Strategy since strengthening the competitiveness of enterprises is a key objective of most cluster organisations. Moreover, since Smart Specialisation like cluster policy is a place-based approach that aims at utilising the advantages of proximity and promoting economic growth and competitiveness, cluster



organisations are well suited to support the PA 7 Knowledge Society which has the objective of further implementing Smart Specialisation Strategies in all Danube countries<sup>25</sup>.

## Interregional collaboration in the Danube Region

Interregional collaboration is at the core of the Danube Region since the EU Strategy for the Danube Region mentions closer cooperation between the different involved Member States as a central objective<sup>26</sup>. In this regard, the Danube Region itself also provides an overview of dedicated funding sources for collaboration (see also Chapter 3)<sup>27</sup>. For existing collaboration in the Danube Region, the **Danube Strategy Flagships** provide a good starting point<sup>28</sup>. These Danube Strategy Flagships are centered around the key priority areas of the EU Strategy for the Danube Region and include projects such as “Danube Region Multimodal Corridors”<sup>29</sup>, which is directed towards the development of a Danube Region-wide multimodal transport network or the “Flagship process on adaptation to climate change”<sup>30</sup>, which follows objectives such as implementing water quality measures and promoting green infrastructure and natural water retention measures. These Danube Strategy Flagships include various government bodies, companies, research organisations and other relevant stakeholders from across the Danube Region. Moreover, many of these Danube Strategy Flagships also involve cluster organisations from the Danube Region. These projects include, for instance, the “Enhancing hydrogen economy in the EUSDR”<sup>31</sup> project which aims at supporting the development of hydrogen economies in the Danube Region. The “Danube Small Project Fund” involves the Danube Cultural Cluster and provides uncomplicated small project funding in the cultural sector. Other Danube Strategy Flagships with cluster involvement include the “[Western Balkans R&I Information Hub](#)”, the “[Danube Alliance for SME Competitiveness](#)” and the “[EuroAccess Macro-Regions](#)”.

Moreover, cluster organisations from the Danube Region are also actively involved in **further European networks and support initiatives** such as the Interregional Innovation Investments (I3) Instrument which focuses on the commercialisation and scale-up of investment projects with a specific focus on the smart specialisation priorities areas of the involved regions (see also Chapter 3). Here, around 10 projects under the participation of organisations from the Danube region can be identified. The majority of these projects can also be directly linked to the priority areas of the Danube Region that were mentioned before. For instance, the I3 project “Hy2Market” involves organisations from Austria and Romania and has the main objective of realising a more mature hydrogen value chain across Europe. The I3 project “HIGHFIVE” involves organisations from Germany, Hungary and Slovenia and

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<sup>25</sup> European Commission (2013): The role of clusters in smart specialisation strategies. Available under: <https://op.europa.eu/o/opportal-service/download-handler?identifier=2fe44194-e5a8-42b7-ac14-9c9b8e157de3&format=pdf&language=en&productionSystem=cellar&part=> (last access 25.09.2023).

<sup>26</sup> See <https://danube-region.eu/about/> (last access 21.09.2023)

<sup>27</sup> See <https://danube-region.eu/projects-and-funding/> (last access 21.09.2023)

<sup>28</sup> See <https://danube-region.eu/download/list-of-danube-strategy-flagships-2022/?wpdmml=11401&refresh=650c3246344ac1695298118> (last access 21.09.2023)

<sup>29</sup> See <https://danube-region.eu/danube-region-multimodal-corridors/> (last access 21.09.2023)

<sup>30</sup> See <https://danube-region.eu/flagship-process-on-adaptation-to-climate-change/> (last access 21.09.2023)

<sup>31</sup> See <https://danube-region.eu/enhancing-hydrogen-economy/> (last access 21.09.2023)



aims at developing innovative digital solutions for concrete challenges of food processing companies, thereby contributing to the Farm to Fork strategy. Furthermore, 36 cluster organisations from EU Member States of the Danube Region are involved in 21 out of 30 Euroclusters (70%). This underlines the strong involvement of Danube Region cluster organisations in interregional collaboration projects since in these 21 Eurocluster 118 cluster organisations from 21 EU Member States are involved.

# 03

## Turn your project idea into practice: public funding instruments for innovation





### 3. Turn your project idea into practice: public funding instruments for innovation

Public funding schemes play a pivotal role in strengthening innovation in Europe, also across European regions. In order to raise awareness of cluster community and seed ideas for future proposals, this chapter outlines diverse funding opportunities for projects that aim to support the green and digital transition, primarily in the areas of mobility and transport, sustainable energy, energy security, and water management. It lists budgets of the selected programmes, concrete calls for proposals, topics funded, partner search and networking opportunities as well as advisory services and supporting tools, relevant for cluster organisations. Figure 8 gives an overview of relevant funding schemes that are presented in the chapter.

In addition, further information on funding opportunities for specific priority areas of the EU Strategy for the Danube Region can be consulted via the following documents:

- Priority Area Water Quality: [Water-related funding](#)
- Priority Area Mobility and Transport: [Sustainable transport](#)

**Figure 8: Overview of relevant public funding instruments for innovation**

Key EU innovation supporting programmes		Other funding opportunities
<p><b>Horizon Europe</b> EU's main funding programme for research and innovation</p> <ul style="list-style-type: none"> <li>• Cluster 5: Climate, Energy &amp; Mobility</li> <li>• Cluster 6: Food, Bioeconomy, etc.</li> <li>• European Partnerships</li> <li>• European Innovation Council (EIC)</li> </ul>	<p><b>INTERREG EU</b> EU funding instrument to support cooperation across borders</p> <ul style="list-style-type: none"> <li>• Interreg Danube Region Programme</li> <li>• Interreg Central Europe Programme</li> <li>• Interreg Euro-MED Programme</li> <li>• and other cross-border programmes</li> </ul>	Vanguard Initiative: Pilot projects
<p><b>Innovation Fund</b> EU's main funding programme for supporting the development of the Single Market and SMEs</p>	<p><b>European Regional Development Fund</b> EU's main funding programme for research and innovation</p> <ul style="list-style-type: none"> <li>• Interregional Innovation Investments (I3) Instrument</li> </ul>	Eureka cluster and project network calls
<p><b>LIFE Programme</b> EU's funding instrument for the environment and climate action</p> <ul style="list-style-type: none"> <li>• Close-to-market projects</li> </ul>	<p><b>Single Market Programme</b> EU's main funding programme for supporting the development of the Single Market and SMEs</p> <ul style="list-style-type: none"> <li>• Joint Cluster Initiatives (Euroclusters) for Europe's recovery</li> </ul>	

Source: ECCP (2023).



## Key EU innovation supporting programmes

### INTERREG Europe

#### Total programme budget 2021-2027

 EUR 379 million

#### Participating countries



#### Topics



Smarter Europe



Greener Europe



More connected Europe



More social Europe



Europe closer to citizens



Better regional governance



#### Call for proposals

Third call for all topics is foreseen in **first semester 2024**. An overview of the calls planned for the 2021-2027 funding period is available [here](#).



#### Support tools

- [Keep.eu](#) database
- Online library of [project ideas](#)
- [Self-assessment tool](#) to verify the suggested project idea
- A tailored [guidance](#) for project development

#### General description

[Interreg Europe](#) is the interregional cooperation programme that aims to reduce disparities in the levels of development, growth, and quality of life in and across Europe's regions. This instrument mainly targets local, regional, and national public authorities, institutions governed by public law (e.g., regional development agencies, business support organisations, universities), private non-profit bodies.

#### Types of topics funded under Greener and more social Europe themes

##### Greener Europe:

- energy efficiency
- renewable energy
- smart energy systems
- water management
- climate change
- nature & biodiversity
- zero-carbon urban mobility

##### More social Europe:

- education
- social inclusion
- culture and sustainable tourism



#### Advice services

Please see a list of [national contact points](#).



## INTERREG specific programmes

INTERREG has three types of programmes: cross-border, transnational and interregional. From the perspective of cluster organisations, primarily two first ones need to be highlighted. [Interreg cross-border cooperation](#), known as Interreg A, supports cooperation between NUTS III regions from at least two different Member States lying directly on the borders or adjacent to them. Following Interreg cross-border cooperation programmes may be of the C2Lab participants' interest:

- [Interreg Austria – Czechia](#): continuously open call [open call](#) until 31.12.2029
- [Interreg Austria – Hungary](#): ongoing [call for small-scale projects](#) until 6 November 2023
- [Interreg Romania-Bulgaria](#): indicative [timeline with planned calls](#)
- [Interreg Romania-Hungary](#): call for [submission of hard projects](#) (with an infrastructure component) until 27.12.2023
- [Interreg Slovakia - Austria](#)
- [Interreg Slovakia-Czechia](#)
- [Interreg Slovenia-Austria](#) : continuously [open call for project proposals](#)
- [Interreg Slovenia-Croatia](#) : [open call system for standard and small-scale projects](#)
- [Interreg Slovenia-Hungary](#): [open call system for proposals](#)


[Interreg transnational cooperation](#), formerly known as Interreg B, involves regions from numerous countries of the EU in order to promote better cooperation and regional development within the Union by a joint approach to tackle common issues. Due to the fact that C2Lab is organised alongside the 12th Annual Forum of the EU Strategy for the Danube Region, three Interreg transnational subprogrammes – Danube Region, Central Europe, and Euro-MED - are briefly presented below.

**Both sources of funding could be considered by clusters wherever they are located. In order to find the right programme that covers geographical area of your interest, please visit a [dedicated portal with all Interreg programmes](#) and [calls for projects](#).**



## Interreg Danube Region Programme





### Total programme budget 2021-2027

 EUR ~269 million

### Participating EU countries



### Priority areas

-  A smarter Danube Region
-  A greener, low-carbon Danube Region
-  A more social Danube Region
-  A better cooperation governance



### Call for proposals

**Second call for proposals (EUR~55 budget) is open until 29<sup>th</sup> February 2024.** More information [here](#). The average budget per project is between EUR1,5 to 2/2,5 mln.



### Support tools

- Thematic and focused on the key features of the second call [webinars](#) (recordings of previous webinars can be found [here](#))
- [How to apply](#) webpage with relevant materials

### General description

#### [The Danube Region Programme 2021-2027](#)

supports transnational cooperation for a smarter, greener, more social and better cooperating Danube region. The Programme area covers a total of 1.083.945 km<sup>2</sup> and consists of 14 countries: 9 EU countries and 5 neighbouring countries (Bosnia and Herzegovina, Moldova, Montenegro, Serbia, and Ukraine). Eligible applicants include public authorities, non-profit organisations, educational institutions, research organizations, and other relevant stakeholders from the Danube region. Regarding geographical composition of the project partnership, each project has to involve at least three financing project partners from three different countries of the programme area.

### Types of topics funded under the second call

- Skills for smart specialisation, industrial transition, and entrepreneurship
- Renewable energy
- Climate change adaptation and disaster risk prevention
- Access to water and sustainable water management
- Protection and preservation of the nature and biodiversity
- Education, training and lifelong learning
- Culture and sustainable tourism



### Partner search & networking


If you seek partners to support your project idea, please check a dedicated [LinkedIn group](#). Project ideas being at an early stage of development are recommended to be consulted with their respective [National Contact Point](#) for general advice and information.





## Interreg Central Europe Programme


### Total programme budget 2021-2027


 EUR~ 224 million


### Participating EU countries




### Thematic priorities

 Cooperating for a smarter central Europe

 Cooperating for a greener central Europe

 Cooperating for a more connected central Europe

 Improving governance for cooperation in central Europe



### Call for proposals

The third call for proposals is planned for **the second half of 2024**. To explore the first call projects click [here](#).



### Advisory services

Should you need further information, please contact [national contact points](#) or reach out to [the Interreg Central Europe Helpdesk](#).

### General description

[The Interreg Central Europe Programme 2021-2027](#) supports transitional cooperation projects in regions and cities of nine EU Member States, long divided by the *Iron Curtain*. Project ideas aimed at developing and piloting solutions, building institutional capacities, and facilitating knowledge transfer can be funded by the Programme.

### Types of topics funded under priority 2. Cooperating for a greener central Europe

#### 2.1 Supporting the energy transition to a climate-neutral central Europe

- Smart integration of carbon-neutral solutions across sectors
- Renewable energy resources
- Reduction of greenhouse gas emissions from industry and other sectors

#### 2.4. Safeguarding the environment in Central Europe

- Reduction of environmental pollution (air, water, soil, noise, light etc.)
- Integrated environmental management and sustainable use of natural resources
- Ecosystem services (e.g. production of food and water, clean air, recreational benefits)
- Sustainable tourism

#### 2.5 Green urban mobility in central Europe

- Sustainable multimodal urban freight and logistic solutions (including the “last mile”)
- Sustainable multimodal connections between urban and peri-urban areas
- Reduction of greenhouse gases and other air pollutants from urban transport
- Smart traffic and mobility management



## Interreg Euro-MED Programme

### Total programme budget 2021-2027



EUR ~294 million

### Participating EU countries



### Thematic priorities



A Smarter Mediterranean



A Greener Mediterranean



Mediterranean Governance



### Call for proposals

The 5th call for Thematic Projects with budget of EUR64 million is planned in the **second semester 2024**. The calendar is available [here](#).



### Support tools

- Programme materials: [brochure](#) and [general Powerpoint presentation](#)
- Discover a [full list of funded projects](#) to get inspired
- To find project partners, sign up to one of the thematic [Forum](#)

### General description

[The Interreg Euro-MED](#) provides funds for projects related to climate change and the environment developed and managed in 14 partner countries: 10 EU Member States and 4 countries from the Instrument for Pre-Accession Assistance (IPA), namely Bosnia-Herzegovina, Montenegro, North Macedonia, and Albania. Bodies from all countries relevant to the project tackled issues and objectives can be associated partners.

The Programme supports 2 types of projects: **thematic projects** that contribute to the Smarter and Greener priorities and **governance projects** that fit the Governance priority.

### Types of topics funded under priority 2. A Greener Mediterranean

2.4 Promoting climate change adaptation and risks prevention

2.6 Supporting circular economy


2.7 Enhancing Nature & biodiversity

- Preventing and mitigating natural and environmental risks, such as coastal erosion, rising sea level, and developing drought management plans as well as contingency plans for other extreme weather events.
- Development of solutions for climate change adaptation, resilience and energy transition
- Deployment of alternative energies and reducing carbon footprint in daily life (e.g.,) promoting renovation which increases the energy efficiency of buildings or low-carbon mobility.



## Interregional Innovation Investments (I3) Instrument

### Total programme budget 2023 - 24

 EUR ~159 million

### Participating countries



### Thematic priorities



Green transition



Digital transition



Smart Manufacturing



### Call for proposals

Upcoming calls for proposals will be published on the [Funding & Tenders portal](#). The EU contribution of 159 EURM is foreseen to be split up into two years:

- EU contribution in 2023: ~ EUR 78.8 million
- EU contribution in 2024: ~ EUR 80.4 million



### Advice services and support tools

- [Guidelines](#) for applicants incl. an [FAQ section](#).
- [Presentation and recording](#) of the I3 Instrument Infoday.

### General description

The [Interregional Innovation Investments \(I3\) Instrument](#) is a new funding instrument under the European Regional and Development Fund (ERDF) with a yearly budget of EUR 75.8 million to EUR 80.4 million. The calls for proposals are divided into **two different call strands** aiming both to invest in **interregional project consortia with innovation projects**. The focus of project strands is on the commercialisation and scale-up of investment projects with a specific focus on the **smart specialisation** priorities areas of the involved regions and interregional cooperation. Moreover, project consortia should involve **major stakeholders of the quadruple innovation helix** like public and private sector stakeholders as well as research organisations and SMEs.

### Types of topics funded

The I3 Instrument is offering **two different support strands** for interested organisations. Both strands only fund projects which belong to one of the **thematic areas**: green transition, digital transition, and smart manufacturing. While **strand 1** aims at supporting more mature partnerships to commercialise and scale-up innovation investments, **strand 2** calls set the focus on less developed regions and their capacity building and integration in global value chains.



## The Innovation Fund

### Total programme budget 2020-2030



EUR ~38 billion

### Participating countries



### Thematic priorities



Renewable energy



Energy storage



Carbon capture and utilisation



Carbon capture and storage



### Call for proposals

The fourth call for proposals for grants (small-, medium- and large-scale) will be launched on 23 November 2023 and closed on 9 April 2024 (estimated).



### Support tools

- Presentation with [the Innovation Fund current overview](#)
- An interactive [Innovation Fund Project Portfolio Dashboard](#), allowing the viewer to discover the Innovation Fund signed projects

### General description

[The Innovation Fund](#) is one of the largest funding programmes for the commercial demonstration of innovative low-carbon technologies, aiming to bring to the market industrial solutions to decarbonise Europe and support its transition to climate neutrality. The primary objective is to help businesses invest in clean energy and industry to foster economic growth through calls for large and small-scale projects. The Innovation Fund mainly focuses on **highly innovative technologies** and **big flagship projects** that are sufficiently mature in terms of planning, business model as well as financial and legal structure. The Innovation Fund supports a variety of project types: **demonstration projects** that focus on bringing new, promising, innovative technologies to the market and **advanced R&D projects** that are close to the commercialisation phase (pilots).

### Types of grants

Under the Innovation Fund currently two kind of projects could be financed: **large-scale projects** with a capital expenditure above 7.5 MEUR and **small-scale projects** with total capital costs below 7.5 MEUR. **Starting with the fourth round of applications in November 2023, the Fund will work with three categories: 'small-size projects' (up to 20 MEUR), 'medium-size projects' (between 20 and 100 MEUR), and finally the large-scale projects' (with investment expenditures of more than 100 MEUR).**



### Advisory services

In order to obtain more information on the Fund, in particular its interactions with national funding instruments and other EU programmes, please check [the list of National Contact Points](#).



## LIFE Programme: close-to-market projects

### Total programme budget 2021-2027



EUR 5.4 billion

### Participating countries



### Two relevant LIFE subprogrammes



Climate Change Mitigation and Adaptation



Circular Economy and Quality of Life



### Call for proposals

Every year the EC publishes LIFE calls for proposals. Applicants for close-to-market projects can apply in both abovementioned areas.



### Support tools

- Dedicated page on [support for applicants](#)
- Materials from [EULife23 INFO DAYS](#)



### Advisory services

Get in touch with your [national contact point](#) for the LIFE programme.

### General description

[The LIFE Programme](#) is the EU's funding instrument for the environment and climate action. Its close-to-market part supports private and public entities bring their green products, technologies, services, and processes to the market. [LIFE close-to-market projects](#) launch innovative, demonstrative solutions e.g., in waste management, the circular economy, resource efficiency, water, air or climate change mitigation. They need to present a high level of technical and business readiness which means that solutions could be implemented in close-to-market conditions (at industrial or commercial scale) during the course of the project or shortly after its completion.

### Types of topics funded (*non-exhaustive list*)

#### Climate Change Mitigation and Adaptation

- renewable energies
- energy efficiency
- resilience of infrastructure
- sustainable management of water in drought-prone areas

#### Circular Economy and Quality of Life

- circular economy (recovery of resources from waste, water, air, noise, soil, and chemical management)

To get inspired, find more examples of completed close-to-market LIFE projects [here](#).



## Horizon Europe (Pillar II)

### Total programme budget 2021-2027



EUR 95.5 billion

### Participating countries



+ third countries associated to HE + other third countries

### Relevant clusters:



Climate, Energy and Mobility  
(cluster 5)



Food, Bioeconomy, Natural  
Resources, Agriculture &  
Environment (cluster 6)

### Relevant Partnerships:



CCAM Partnership



ZEWT Partnership



2ZERO Partnership



### Support tools

[Partner Search Services](#) helps to find a partner organisation for your proposal.

[Online manual](#) guide on the procedures from proposal submission to managing your grant.

[HE Cluster 5 Info Day](#)



### Advisory services

Look for your National Contact Point [here](#).

### General description

[Horizon Europe](#) (HE) is the EU's key funding programme for research and innovation that aims to tackle climate change, boosts the EU's growth, and promotes industrial competitiveness and optimises investment impact within a strengthened European Research Area. Apart from the EU members, the third countries associated to HE and participants with low- or middle-income third countries are eligible for funding (the full list can be accessed [here](#)).

### Types of projects funded

Projects funded under HE can be divided into three main types: 1) **RESEARCH, AND INNOVATION ACTIONS (RIA)** aim at establishing new knowledge or exploring a new or improved technology, product, process, service or solution (the EU funding covers up to 100% of the project costs); 2) **INNOVATION ACTIONS (IA)** aim at producing plans or designing for new or improved products, processes or services including prototyping, testing, demonstrating, piloting, large-scale product validation and market replication (the EU funding covers up to 70% of the project costs); 3) **COORDINATION AND SUPPORT ACTIONS (CSA)** that aim at improving cooperation among EU and associated countries to strengthen the European Research Area including standardisation, dissemination, awareness-raising, communication, and networking activities (up to 100% of the project costs).

### Topics of calls for proposals

As part of the 2023 – 24 work programme, different calls for proposals will be launched, also in the areas of mobility and transport, sustainable energy, energy security, and water management.



## Call for proposals (non-exhaustive list)

### Calls under Cluster 5. Climate, Energy and Mobility

Opening: 12 September 2023

Deadline: 16 January 2024

- [HORIZON-CL5-2024-D3-01-08](#): Demonstration of sustainable wave energy farms (IA)
- [HORIZON-CL5-2024-D3-01-12](#): Energy Management Systems for flexibility services (IA)
- [HORIZON-CL5-2024-D3-01-03](#): Demonstration of improved intermediate renewable energy carrier technologies for transport fuels (IA)
- [HORIZON-CL5-2024-D3-01-05](#): Development of carbon fixation technologies for biogenic flue gases (RIA)
- [HORIZON-CL5-2024-D3-01-10](#): Next generation of renewable energy technologies (RIA)

Opening: 7 December 2023

Deadline: 18 April 2024

- [HORIZON-CL5-2024-D2-01-04](#): Emerging energy technologies for a climate neutral Europe (RIA)
- [HORIZON-CL5-2024-D5-01-07](#): Accelerating climate neutral aviation, minimising non-CO2 emissions (RIA)
- [HORIZON-CL5-2024-D5-01-18](#): Assessment of air pollutant emissions from low-carbon fuels in the heavy-duty, aviation, and maritime sectors (RIA)

Opening: 7 May 2024

Deadline: 5 September 2024

- [HORIZON-CL5-2024-D6-01-11](#): Effects of disruptive changes in transport: towards resilient, safe and energy efficient mobility (RIA)
- [HORIZON-CL5-2024-D6-01-07](#): Scaling up logistics innovations supporting freight transport decarbonisation in an affordable way (IA)
- [HORIZON-CL5-2024-D6-01-08](#): Improved transport infrastructure performance – Innovative digital tools and solutions to monitor and improve the management and operation of transport infrastructure (IA)

### Calls under Cluster 6. Food, Bioeconomy, Natural Resources, Agriculture & Environment

Planned opening: 17 October 2023

Deadlines: 22 February 2024

17 September 2024

- [HORIZON-CL6-2024-BIODIV-02-1-two-stage](#): Demonstrating Nature-based Solutions for the sustainable management of water resources in a changing climate, with special attention to reducing the impacts of extreme droughts (IA)
- [HORIZON-CL6-2024-CircBio-02-4-two-stage](#): New circular solutions and decentralised approaches for water and wastewater management (IA)
- [HORIZON-CL6-2024-CircBio-02-3-two-stage](#): Increasing the circularity in electronics value chains (IA)



### Forthcoming calls under CCAM Partnership

Opening: 7 May 2024

Deadline: 5 September 2024

- [HORIZON-CL5-2024-D6-01-01:](#) Centralised, reliable, cyber-secure & upgradable in-vehicle electronic control architectures for CCAM connected to the cloud-edge continuum (RIA)
- [HORIZON-CL5-2024-D6-01-02:](#) Scenario-based safety assurance of CCAM and related HMI in a dynamically evolving transport system (RIA)
- [HORIZON-CL5-2024-D6-01-03:](#) Orchestration of heterogeneous actors in mixed traffic within the CCAM ecosystem (IA)
- [HORIZON-CL5-2024-D6-01-04:](#) AI for advanced and collective perception and decision making for CCAM applications (RIA)

### Forthcoming calls under ZEWT Partnership

Opening: 7 December 2023

Deadline: 18 April 2024

- [HORIZON-CL5-2024-D5-01-13:](#) Demonstration of Technologies to minimise underwater noise generated by waterborne transport (IA)

- [HORIZON-CL5-2024-D5-01-11:](#) Achieving high voltage, low weight, efficient electric powertrains for sustainable waterborne transport (RIA)
- [HORIZON-CL5-2024-D5-01-14:](#) Demonstrating efficient fully DC electric grids within waterborne transport for large ship applications (IA)
- [HORIZON-CL5-2024-D5-01-12:](#) Combining state-of-the-art emission reduction and efficiency improvement technologies in ship design and retrofitting for contributing to the "Fit for 55" package objective by 2030 (IA)

### Forthcoming calls under 2ZERO Partnership

Opening: 7 December 2023

Deadline: 18 April 2024

- [HORIZON-CL5-2024-D5-01-01:](#) Smart, low-cost pervasive stationary slow charging and bi-directional solutions synergic with the grid for EV mass deployment (IA)
- [HORIZON-CL5-2024-D5-01-04:](#) Integrated flexible multipoint megawatt charging systems for electric truck mass deployment (IA)
- [HORIZON-CL5-2024-D5-01-02:](#) Integration and testing of next generation post-800V electric powertrains (RIA)





## European Innovation Council as part of Horizon Europe (Pillar III: Innovative Europe )

### Total programme budget 2021-2027



EUR 10.1 billion

### Participating countries



+ third countries associated to HE + other third countries

### Thematic priorities

Support for **any technologies and innovations** that cut across scientific, technological, sectoral and application fields or represent novel combinations.



### Call for proposals

The calls for proposals will be launched in 2024 once EIC work programme 2024 is adopted.



### Support tools

[EIC FAQs](#): overview of the most asked questions from the EIC applicants and beneficiaries



### Advisory services

Reach out to your National Contact Point [HE National Contact Point](#) or to [Access 2 EIC](#) network that supports national applicants and helps raising the quality of applications submitted under the EIC.

### General description

The [European Innovation Council](#) is one of the flagship programmes of the HE programme to support breakthrough innovations of SMEs and start-ups. A majority of the funding is awarded through 'open' calls with no pre-defined thematic priorities. Support from the EIC goes beyond funding as all beneficiaries receive access to a range of tailor-made [EIC Business Acceleration Services](#).

The EIC consists of three different support strands:

- [EIC Pathfinder](#) offers support for scientific, technological, or technology-oriented research and development in the earliest stages of development for SMEs and research consortia (TRL<sup>32</sup> 1-4). Each project can receive up to EUR 4 million.
- [EIC Transition](#) funds innovative activities of SMEs, start-ups and spin-offs that go beyond experimental proof of the principle in the laboratory (validation) with TRL 4-6. Each project can receive up to EUR 2.5 million.
- [EIC Accelerator](#) supports single companies' innovations in later stages of development (TRL 6-9). Each project can receive a grant of up to EUR 2.5 million and additional max. EUR 15 million of equity.

<sup>32</sup> Technology Readiness Level; for reference please see the scale [here](#).



## Single Market Programme

### Total programme budget between 2021-2027

 EUR ~4.2 billion

### Participating countries



### Thematic priorities

-  Food safety
-  Consumer protection
-  Effective Single Market
-  Development of standards
-  European Statistics



### Call for proposals

All the calls can be found on the [Funding & Tenders platform](#)



### Partner search & networking

Partner search is offered through the call website on the Funding and Tenders portal for each call.

### General description

As the successor programme of the COSME programme and five other support programmes of the 2014-2020 funding period, (e.g. consumer protection or financial support), the [Single Market Programme \(SMP\)](#) aims at supporting the EU single market to reach its full potential and to boost growth, competitiveness and employment. The overall objective of the SMP is to create jobs, support the long-term recovery due to the COVID-19 pandemic and ensure food safety.

Besides the EU27 Member States, Iceland, Norway and Liechtenstein, there are ongoing negotiations with [additional 12 countries](#) interested in joining the SMP Programme.

### Types of topics funded

**Activities** supported under the SMP are diverse. They consist of data gathering, analyses, studies and evaluations in support of effective enforcement and modernisation of the EU legal framework, capacity-building activities and facilitation of joint actions between EU countries, their competent authorities, the European Commission and decentralised EU agencies.

### Target audience

The SMP targets different types of stakeholders such as SMEs, cluster organisations and more. Especially the pillar on “Effective Single Market” has some interesting calls for cluster organisations coming up soon.


### Additional information

More information can be found on the [dedicated Single Market Programme website](#).



## Joint Cluster Initiatives (Euroclusters) for Europe's recovery as part of the SMP

### Total programme budget between 2021-2027

 EUR ~42 million

### Participating countries



### Thematic priorities

-  Tourism
-  Aerospace & Defence
-  Retail
-  Digital
-  Creative-cultural industry
-  Textiles
-  Proximity/Social economy
-  Construction
-  Energy-intensive industry
-  Electronics
-  Agri-food
-  Renewable Energy
-  Mobility-Transport



### Call for proposals

Other calls are expected to be launched in 2024. Upcoming calls for proposals will be published on the [Funding & Tenders portal](#).

### General description

As part of the European Single Market Strategy, the Eurocluster call aims at strengthening the resilience of cluster networks within the EU industrial ecosystem through the establishment of value chain interlinkages through European cluster networks. Moreover, the Eurocluster calls foresee to enable cluster organisations to speed up twin transition processes and to improve up- and re-skilling of the skilled workers as well as the increase internationalisation. In September 2022, the first [30 Euroclusters](#) have started their activities.

### Types of topics funded

The focus of the Euroclusters projects should be at least on one of the 14 [EU Industrial Ecosystems](#). As part of the open strand, project proposals can include several elements of different EU Industrial Ecosystems (Cross-Innovation).

### Target audience

Eurocluster projects focus on supporting cluster organisations and cluster networks. The current 30 Euroclusters offer regularly third-party support for SMEs. Open call opportunities for SMEs can be found [here](#).

### Additional information

More information can be found on the [dedicated Eurocluster website on the ECCP](#).



## Other intergovernmental and national funding for innovation

### Vanguard Initiative Pilot Projects

[The Vanguard Initiative](#), launched in 2014, is a network of 39 European regions (also from Danube Region countries), which is dedicated to **advancing industrial innovation in Europe**. By bringing innovation ecosystems together and sharing knowledge and facilities across its member regions, the Vanguard Initiative facilitates interregional collaboration, fosters interregional innovation investments, strengthens open innovation, and accelerate the introduction and market-uptake of new products and innovations in Europe.

The Vanguard Initiative is currently focused on thematic interregional [Pilot Projects](#) which have been developed through the active participation of clusters, science parks, research institutes and universities in the member regions. The Pilot Projects aim to speed up the market uptake of innovations in following eight domains:

- advanced manufacturing for energy related applications in harsh environments
- bioeconomy
- efficient and sustainable manufacturing
- high performance production through 3D-printing
- new nano-enabled products
- artificial intelligence
- hydrogen (H2)
- smart health/ personalised medicine

All Pilot Projects are close to the market (> TRL5) and therefore have a high potential for full market deployment in a time span of 3 to 5 years. In order to develop concrete results by the Pilot Projects, a 4-step methodological approach is applied: **learn, connect, demonstrate, commercialise**.

Overview of the Pilot Projects supported by the Vanguard Initiative can be found [here](#).

### EUREKA cluster calls

EUREKA is a transnational network consisting of 47 member countries and the European Commission. EUREKA offers support programmes in the context of international R&D activities of companies. In this context, EUREKA also provides funds to mixed large consortia with large companies as part of the [EUREKA cluster programme](#) and the [EUREKA network projects](#).

As part of the **EUREKA clusters**, the network offers support for collaboration projects of SMEs, knowledge institutes and end-user organisations for projects in fields such as low-carbon energy and advanced manufacturing. The focus of EUREKA clusters should be on close-to-market community activities. The average project budget is around EUR 6.75 million and calls follow the bottom-up approach. Upcoming calls will be published on the [EUREKA website](#) or national partner websites.



Besides the EUREKA cluster calls, the [EUREKA Network projects](#) offer funding for R&D projects in international cooperation consortia. The average costs per project are in average around EUR 1.34 million. The final deadline for the EUREKA Network projects is the 31 December 2025 at 20:00h CET.

# 04

**Turn your project idea  
into practice: private  
funding for innovative  
business**



EUROPEAN CLUSTER  
COLLABORATION PLATFORM

Strengthening the European economy through collaboration



## 4. Turn your project idea into practice: private funding for innovative business

This chapter provides an overview of potential types of investors and their specific characteristics, starting points and examples for relevant market intelligence as well as a practical guide to construct a convincing business model canvas.

### The financial geography of the Danube Region

The Danube Region is constituted by a vast and diverse group of countries that show **great diversity in the types and development of financial markets**. According to the typology chosen in an EIF study<sup>33</sup>, they belong to two different types of financial systems. They differentiate between bank-based, market-based and former socialist countries. While in bank-based financial systems, the allocation and monitoring of investment capital is primarily organized by banks, in market-based financial systems, bond markets take the lead role in allocation and control. The third group of former socialist countries usually show a legacy of weaker developed financial systems that are more dependent on foreign investment<sup>34</sup>.

This creates an **uneven financial geography within the Danube Region** with highly developed bank-based financial systems upstream in Germany and Austria and while the formerly socialist financial systems of the rest of the Danube countries tend to be less developed and capitalized. As a result, German and Austrian banks and corporate investors generally take an important role in the interregional financing streams. This makes **financial cooperation across the Danube Region** all the more important.

### Financing innovation: The European ‘Valley of Death’

There is a yawning gap between Europe’s world-class research and its sluggish commercialisation of innovation. Start-ups who aim to develop research output into market products often end up in the figurative ‘Valley of Death’. It describes the lack of early-stage funding that inhibits the translation of European knowledge into marketable goods and services. A similar problem arises for established SMEs which often are able to finance R&D and develop new products with the support of public funding programmes but have a hard time scaling up production and sales. The result is an estimated 95% of European patents lying idle while the remaining 5% contribute more than 40% to the European GDP in IPR-intensive industries<sup>35</sup>.

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<sup>33</sup> Moritz, A., Block, J., & Heinz, A. (2015). Financing Patterns of European SMEs: An Empirical Taxonomy. EIF Research & Market Analysis. Working Paper 2015/30. Available at:

[https://www.eif.org/news\\_centre/publications/EIF\\_Working\\_Paper\\_2015\\_30.htm](https://www.eif.org/news_centre/publications/EIF_Working_Paper_2015_30.htm) (last access 26.09.2023).

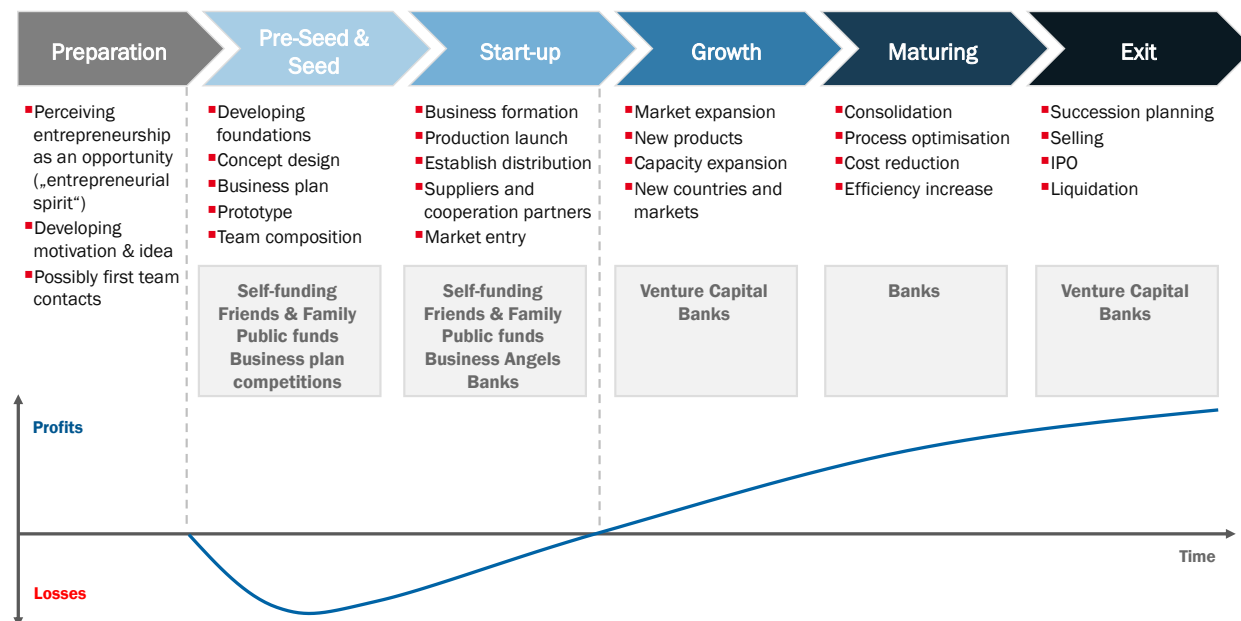
<sup>34</sup> On this point see also Nölke, A., & Vlieghart, A. (2009). Enlarging the Varieties of Capitalism: The Emergence of De-pendent Market Economies in East Central Europe. *World Politics*, 61(4), 670-702.

<sup>35</sup> European Patent Office & European Union Intellectual Property Office 2019 and Siota et al. 2020, p. 16.



The valley of death occurs in the stage after initial funding (e.g., from public funds or business angels) ends but before institutional investors like banks and venture capital are ready to support the market expansion of proven and market-ready products (see Figure 9).

**Figure 9: Start-up life cycle and financing**



Source: Own elaboration by Prognos (2023).

To overcome the valley of death and propel their business into the growth phase, entrepreneurs need to convince potential investors of their product while it is still in the incipient stage. While still existent, the problem has risen to the attention of investors and policymakers alike. New lines of public, private or hybrid funding are emerging to bridge the deadly gap. The following chapter provides an overview of private sources of financing that can complement the public funding sources shown in the previous chapter.

## Overview: Sources of private financing

Finding the right mix of financing with the right conditions aligned with the type of investment is crucial for the success and sustainability of any business. This chapter describes some of the most important sources of private financing and shows first entry points to investigate the market. The first part elaborates on the varieties of equity financing. While this type of financing is more important for startups and young businesses, it can also be a viable option for SMEs aiming to fund an innovation project or capacity expansion. The second part focuses on debt instruments usually more compatible to SMEs’ financing needs but also an option for later-stage startups.

The [Toolbox on interregional investment](#) by the Technical assistance facility for industrial modernization and investment provides a useful set of additional tools that can help investors and





entrepreneurs navigate their decision processes in planning interregional investment across the Danube macro-region.

## Equity financing

The importance of equity-based financing – venture capital, business angels, and other forms of private equity – has increased in Europe over all and in Southeastern Europe (SEE) in particular. According to a 2022 report<sup>36</sup>, combined VC funding of SEE-based startups has grown 5.9x from \$218 million in 2017 to over \$1.3 billion in 2022. The three strongest industries by combined enterprise valuation are enterprise software, fintech, and transportation. As pointed out by a report on the Romanian market, private equity and venture capital is – still – highly dependent on public funds in most places (in 2021 a decreasing share of 59% of all PE/VC funding came from government agencies)<sup>37</sup>.

**Venture capital (VC)** is generally expected to play a crucial role in the commercialization of green technologies. VC firms provide early-stage funding to startup companies in exchange for equity in the company, with the goal of generating a return on investment through an eventual exit, such as an initial public offering (IPO) or acquisition by a larger company. VC firms which are focused on specific sectors or innovation ecosystems<sup>38</sup> can also provide valuable support beyond funding, including business strategy guidance, mentorship, and network connections.

Although VC certainly plays an important role in financing business investment and innovation, it also comes with some **limitations** that are worth keeping in mind.<sup>39</sup> Those limitations derive from the typical business model of VC firms which aim for fast growth and high returns. The type of company that suits these expectations best is usually in software or services that are rapidly scalable and come with the promise of market domination and monopoly profits. Businesses in other fields might not fit the VC model due to higher technological or regulatory risks, lower expected growth potential, or a longer time horizon.

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<sup>36</sup> Dealroom, EIF, BVCA, EIB (2022). Startups & Venture Capital in South Eastern Europe. Available at: <https://bvca.bg/en/startups-and-venture-capital-in-south-eastern-europe-2022/> (last access 26.09.2023).

<sup>37</sup> ROPEA, Deloitte (2023). Romanian Private Equity and Venture Capital Study, May 2023. Available at: <https://ropea.ro/wp-content/uploads/2023/05/Romanian-private-equity-and-venture-capital-study.pdf> (last access 26.09.2023).

<sup>38</sup> A study on the Hungarian venture capital landscape found that out of fifteen analysed venture capital actors only six were general investors, while the others were focused on specific industries. Besenyei, B. (2022). Study on the Hungarian Venture Capital Landscape. Capstone Summary. Central European University, Budapest, p. 5. Available at: [https://www.etd.ceu.edu/2022/besenyei\\_balazs.pdf](https://www.etd.ceu.edu/2022/besenyei_balazs.pdf) (last access 26.09.2023).

<sup>39</sup> For a more general evaluation of VC's role in financing innovation, see Lerner & Nanda 2020.



Though VC funds are usually not bound to any country or region in their operations, there remains a certain **home bias of investors**. It can therefore make sense to look out for domestic and regional VC funding<sup>40</sup>. For some first entry points to gather information on possible financiers, see Box 1 below.

Another variety of private funding available to startups is provided by established, large companies in the form of **corporate venture capital (CVC)**. CVC therefore is a type of venture capital investment made by established corporations in emerging startups that are seen as strategically relevant to the corporation's core business or long-term growth objectives. A study on the Hungarian venture capital landscape found that "governments or corporates back the most influential five investors, representing 84% of the total funds"<sup>41</sup>.

**Business angels** are typically high-net-worth individuals who invest their own capital in startups in exchange for equity or convertible debt and can be an important source of financing in the early stages of a company's development. Beyond financial support, business angels can offer strategic guidance, mentorship and access to their networks which can be critical to overcome the 'valley of death' and navigate the challenges of developing and commercialising innovative sustainable technologies.

#### **Box 1: Information resources on equity financing in the Danube Region**

**General market intelligence** on private equity and venture capital actors can be consulted at the following sources:

- **InvestEurope**, the European private equity association, provides [data and reports](#) on fundraising, investment and divestment from over 1,800 private equity and venture capital firms in Europe.
- **Dealroom**, a market intelligence provider with a focus on European venture capital, [monitors](#) startup and venture capital developments and provides reports, briefings and other materials.
- Further recent insights into the European investment landscape can be found in the [State of European Tech](#) report for 2022.
- The [Startups & Venture Capital in South Eastern Europe 2022](#) report, a cooperation between the EIF, EIB, the Bulgarian Private Equity and Venture Capital Association (BVCA), and Dealroom, provides a good overview of private equity financing in SEE including a range of regional examples of "unicorn" startups.

A further useful source of information are the **national venture capital associations**:

- **Austria**: [Austrian Private Equity and Venture Capital Organisation \(AVCO\)](#)
- **Bulgaria**: [Bulgarian Private Equity and Venture Capital Association \(BVCA\)](#)
- **Croatia**: [Croatian Private Equity and Venture Capital Association \(CVCA\)](#)
- **Czechia**: [Czech Private Equity and Venture Capital Association \(CVCA\)](#)
- **Germany**: [German Private Equity and Venture Capital Association \(BVK\)](#)
- **Hungary**: [Hungarian Venture Capital and Private Equity Association \(HVCA\)](#)

<sup>40</sup> Gaar, E.; Scherer, D.; Schiereck, Dirk (2020): The home bias and the local bias: A survey, *Management Review Quarterly*, 72, 21-77. Available under: <https://link.springer.com/article/10.1007/s11301-020-00203-8> (last access 19.02.2023).

<sup>41</sup> Besenyei, B. (2022). Study on the Hungarian Venture Capital Landscape. Capstone Summary. Central European University, Budapest, p. 5. Available at: [https://www.etd.ceu.edu/2022/besenyei\\_balazs.pdf](https://www.etd.ceu.edu/2022/besenyei_balazs.pdf) (last access 26.09.2023).



- **Romania:** [Romanian Private Equity Association \(ROPEA\)](#)
- **Slovakia:** [Slovak Venture Capital & Private Equity Association \(SLOVCA\)](#)
- **Slovenia:** n/a

The same goes for **business angel networks**:

- **Austria:** BA association merged with AVCO, see: <https://www.invest-austria.com/en/>; see also the [matching platform](#) for startups and business angels by aws
- **Bulgaria:** [CEO Angels Club](#)
- **Croatia:** [CRANE](#)
- **Czechia:** [Czech Business Angel Association](#)
- **Germany:** [BAND](#)
- **Hungary:** [Hungarian Business Angel Network](#)
- **Romania:** [Business Angels Romania](#); [TechAngels](#)
- **Slovakia:** n/a
- **Slovenia:** [Business Angels of Slovenia](#)

Support for developing businesses at an early stage is also provided by **accelerators and incubators**:

- The [ACCELERATOR programme](#) (2017-19) from the Interreg Danube Transnational Programme created a range of accelerators in participating countries. A list and presentation can be found at the linked project page.
- There are plenty of useful **lists of accelerators and incubators** available online, e.g., in [Hungary](#), [Romania](#), [Austria](#), etc.

## Debt financing

Debt financing in the form of loans, credit lines or – recently – quasi-equity is important for businesses that want to scale up their production, modernise and digitalise their structures, or bring new products to the market. These financing instruments are provided by commercial banks, often supported by public investment banks and other public agencies through co-financing or guarantees.

**Bank lending is crucial to easing SMEs' financing constraints** that can hamper innovation, expansion, and modernisation. While local banks often have a closer relationship with SMEs and a better overview of local and regional economies, large and foreign-owned banks can be just as likely to provide financing to SMEs.<sup>42</sup> This point is essential for the Danube Region, where local banking systems are often underdeveloped and interregional and foreign lending is vital for filling financing gaps (see subchapter on the financial geography of the Danube Region above).

<sup>42</sup> Beck, T. (2013). Bank Financing for SMEs – Lessons from the Literature. National Institute Economic Review, 225:1. Available at: <https://openaccess.city.ac.uk/id/eprint/19113/1/SMEs%20finance-NIER%20paper-revised.pdf> (last access 26.09.2023).



Banks can also be an important **source of financing for startups**, but they are typically not the primary source of funding for early-stage ventures. This is because banks generally require collateral or a proven track record of profitability, which many startups do not have. However, as startups mature and establish a track record of revenue and profitability, they may become eligible for various forms of bank financing, including loans, lines of credit, and other debt instruments.

### **Box 2: Information resources on debt financing in the Danube Region**

**National banking associations** can provide a good overview of the national banking landscape:

- **Austria:** [Austrian Bankers' Association](#)
- **Bulgaria:** [Association of Banks in Bulgaria](#)
- **Croatia:** [Croatian Banking Association](#)
- **Czechia:** [Czech Banking Association](#)
- **Germany:** [Association of German Banks](#); [Association of German Cooperative Banks](#); [Savings Banks Association](#)
- **Hungary:** [Hungarian Banking Association](#)
- **Romania:** [Romanian Association of Banks](#)
- **Slovakia:** [Slovak Banking Association](#)
- **Slovenia:** [Bank Association of Slovenia](#)

For cross-border lending, larger banks have an **international desk** as a first point of contact. Some prominent examples include:

- **Erste Group** (Austria): [International Desk](#) with country representatives for Austria, Bosnia and Herzegovina, Croatia, Czech Republic, Hungary, Moldova, Montenegro, North Macedonia, Romania, Serbia, Slovakia, and Slovenia.
- **Raiffeisen Bank International** (Austria): [International Network](#) covering Austria, Bosnia and Herzegovina, Croatia, Czech Republic, Hungary, Romania, Serbia, Slovakia, Ukraine, and others.
- **OTP Bank** (Hungary): International [business](#) services via the [OTP Group](#) in Bulgaria, Croatia, Hungary, Montenegro, Romania, Slovenia, Serbia, Ukraine, and others.
- **Banca Transilvania** (Romania): [Business](#) portal for SMEs



## The role of EU support for private funding

The **European Union** provides a range of important instruments (see also Ch. 3) to finance innovation, expansion, and modernisation in startups and SMEs. Next to direct grants, loans or – most recently – [direct equity investment](#), a large part of EU funding is earmarked to back up and facilitate private investment<sup>43</sup>. The European Commission also acts to facilitate matching processes and provide information about [access to finance](#).

The [European Investment Bank \(EIB\)](#) is a key financing partner for [SMEs and Mid-caps](#) as well as for startups. The EIB supports businesses through [loans for on-lending](#) and partial [portfolio guarantees](#) to banks, advisory services with a broad range of assistance to urban and regional development. Mid-cap companies can receive [direct support for R&D investments](#). An adjacent line of financing is provided through [venture debt](#) for SMEs and Mid-caps developing highly innovative technologies, solutions or platforms. The EIB is actively [supporting](#) the macro-regional strategy for the Danube Region.

The [European Investment Fund \(EIF\)](#) is the EU's provider of risk finance to small and medium-sized enterprises (SMEs). Its main shareholder is the EIB, accompanied by the European Commission, as well as a broad range of public and private banks and financial institutions. It [facilitates SMEs' access to finance](#) in cooperation with a wide range of financial intermediaries and backs up banks and guarantee institutions active in SME lending with [portfolio and counter-guarantees](#). The EIF is also invested in private venture capital funds such as [Ananda Impact Ventures](#) and [Junction Growth Investors](#).

In February 2023 five EU member states and the EIB Group have launched the European Tech Champions Initiative ([ETCI](#)) which will be operated as a fund of funds by the EIF as the backbone of the [pan-European Scale-up Initiative](#) with the goal to back European high-tech companies in their late-stage growth phase.

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<sup>43</sup> See also [https://commission.europa.eu/business-economy-euro/growth-and-investment/financing-investment/financing-programmes-smes\\_en](https://commission.europa.eu/business-economy-euro/growth-and-investment/financing-investment/financing-programmes-smes_en) (last access 27.09.2023).



## Developing a Business Model Canvas

The Business Model Canvas (BMC) is a **strategic visualisation tool** for developing and displaying a business model. It helps to get a clear view of a company's operations and identify key business components. A BMC does not replace a formal business plan but provides a bird's-eye perspective on the business model that allows for further strategic development as well as easy understanding and communication.

It can provide the structure for the **collaboration** of different stakeholders and facilitate discussions and brainstorming sessions, allowing everyone to contribute their ideas and insights. At the same time, it is **flexible** enough to allow for an **iterative** process when rapidly developing and testing different business models. In its focus on creating and delivering **value** to customers, it is useful to both new ventures and existing businesses and can be applied to a wide range of business scenarios.

A typical BMC comprises the following sections as shown in Figure 10 below.

**Figure 10: Structure of a Business Model Canvas**

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
	Key Resources		Channels	
Cost Structure		Revenue Streams		

Source: Own elaboration by Prognos (2023).

Detailed **guides for constructing a BMC** can be obtained from the following sources:

- Strategyzer explains the structure and [building blocs](#) of the BMC.
- Indeed has a detailed [walkthrough](#) of what a BMC should contain and how it can be elaborated.
- **Templates** for a BMC can be found, for example, at [miro](#) or [canvanizer](#).

Further helpful **resources on scaling up**:

- **Tech Nation's** [guide](#) to scaling provides useful an abundance of checklists, tips, and explainers for businesses at the early, mid, and late stage.
- **'An Entrepreneur's Guide to Surviving the "Death Valley Curve"'** by Thomas Ritter and Carsten Lund Pedersen in the [Harvard Business Review](#).



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## Annex

**Table 1: Overview of Slovenian cluster organisations registered on the ECCP and their addressed EU industrial ecosystem, by region**

N°	Cluster organisation	Industrial Ecosystem	Region
1	ITC - Innovation Technology Cluster Murska Sobota	Agri-food	Eastern Slovenia
2	SiEnE, Slovenian Energy and Environment Partnership in Defence	Renewable Energy	
3	SRIP PSIDL, Strategic Research and Innovation Partnership on Smart Buildings and Home with Wood Chain	Construction	
4	Strategic Research and Innovation Partnership - Networks for the Transition to the Circular Economy	Renewable Energy	
5	TCS - Toolmakers Cluster of Slovenia; Zavod C-TCS	Mobility, Transport & Automotive	
6	TECES, Green Tech Cluster	Electronics	
7	TECOS - Industrial Association of Slovenian Toolmakers	Electronics	
8	AE-ROBO-NET	Agri-Food	Western Slovenia
9	GIZ ACS Automotive cluster of Slovenia	Mobility, Transport & Automotive	
10	ICT Innovation network, Chamber of Commerce and Industry of Slovenia, ICT association of Slovenia	Digital	
11	ICT Techology Network Institute	Digital	
12	Poligon Creative Centre / Poligon Institute	Creative & Cultural Industries	
13	Poly4EmI hosted by Anteja ECG d.o.o.	Energy Intensive Industries	
14	SRIP HRANA - Strategic Research and Innovation Partnership for Sustainable Food Production	Agri-Food	
15	SRIPToP	Digital	
16	Turistico gostinska zbornica Slovenije/Tourism and Hospitality Chamber of Slovenia	Tourism	
17	Wood Industry Cluster Slovenia	Construction	
18	CONSTRUCTION CLUSTER OF SLOVENIA	Construction	
19	Slovenian innovation hub,European Economic Interest Grouping, SIH EEIG	Health	

Source: ECCP (2023) and own adaptations.