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COLLABORATION PLATFORM

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Input Paper

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Authors:

Dr. Jan-Philipp Kramer (Prognos)

Fabian Schmidt (Prognos)

Felix Ginzinger (Prognos)

Vincent Vogelsang (Prognos)

Joseba Unzaga Rubio (Prognos)

Dr. Athanasios G. Konstandopoulos (CHORUS Cluster)

Chrysoula Oikonomidou (CHORUS Cluster)

Brussels, March 2025

Table of Contents

Figures

Tables

Introduction

The primary purpose of this Input Paper is to provide a set of relevant information supporting the innovative efforts of the participants in the Cluster Collaboration Lab (C2Lab) that takes place in Zaragoza, Spain, on 19-20 March 2025.

The C2Labs offer 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 and the development of joint applications for European funding calls. **The ideas for projects presented at this C2Lab shall strengthen the EU Twin Transition and enhance the resilience and competitiveness of the European industry.**

At the event in Zaragoza, the capital of the autonomous community of **Aragon**, joint project creation will focus on **harnessing Artificial Intelligence (AI) to address key economic and societal challenges**. Participants will collaborate on AI-driven solutions in areas such as industrial transformation, sustainability, healthcare, crisis management, smart cities, and dual-use technologies. By fostering synergies among clusters, businesses, and research institutions, the C2Lab aims to accelerate the development of innovative AI applications that align with European strategic priorities.

In view of the above, the **central objective of this paper is to offer suitable assistance and practical guidance for the development and implementation of innovative projects that foster greener, more digital, and resilient economies**. Specifically, it provides insights into relevant funding opportunities, strategic priorities, and collaboration mechanisms that can help participants refine their project ideas and bring them closer to implementation. **Chapter 1** examines Europe's position in the global AI landscape, highlighting strengths in high-performance computing and industrial specialisation, alongside challenges. It also outlines key AI policies and strategies at the European, national, and regional levels, with a focus on Spain's AI framework and **Aragon's** regional strategic approach to industrial AI applications. **Chapter 2** provides a brief economic profile of Spain, offering insights into its key economic indicators, innovation ecosystems, and industrial clusters. This contextual overview helps to frame the discussion on AI innovation and collaboration within Spain's broader economic landscape. **Chapter 3** outlines the key steps involved in developing a successful project proposal. Building on this, Chapters 4 and 5 explore how to turn AI-driven project ideas into actionable initiatives. **Chapter 4** outlines public funding opportunities at European, national, and intergovernmental levels, including relevant programmes, calls for proposals, and support mechanisms. **Chapter 5** covers private funding options such as venture capital, business angels, banks, and impact investors to help bring AI innovations from research to commercialisation.

01

Challenges in the global AI technology race and the case of industrial AI application

1. Challenges in the global AI technology race and the case of industrial AI application

Digital technologies, particularly AI, big data and digital security, are considered advanced technologies.[1] Not only do they have the broadest impact, but they are also advancing at the fastest pace. However, it has become increasingly clear for several years that the European Union (EU) and its Member States are lagging behind their main competitors, the United States (US) and China, in the global AI race. The recently published report on the competitiveness of the EU, produced under the auspices of Mario Draghi, identifies striking weaknesses in the field of AI, particularly in Research and Development (R&D) spending, cloud services and AI models. At the same time, the report recognises strengths in European high-performance computing centres and research into quantum technologies.[2] While American companies dominate the development of advanced large language models (LLMs) for generative AI, even promising European contenders like Mistral struggle to keep pace. Difficulties arise from the lack of venture capital and the availability of qualified data scientists.[3]

As the release of the new Chinese generative AI model Deep Seek showed, the technological race is not linear. While one path to competitiveness is investing heavily in computing power, particularly through advanced GPU chips for training AI models, another lies in optimising model training and development strategies and leapfrogging on existing results. A third crucial aspect is how AI models can be effectively applied and adapted across different sectors and industries. This presents a chance for European businesses to compete. Although the EU may not be at the forefront of large-scale generative AI models, its companies and clusters possess deep, specialised expertise in industrial automation. This positions Europe well to lead in industry-specific AI applications.[4] The strength of European companies and clusters in Industry 4.0 (including Internet of Things (IoT) systems), net zero technologies, healthcare and biotechnology, dual use technologies, and smart city development is both endangered by global AI developments and a source of strength for competing in the global race to transform AI potential into real competitive advantages. A selection of examples illustrating these AI applications can be found in Box 1.

[1] Kroll, H.; Berghäuser, H.; Blind, K.; Neuhäusler, P.; Scheifele, F.; Thielmann, A.; Wydra, S. (2022). Key Enabling Technologies. Study on the German innovation system No. 7-2022. Fraunhofer ISI. Ed.: Commission of Experts for Research and Innovation (EFI). Available online: https://publica.fraunhofer.de/entities/publication/c4d699f6-6ddd-4446-bc64-43746c3b0ce8/details (last access 28.02.2025).

[2] Draghi, M. (2024). The future of European competitiveness. Part B | In-depth analysis and recommendations. September 2024. Available online: https://commission.europa.eu/document/download/ec1409c1-d4b4-4882-8bdd-3519f86bbb92_en?filename=The%20future%20of%20European%20competitiveness_%20In-depth%20analysis%20and%20recommendations_0.pdf (last access 28.02.2025).

[3] Financial Times (2025). Has Europe's great hope for AI missed its moment? Available online: https://www.ft.com/content/fa8bad75-dc55-47d9-9eb4-79ac94e54d82 (last access 28.02.2025).

[4] Melguizo, Ángel (2025). Deep pockets, DeepSeek, and the EU's digital drift. ECFR Commentary. Available online: https://ecfr.eu/article/deep-pockets-deepseek-and-the-eus-digital-drift/ (last access 26.02.2025).

Box 1: AI technology trends identified in the ECCP Trend Universe

The **ECCP Trend Universe**[5] provides a unique **technology monitoring** platform that is open for all registered ECCP users. In the Trend Radar, clusters can assess their strengths and weaknesses in each of the 14 industrial ecosystems, including the Digital ecosystem. Furthermore, the content area shows regularly updated articles showcasing recent technological developments in the ecosystem.

Recent examples include:

- *Rutronik*, a German electronics wholesaler, plans to replace traditional warehouse operations with AI-driven logistics. In partnership with AI specialist Collective Mind, the company is automating logistics processes to improve flexibility, reduce costs, and enhance efficiency.
- The *Universitat Politècnica de València* (UPV) has now developed a heat pump for private households that is completely emission-free. This is made possible by using propane or other natural fluids to reach higher energy-efficiency than conventional aerothermal energy. Intelligent systems warn of possible failures and monitor efficiency.
- The project "GenISys" of the *University of Wuppertal*, together with partners from plant engineering, aims to make the construction of filling plants more intelligent and resource-efficient through generative AI models.

Visit and explore the ECCP Trend Universe **here**.

On a policy level, the EU, Member States and regions have actively shaped the regulatory and support framework for AI development and implementation in Europe.

- At the European level, the EU's strategic framework for AI policy was defined in 2018 and updated in 2021 under the "Coordinated Plan on Artificial Intelligence".[6] In 2024, the EU pushed its AI agenda forward with the **AI Act[7] and the accompanying AI innovation package**.[8] While the former defines the regulatory framework for AI use, the latter sets out the EU's support activities for AI development. In particular, it includes the **GenAI4EU initiative**, which seeks to foster the creation of innovative AI applications across Europe's 14 industrial ecosystems and the public sector. Its key focus areas encompass robotics, healthcare, biotechnology, manufacturing, mobility, climate, and virtual environments[9].

[5] Rewatch the ECCP Cluster Talk on the Trend Universe here: https://www.youtube.com/watch?v=mpUp_xYG52c (last access 28.02.2025).
[6] European Commission (2018/2021): Coordinated Plan on Artificial Intelligence. Available online: https://digital-strategy.ec.europa.eu/en/policies/plan-ai (last access 28.02.2025).
[7] European Commission (2024): AI Act. Available online: https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai (last access 28.02.2025).
[8] European Commission (2024): Commission launches AI innovation package to support Artificial Intelligence startups and SMEs. Available online: https://ec.europa.eu/commission/presscorner/detail/en/ip_24_383 (last access 28.02.2025).
[9] European Commission (2025): EU launches InvestAI initiative to mobilise €200 billion of investment in artificial intelligence. Available online: https://ec.europa.eu/commission/presscorner/detail/en/ip_25_467 (last access 28.02.2025).

- In Spain, the government has described its strategic framework in the "Artificial Intelligence Strategy 2024".[10] This strategy addresses both input factors, such as supercomputer infrastructure and AI talent development, and application areas across the public and private sectors, particularly in SMEs.
- At the regional level, the "Aragonese Artificial Intelligence Strategy" is integrated into Aragon's Smart Specialisation Strategy (S3).[11] It aims to position Aragon's leading sectors as frontrunners in industrial AI applications (see also Chapter 2 on Spanish S3 priorities).

Recent studies provide insights into the current state of European AI innovation policy. A special report by the European Court of Auditors[12] highlights the need for improvements in the EU's governance framework and investment instruments. The Draghi Report identifies several key measures[13] to strengthen Europe's R&D performance in AI, including:

- **A European investment programme** to develop AI skills, building on the AI Innovation Package.
- **Prioritising sector-specific AI applications** in strategic industries.
- **Harmonising and simplifying AI regulations**, particularly in relation to GDPR and the AI Act.

The acceleration of the development of sectoral AI applications can be implemented via competition formats such as those of the European Innovation Council (EIC) and European Space Agency (ESA). A recent study on coordination measures for the EU's competitiveness also proposes a similar approach to establish a European 'Advanced Research Projects Agency' (EU-ARPA) along the lines of the US DARPA.

[10] Government of Spain, Ministry for the digital transformation and transformation of the civil service (2024): Estrategia de Inteligencia Artificial 2024. Available online: https://digital.gob.es/dam/es/portalmtdfp/DigitalizacionIA/Estrategia_IA_2024.pdf (last access 28.02.2025).
[11] Government of Aragon (2022): Estrategia Aragonesa de Inteligencia Artificial. Available online: https://www.aragon.es/-/la-estrategia-aragonesa-de-inteligencia-artificial (last access 28.02.2025).
[12] European Court of Auditors (2024): EU Artificial Intelligence Ambition. Stronger Governance and Increased, More Focused Investment Essential Going Forward. Special Report 08/2024. Available at: https://www.eca.europa.eu/ECAPublications/SR-2024-08/SR-2024-08_EN.pdf (last access 06.03.2025).
[13] Draghi, M. (2024). The future of European competitiveness. Part B | In-depth analysis and recommendations. September 2024. Available online: https://commission.europa.eu/document/download/ec1409c1-d4b4-4882-8bdd-3519f86bbb92_en?filename=The%20future%20of%20European%20competitiveness_%20In-depth%20analysis%20and%20recommendations_0.pdf (last access 28.02.2025).

02

Context: Economic profile of Spain and its innovation ecosystem

2. Context: Economic profile of Spain and its innovation ecosystem

Since this C2Lab is taking place in Zaragoza and C2Lab events have a supra-regional focus, this chapter will provide an overview of the economic profile of Spain and its innovative ecosystem, with a particular emphasis on the Aragon region. As of 2024, Spain has a population of approximately 48.6 million, making it the fourth populous EU Member State.[14] Administratively, Spain is divided into 17 autonomous communities and two autonomous cities.[15] The region of Andalusia is the largest by population, with roughly 8.6 million residents, accounting for 18% of the country's total population. Other populous regions in Spain include Catalonia and Madrid, with populations of around 8 million and 7 million, respectively.[16]

Aragon, the region hosting the C2Lab event, is located in northeastern Spain. The region exhibits a population of roughly 1.4 million, accounting for 2.8% of Spain's total population.[17] For the regional economy, manufacturing is of great importance (18.7% of GDP; national average 12.5%), particularly the motor vehicle industry, as well as the agricultural sector, contributing 5.5% of GDP (national average of 2.6%).[18] Aragon is a highly export-oriented region with exports accounting for 39.3% of GDP, far above the national average of 28.9%. The most exported goods are motor vehicles, food and chemical products.[19]

The following section will provide a concise economic overview of Spain, encompassing key aspects, such as the macroeconomic profile, employment composition and innovation performance.

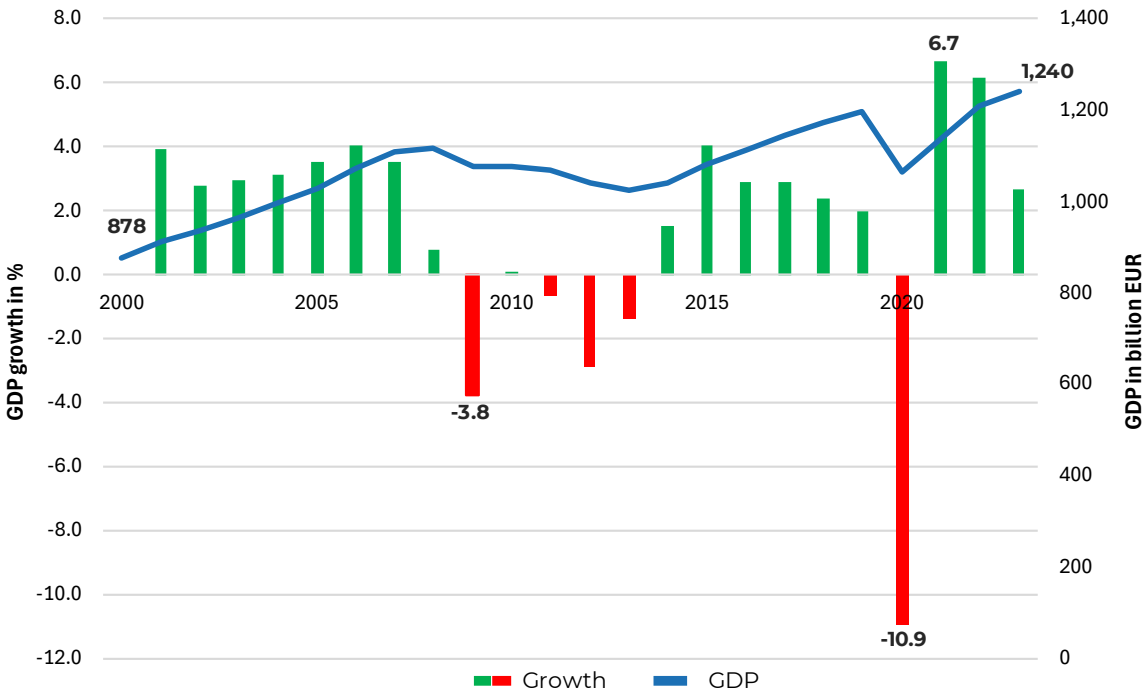
Spain and its macroeconomic picture

Spain is the fourth-largest economy among the EU27 Member States, following Germany, France, and Italy. The country has exhibited a modest economic performance in recent years, with a real GDP of € 1.2 trillion in 2023 (see Figure 1).[20] Between 2000 and 2023, Spain's average annual GDP growth rate was 1.7%, slightly below the EU average of 2%. During this period, the Spanish economy experienced two major recessions. The first followed the 2008 financial crisis, from which Spain struggled to recover compared to other European economies. The country endured a prolonged period of stagnation and recession until 2014, when economic growth resumed. By 2017, the Spanish GDP had finally surpassed

[14] Eurostat (2025): Population on 1 January. Available online: https://ec.europa.eu/eurostat/databrowser/view/tps00001/default/table?lang=en&category=t_demo.t_demo_pop (Data retrieved on 19.02.2025).
[15] The two autonomous cities include Ceuta and Melilla.
[16] Eurostat (2025): Population on 1 January by age, sex and NUTS 3 region. Available online: https://ec.europa.eu/eurostat/databrowser/view/demo_r_pjangrp3/default/table?lang=en (Data retrieved on 19.02.2025).
[17] ibid.
[18] Caixa Bank Research (2024). Aragón. Available online: https://www.caixabankresearch.com/en/publications/autonomous-community-profiles/aragon (last access 19.02.2025).
[19] ibid.
[20] Eurostat (2025): GDP and main components (output, expenditure, and income. Available online: https://ec.europa.eu/eurostat/databrowser/view/nama_10_gdp__custom_12801476/default/table?lang=en (Data retrieved on 18.02.2025).

its pre-crisis level of 2008. The second recession occurred in 2020, triggered by the COVID-19 pandemic, causing the GDP to contract by 10.9%. However, the Spanish economy rebounded swiftly, exceeding pre-pandemic GDP levels by 2022. In 2023, Spain's GDP growth rate reached 2.7%, significantly outpacing the EU average of 0.4%.

Figure 1: Real GDP and GDP change over time in Spain

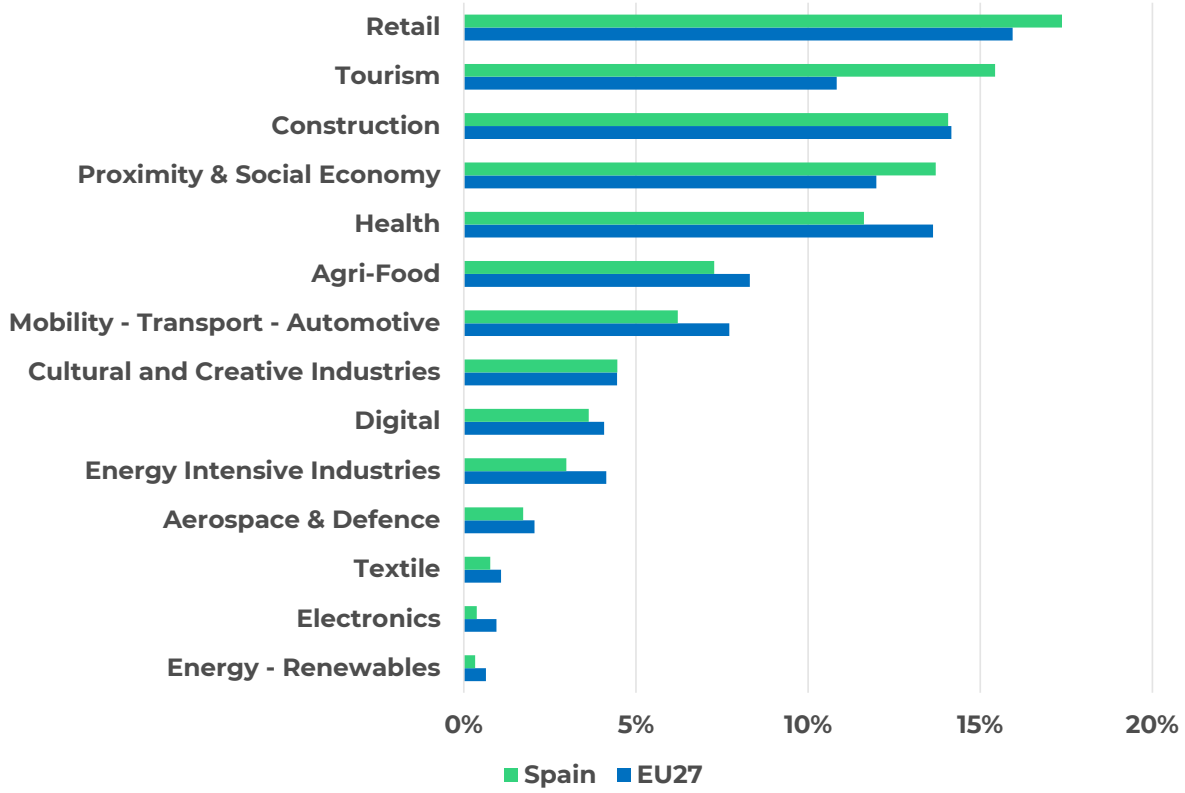


Source: ECCP (2025), own elaboration based on Eurostat.

In 2023, Spain recorded a GDP per capita (PPS) of € 34,500, below the EU27 average of € 38,100.[21] Madrid had the highest GDP per capita (PPS) in Spain, reaching € 47,000, well above both the national and EU averages. This underscores the capital region's significant economic contribution to the national economy. The Basque Country followed closely with € 44,100. In contrast, other regions showed a broader GDP per capita range, varying between € 25,900 and € 41,300, with most falling below the European average.[22] The region of **Aragon** exhibited a nominal GDP of € 46.7 billion in 2023, representing 3.1% of the Spanish economy. This translated to a GDP per capita of € 38,600, ranking 5th among Spanish regions and exceeding both the national and EU average.

[21] Eurostat (2025): Gross domestic product (GDP) at current market prices by NUTS 2 region. Available online: https://ec.europa.eu/eurostat/databrowser/view/nama_10r_2gdp/default/table?lang=en (Data retrieved on 24.02.2025).
[22] The two city-states of Ceuta and Melilla that are located in North Africa are excluded from this.

Figure 2: Employment across the industrial ecosystem in 2022



Source: ECCP (2025), own calculations and elaboration based on data from Eurostat.

To gain a better understanding of the Spanish economic profile and its employment composition, it is useful to assess its positioning across the EU's **14 industrial ecosystems in terms of employment** (See Figure 2). These industrial ecosystems have been identified by the European Commission as part of its Industrial Strategy and encompass all players operating in a value chain.[23] The Retail ecosystem leads in employment share, accounting for 17.4% of total employment across all ecosystems, exceeding the EU27 average of 15.9%. It is followed by the Tourism ecosystem, which represents 15.4% of total employment, nearly 5 percentage points above the EU average (10.8%). This highlights the Tourism sector's strength and its significant role in the Spanish economy. Construction ranks as the third-largest ecosystem by employment, contributing 14.1%, which is slightly below the EU average of 14.2%. Additionally, the Proximity & Social Economy sector is the only other ecosystem, alongside Retail and Tourism, where Spain surpasses the EU average, with an employment share of 13.7% compared to 12% in the EU.

[23] see here for more information https://clustercollaboration.eu/in-focus/industrial-ecosystems (last access 16.08.2024).

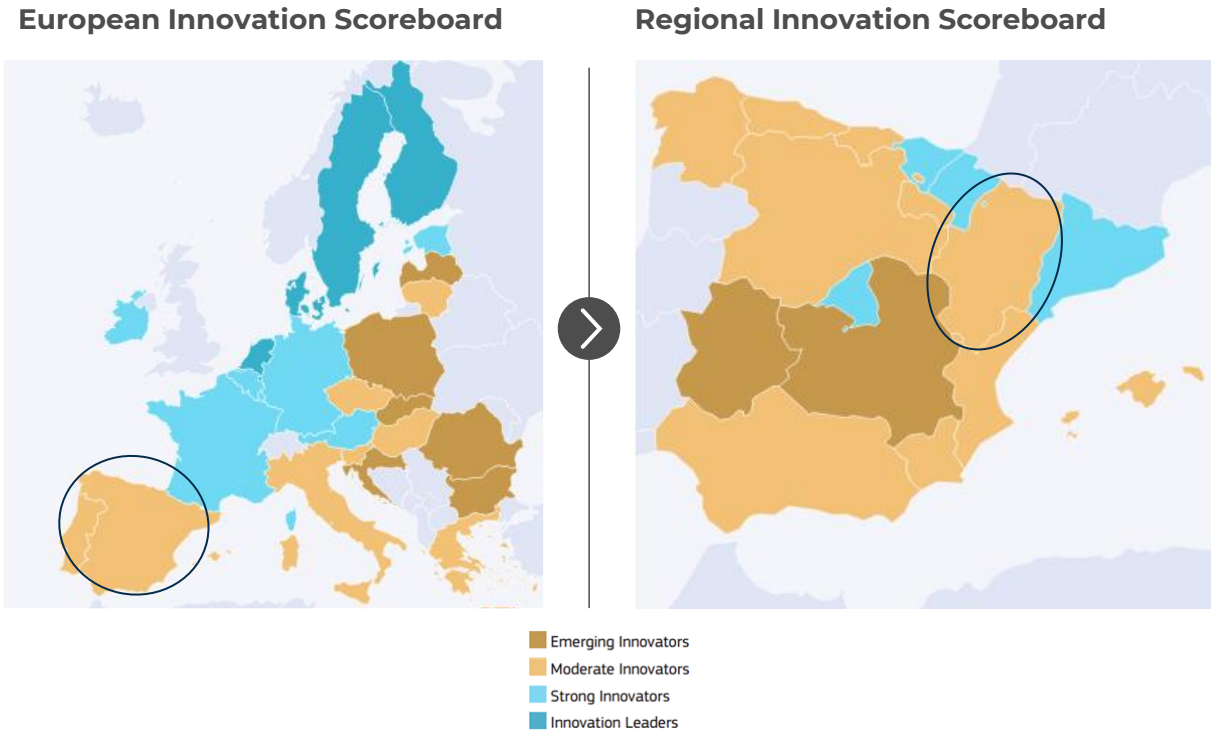
Innovation performance of Spain

Based on the most recent data from the European Innovation Scoreboard (EIS) 2024, Spain continues to be a "Moderate Innovator" (see Figure 3), with a summary score of 89.9 (EU27 = 100), thus exhibiting a lower innovation performance than the EU average while having the second highest score amongst the "Moderate Innovators". Since 2017, Spain's innovation performance has displayed a modest improvement, with an increase of 9.4%-points, making the country lag behind the EU average of 10%-points.[28] Although Spain is performing below the EU average, it has well-performing indicators across various innovation dimensions that score above the EU average (see Figure 10 in the Annex). Spain exhibits strength in the dimension of human resources (124.3), particularly in the percentage of the population with tertiary education (148.4) and the population involved in lifelong learning (125.4). The high performance in digitalisation (144.9) is driven by the substantial broadband penetration (142.2) and by individuals with above-average IT skills (148.7). In the area of finance and support, the country scores above the EU average in both venture capital expenditure (114.9) and in direct and indirect government support of R&D (116.4). Government R&D funding and venture capital both play a crucial role in fostering an environment conducive to innovation. The country also excels in public-private co-publications (116.4), indicating a robust network and cooperation between businesses, academia, and public research institutions, which are crucial for knowledge exchange and innovation. In the realm of intellectual property, Spain performs well in the field of trademark application (110.3). The dimension of sales of new-to-market and new-to-firm innovations (170.5) can be considered another area of strength, showcasing a high level of integration of innovation. Lastly, Spain's performance is exceptional in the field of resource productivity (136.9). Strengths in this area can play a crucial part in the transition to an environmentally sustainable economy.

However, the EIS also highlights specific weaknesses, underscoring the need for improvements to enhance Spain's overall innovation performance. Indicators for international scientific co-publications (93.5) and the top 10% most cited publications (89.8) both fall below the EU average, with the latter showing a declining trend. R&D expenditure in both the public and business sectors (53.5), as well as innovation expenditures per person employed (52), remain significantly below the EU average. These indicators are at levels comparable to those of an "Emerging Innovator", suggesting insufficient investment in areas critical for the commercialisation and market adoption of innovations. In the area of innovation, the indicators SMEs introducing innovations (58) and SMEs introducing business process innovations (49.9) both perform significantly below the EU average and indicate a weak innovation ecosystem of Spanish SMEs.

[28] European Innovation Scoreboard (2025). Country Profile Spain. Available online: https://projects.research-and-innovation.ec.europa.eu/en/statistics/performance-indicators/european-innovation-scoreboard/eis-2024#/eis/countries/ES (last access 19.02.2025).

Figure 3: Spain in the EU (left) and Regional (right) Innovation Scoreboard



Source: European Commission (2025). European Innovation Scoreboard.

When looking at Spain's regional innovation performances, there are differences in the performance depending on the region, as shown in the figure above. The Regional Innovation Scoreboard (RIS) classifies Spain's 19 regions into three categories: "Strong Innovators," "Moderate Innovators," and "Emerging Innovators". The Basque Country, Madrid, Catalonia, and Navarra are classified as "Strong Innovators", reflecting their high innovation capacity. The remaining regions, including Aragon, fall into the "Moderate Innovators" or "Emerging Innovators" categories. The two autonomous cities, Ceuta and Melilla, located in North Africa, record the lowest innovation performance in Spain.

Aragon is classified as a "Moderate Innovator", ranking sixth in the country with a score of 83.6. Over time, its innovation performance has improved. Several indicators drive the region's innovation strength, including tertiary education, lifelong learning, international scientific co-publications, above-average digital skills, public-private co-publications, sales of innovative products, and low air emissions from fine particulates, all of which exceed the EU average. Additionally, compared to the national average, Aragon shows strengths in the indicators of product innovators, PCT patent applications, employment knowledge-intensive activities and employment innovative enterprises (see Figure 11 in the Annex).[29]

[29] European Commission (2023): Regional Innovation Scoreboard 2023 - Regional profiles Spain. Available online: https://ec.europa.eu/assets/rtd/ris/2023/ec_rtd_ris-regional-profiles-spain.pdf (last access 03.03.2025).

While Spain has made solid progress in various areas of innovation, challenges remain, particularly in the commercialisation and implementation of innovations. Weaknesses in R&D expenditure and a relatively low innovation dynamic among SMEs indicate that additional measures are needed to strengthen Spain's innovation ecosystem. The adoption of AI is considered a key driver of innovation and technological advancement. When it comes to AI adoption, Spain outperforms the EU average, with 9.2% of its companies integrating AI solutions compared to the EU average of 8%.[30] In terms of growth, Spain's average annual growth (9.3%) is nearly four times the EU average of 2.6%. This reflects the country's growing focus on leveraging AI as a driver of innovation and competitiveness. A major factor supporting Spain's strong AI uptake is its high level of digital skills. In 2023, 66.2% of Spaniards had at least basic digital skills, well above the EU average of 55.6%.[31] A digitally skilled workforce is crucial for scaling AI integration across sectors. Looking ahead, AI adoption in the Spanish economy could boost productivity by 3% in the next ten years and increasingly complement tasks of the Spanish workforce.[32] So far, the adoption remains uneven, with large companies leveraging AI significantly more than SMEs.[33] Closing this gap will be essential to harness the potential of AI across all sectors of the economy.

[30] European Commission (2024). Spain 2024 Digital Decade Country Report. Available online: https://digital-strategy.ec.europa.eu/en/node/12846/printable/pdf (last access 10.03.2025)
[31] ibid.
[32] BBVA Research (2025). Spain | The impact of AI on the economy. Available online: https://www.bbvaresearch.com/en/publicaciones/spain-the-impact-of-ai-on-the-economy/ (last access 10.03.2025)
[33] ibid.

Spanish innovation landscape & relevant cluster actors

First, Spanish cluster organisations are examined, as they play a crucial role as intermediaries in innovation ecosystems. The European Cluster Collaboration Platform (ECCP) serves as a one-stop shop for cluster organisations at the European level, making its database a valuable resource for assessing Spain's cluster landscape. The number and sectoral orientation of ECCP-registered cluster organisations in Spain provide a comprehensive overview of the country's cluster landscape. Among the 1,221 registered cluster organisations from EU27 on the ECCP, 198 are based in Spain.

Figure 4 shows the geographical distributions of the ECCP-registered cluster organisations from Spain.[34] Catalonia hosts the highest number, with 45 cluster organisations, followed by the Basque Country (20), Andalusia (20), Madrid (18), and Aragon (15). Aragon exhibits 15 ECCP-registered cluster organisations, reflecting a diverse cluster landscape. A complete list of Aragonese cluster organisations is found in Table 1 in the Annex.

Figure 4: Spanish cluster organisations registered on the ECCP, by their regional and sectoral distribution

Source: ECCP (2025), own elaboration based on the ECCP Mapping Tool (retrieved on 21.02.2025). Note: The two city states of Melilla and Ceuta do not have any cluster organisations registered on the ECCP.

[34] The two city states of Melilla and Ceuta are not included in this list.

As mentioned in Chapter 1, the autonomous community of **Aragon** is leveraging competitive advantages in digital transformation and AI adoption. The sector is attracting significant investments, and "Digitalisation & AI Adoption" is one of Aragon's four S3 priorities. This focus is also reflected in the region's cluster landscape. To name an example, the **TECNARA - Aragon IT Cluster** is an ITC, Electronics and Telecommunications cluster which aims to promote the improvement of the competitiveness of its partners through open innovation and is active since 2011. Another example is **IDiA**. The cluster has been active in the region since 2004 and focuses on innovation in the ICT sector by fostering collaboration, sharing knowledge and developing digital talents. It can also be highlighted that IDiA is highly involved in European projects and networks. The cluster has, in close collaboration with the government of Aragon, promoted the creation of the GenAI Europe Network, aimed at strengthening European capabilities in Generative AI. This network brings together clusters and regional institutions from regions such as Cluj-Napoca, East Netherlands, Île-de-France, NRW, and Skåne, among others.

At the national level, Spain's cluster policy revolves around the Register of Innovative Business Associations (AEIs) and the Programme to Support Innovative Business Associations, both managed by the Ministry of Industry and Tourism (MINTUR). The programme strengthens cluster organisations (AEIs) as facilitators of collaboration between universities, R&D&I centres, and industry to enhance competitiveness, innovation, and internationalisation, with a strong focus on SMEs. The Programme supports cluster organisations registered in the AEI Register, classified as either **Emerging AEIs**, which are newly established and in the process of consolidation (up to four years old), or **Excellent AEIs**, which demonstrate strong project development, effective management, and financial sustainability.

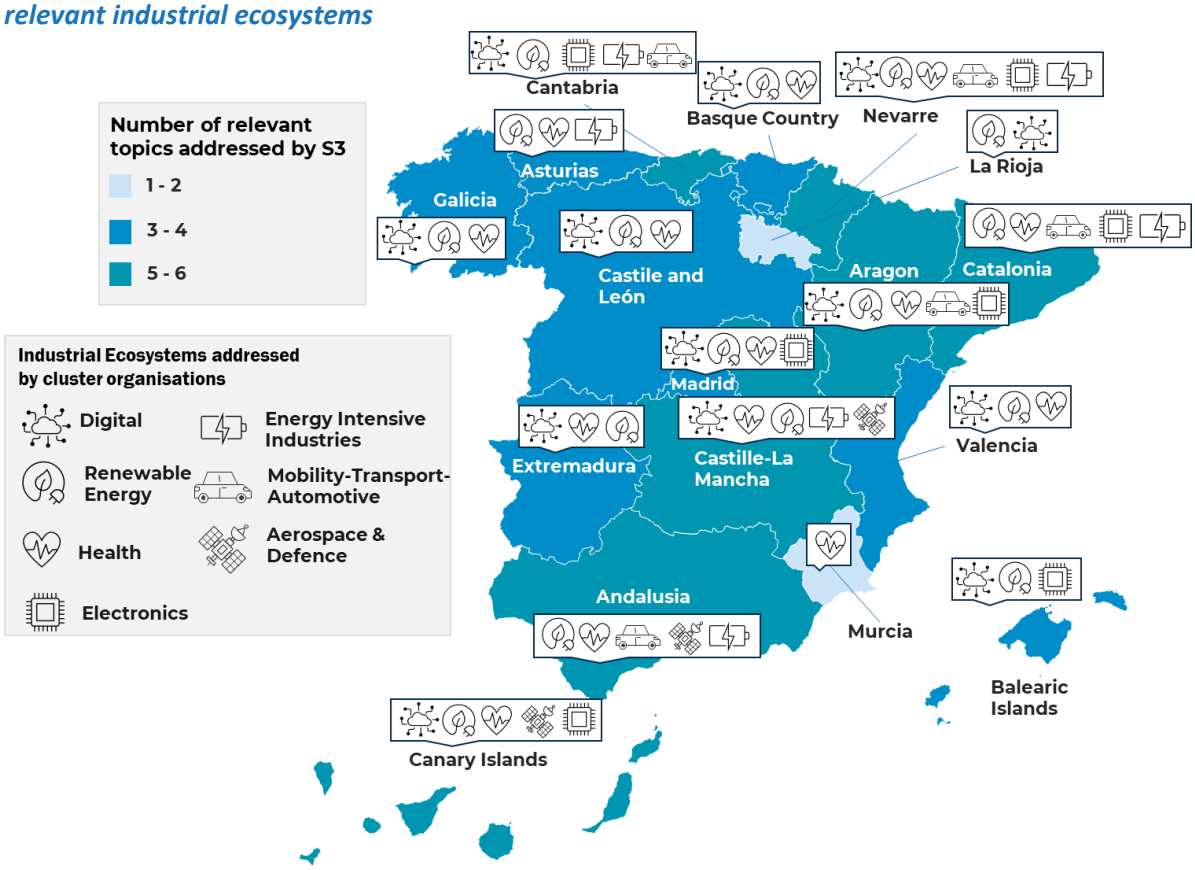
Moreover, Aragon is positioning itself as a key destination for the European digital and AI economy. The Government of Aragon is investing € 100 million in the creation of the Aragon Technology District (DAT) César Alierta in Zaragoza. Covering 79 hectares, the technology hub will be dedicated to IT companies, research facilities, and digital services. The DAT aims not only to attract businesses and create employment but also to foster synergies between technology companies, universities, and the public sector.[35]

[35] Invest in Aragon (2025). The Government of Aragon will invest 100 million euros in the creation of the DAT Alierta Technology Park in Zaragoza. Available online: https://investinaragon.com/the-government-of-aragon-will-invest-100-million-euros-in-the-creation-of-the-dat-alierta-technology-park-in-zaragoza/ (last access 28.02.2025).

Strategic innovation priorities of Spain

Smart Specialisation, like cluster policy, is a place-based approach that aims at utilising the advantages of proximity and promoting economic growth and competitiveness[36], thereby concentrating resources into defined strategic priorities.[37] Due to the similarity of the two concepts, Cluster organisations (can) play an important role in designing and implementing Smart Specialisation Strategies. AI serves as a key driver in addressing critical challenges across multiple sectors, with particular emphasis on sustainability, industrial transformation, healthcare, security, and smart cities. These sectors align with the industrial ecosystems: Digital, Renewable Energy, Health, Electronics, Energy-Intensive Industries, Mobility-Transport-Automotive, and Aerospace & Defence. Figure 5 showcases in which Spanish regions these topics are directly linked to their S3 priorities.

Figure 5: Overview of Spanish regions with priority areas directly linked to the topics of relevant industrial ecosystems



Source: ECCP (2025), own elaboration based on the S3 CoP Observatory (last access 26.02.2025).

[36] European Commission (2013): The role of clusters in smart specialisation strategies. Available online: https://op.europa.eu/o/opportal-service/download-handler?identifier=2fe44194-e5a8-42b7-ac14-9c9b8e157de3&format=pdf&language=en&productionSystem=cellar&part= (last access 28.02.2025)

[37] Prognos /CSIL (2021): Study on prioritisation in Smart Specialisation Strategies in the EU. Study on behalf of the European Commission. Available online: https://ec.europa.eu/regional_policy/en/information/publications/studies/2021/study-on-prioritisation-in-smart-specialisation-strategies-in-the-eu (last access 28.02.2025).

It can be seen that most Spanish regions prioritise between three and six of the strategic areas within their Smart Specialisation Strategies (S3). Catalonia, Aragon, and Castilla y León have the highest number of priority linkages, addressing five to six of these strategic areas.

Aragon's five S3 priorities include Digital, Renewable Energy, Health, Automotive-Mobility-Transport and Electronics. The S3 priorities are based on the regional strength of Aragon. The region attracts significant investments in data centres, digital transformation, and AI adoption.[38] Especially in the field of data centres, Aragon has become a key European destination for investments, with many major technology companies having announced investments of over € 30 billion.[39] In the field of renewable energy production, Aragon plays a leading role, with its renewable energy output exceeding 179.1% of its regional electricity consumption, further reinforcing its position in the energy transition.[40] Although aerospace and defence are not S3 priorities of Aragon, the region's Government has started the initiative “Defence logistics and industrial hub project” to promote the security and defence industrial ecosystem. [41] Regarding the mobility sector, a new battery plant is being constructed in Zaragoza with an overall investment volume of € 4.1 billion.

[38] Ibid.
[39] La Vanguardia (2024). Investments in Aragon boost Spain's capacity in data centers. Available under: https://www.lavanguardia.com/mediterranean/20241104/10076938/investment-aragon-boost-spain-capacity-data-centers-technology-economy-spain-europe-microsoft-blackstone-amazon-box2bit.html (last access 06.03.2025).
[40] Government of Aragón (2023). Boletín de Coyuntura Energética en Aragón. Available online: https://www.aragon.es/documents/d/guest/boletin-n-37-pdf (last access 19.02.2025).
[41] Invest in Aragón (2025). A new project for Aragon: a logistics and industrial Defence hub. Available under: https://investinaragon.com/a-new-project-for-aragon-a-logistics-and-industrial-defence-hub/ (last access 06.03.2025).

03

Developing a project proposal

3. Developing a project proposal

In this chapter, we first provide some guidelines for SMEs to enhance their chances of securing funding and successfully implementing their projects. Second, the use of a business model canvas to promote a project idea is presented.

A well-prepared **project proposal** should clearly demonstrate the value and impact of the project while meeting any specific requirements of the funding source. Needless to say, a prerequisite is the nucleation of a project idea for a product or process. For developing project ideas, inspiration can come from global challenges society faces, from customers and stakeholders as well as from the technical/scientific literature or by monitoring specific Calls aimed at SMEs and intermediaries (such as Clusters) e.g. from Horizon Europe (including those from European Innovation Council), I3 and/or SMP and other relevant funding sources.

Along with the project idea, it is important to have an initial identification of relevant actors that need to be engaged (collaborators, suppliers, etc), required material resources (e.g. hardware, software, access to specialized infrastructure) and human resources (skilled personnel), key performance indicators for the product or process that is under consideration vs existing solutions/state-of-the-art and broad knowledge of required funds for the various stages of development. In this respect classification of the product or process along the Technology Readiness Level (TRL), Manufacturing Readiness Level (MRL) and Investment Readiness Level (IRL) scales is a must. While the TRL focuses on the readiness of the technology itself, MRL focuses on the capability to manufacture the technology at scale and IRL provides a structured approach to evaluating the maturity of a product/process made by an enterprise, from the perspective of potential investors.

Some useful material on proposal preparation can also be consulted here:

- Practical pointers for developing a proposal for Horizon Europe project funding
- INFO Session Erasmus+ Alliances for Innovation 2023: Tips on how to write a good project proposal. Do's and Don'ts
- How to write a winning proposal for Horizon Europe
- Develop your Interreg project proposal
- Interreg NEXT MED – Guide for project preparation

A concise summary is provided below, tailored to applicants with little experience in proposal writing (e.g. SMEs, Clusters, etc), helping them navigate the process with confidence.

Guidelines for Proposal Development

1. Start Early and Understand the Requirements

- **Begin the Process Early**:

- Start the proposal writing process well in advance of the submission deadline. This allows time for refining ideas, gathering necessary information, and collaborating with partners.
- Early preparation helps avoid last-minute issues and ensures that all aspects of the proposal are thoroughly considered.

- **Familiarise Yourself with the Call for Proposals**:
  - Carefully read the call for proposals to understand the objectives, eligibility criteria, and evaluation criteria. This will guide the development of your project and ensure it aligns with the funder's expectations.
  - Review relevant documents such as program guides, funding guidelines, and evaluation criteria to ensure compliance.

2. Define Your Project Clearly

- **Clarify Objectives and Needs**:
  - Clearly define the objectives of your project. Ensure they are Specific, Measurable, Achievable, Relevant, and Time-bound (SMART).
  - Conduct a thorough needs analysis to justify the project. Clearly articulate the problem your project addresses and provide evidence to support its significance.
- **Align with Strategic Goals**:
  - Make sure your project aligns with broader strategic goals, such as those outlined in EU policy frameworks and other relevant documents, such as the Call documents. This alignment can strengthen your proposal by demonstrating its relevance to the funder's priorities.

3. Build a Strong Consortium

- **Select the Right Partners**:
  - Choose partners with complementary skills and expertise that cover all aspects of the project. This includes technical knowledge, market access, and implementation capabilities.
  - Involve partners early in the proposal development process to build trust and ensure alignment on project goals.
- **Diversity and Collaboration**:
  - A diverse consortium with a mix of SMEs, large enterprises, research institutions, and other stakeholders can enhance the proposal's appeal. Ensure that all partners contribute meaningfully to the project.

4. Develop a Detailed Work Plan

- **Structure the Proposal with Clear Work Packages**:
  - Divide the project into clear work packages, each with specific tasks, responsibilities, and deliverables. Use tools like Gantt charts or PERT diagrams to visualise the timeline and dependencies.
  - Ensure that the work plan is logical, realistic, and directly aligned with the project's objectives.

- **Write a Compelling Work Plan**:
  - The work plan should be detailed, clear, and convincing. Avoid overly complex language and focus on presenting a coherent narrative.
  - Include key milestones, performance indicators, and a risk management plan to demonstrate the project's feasibility.

5. Create a Realistic Budget

- **Develop a Detailed and Justified Budget**:
  - Prepare a budget that includes all necessary costs such as personnel, travel, materials, and equipment. Ensure that the budget aligns with the project's scope and timeline.
  - Justify each budget item, explaining why it is necessary for the project's success. Be transparent about how funds will be used.

6. Focus on Impact and Sustainability

- **Demonstrate the Project's Impact**:
  - Clearly articulate the impact your project will have, both during and after its implementation. Highlight how the project will contribute to societal, economic, or environmental goals.
  - Include measurable outcomes and Key Performance Indicators (KPIs) to track the project's success.
- **Plan for Long-term Sustainability**:
  - Include a sustainability plan that outlines how the project's outcomes will be maintained beyond the funding period. This could involve follow-up funding, partnerships, or commercialisation strategies.

7. Write and Refine Your Proposal

- **Draft a Clear and Concise Proposal**:
  - Write the proposal in clear, simple language. Avoid jargon and ensure that the narrative is easy to follow, even for those not familiar with the topic.
  - Address all sections required by the funder, ensuring that each part of the proposal is consistent and coherent.
- **Review and Seek Feedback**:
  - Review the proposal multiple times, checking for clarity, consistency, and alignment with the call's objectives.
  - Seek feedback from colleagues or experts to identify areas for improvement. Consider having a native speaker proofread the proposal if it is not in your first language.
- **Ensure Timely Submission**:
  - Submit your proposal well before the deadline to avoid any last-minute technical issues or omissions.
  - Double-check that all required documents are included and correctly formatted.

Developing your Business Model with a Canvas

This part gives a short introduction on how to use a business model canvas to promote a project idea. 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 6 below.

Figure 6: Structure of a Business Model Canvas

<table>
<tr><td rowspan="2">Key Partners</td><td>Key Activities</td><td rowspan="2">Value Propositions</td><td>Customer Relationships</td><td rowspan="2">Customer Segments</td></tr>
<tr><td>Key Resources</td><td>Channels</td></tr>
<tr><td colspan="2">Cost Structure</td><td colspan="3">Revenue Streams</td></tr>
</table>

Source: Own elaboration by Prognos (2024).

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.

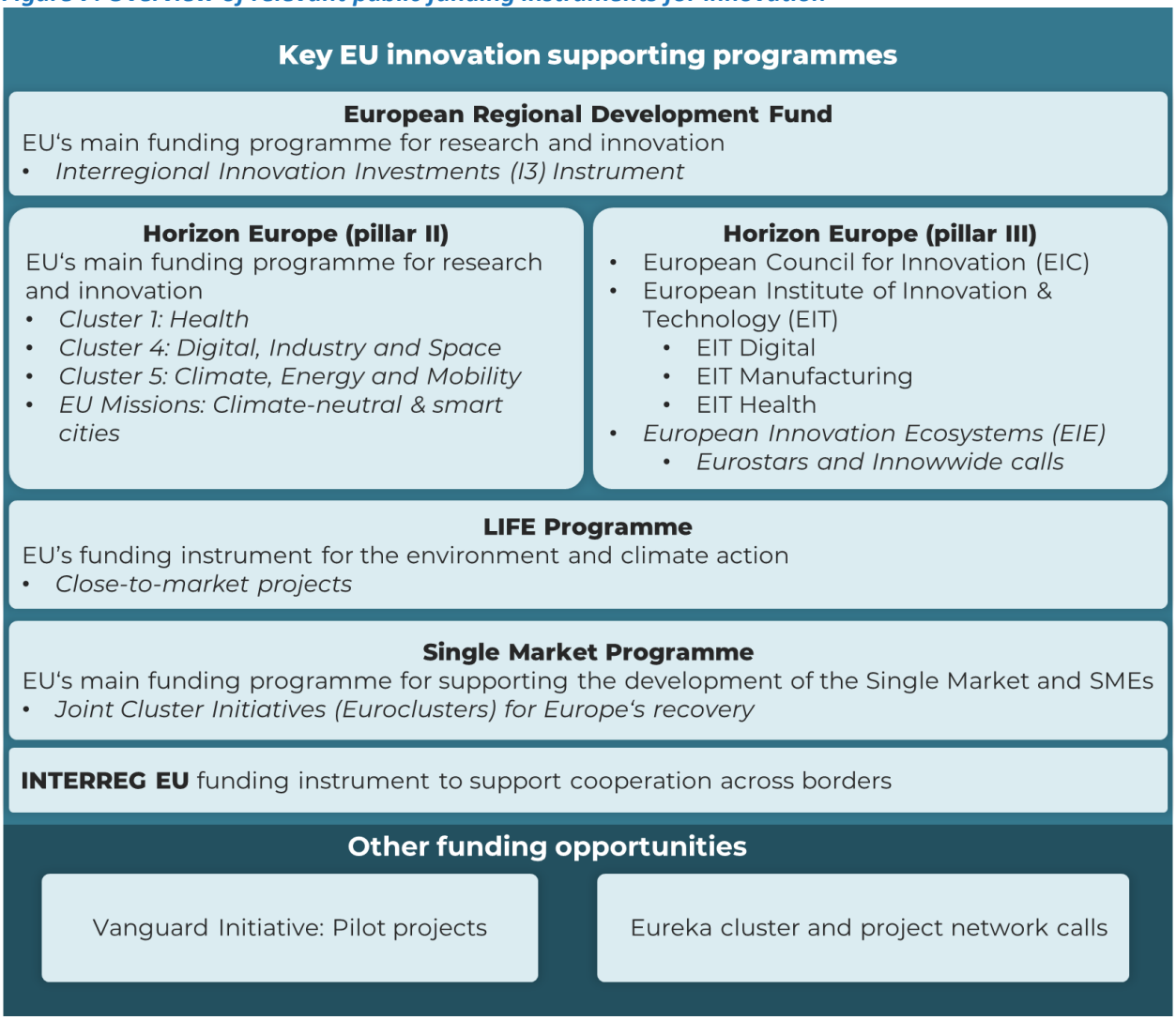
'**An Entrepreneur's Guide to Surviving the "Death Valley Curve"**' (see also the Annex for an elaboration on the "Valley of Death" by Thomas Ritter and Carsten Lund Pedersen in the Harvard Business Review.

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

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

Public funding schemes play a pivotal role in strengthening innovation in Europe. To raise awareness of cluster community and seed ideas for future proposals, this chapter outlines diverse funding opportunities for projects primarily in the domains of interregional investments, Health, Digital, Industry and Space and Climate Energy and Mobility. Thereby, the funding opportunities should support addressing the challenges that are outlined in Chapter 1. This chapter 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 7 gives an overview of relevant funding schemes that are presented in the chapter.

Figure 7: Overview of relevant public funding instruments for innovation



Source: ECCP (2025)

Key EU innovation supporting programmes

Interregional Innovation Investments (I3) Instrument

Total programme budget within the work programme 2025 - 27

~€ 159 million

Participating countries

Thematic priorities

Green transition

Digital transition

Smart Manufacturing

More information on the I3 Instrument:

- I3 website
- Upcoming calls for proposals will be published on the Funding & Tenders portal.

General description

In the 2021-2027 funding period, the **Interregional Innovation Investments (I3) Instrument** is a new funding instrument under the European Regional and Development Fund (ERDF) with a yearly budget of € 75.8 million to € 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 Interregional Innovation Investments (I3) Instrument is offering **two different support strands** for interested organisations. Both strands only fund projects which belong to one of **three thematic areas, including 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.

- **Strand 1:** Financial and advisory support for investments in interregional innovation projects
- **Strand 2a**: Financial and advisory support to the development of value chains in less developed regions
- **Strand 2b:** Financial and advisory support to test new approaches to

increase the capacity of regional innovation ecosystems in less developed regions

Call for proposals

Under the Interregional Innovation Investments Instrument (I3), there **no open calls at the moment**. EISMEA plans to publish three calls this year. More details will be available once the Work Programme (WP) 2025-2027 is adopted. The next calls are expected as follows:

- **For I3 Strand 1,** the call will open on 22 May 2025, with a closing deadline on 20 November 2025.
- **For I3 Strand 2a,** the call will open on 22 May 2025, with a closing deadline on 20 November 2025.
- For I3 Strand 2b, the call will open on 23 October 2025, with a closing deadline on 19 March 2026.

Partner search & networking

Partner search is offered through the call website on the Funding and Tenders portal for each individual call. For instance, partners for the open call on "Capacity Building Strand 2b" can be found here.

Advice services and support tools

Interested organisation can find information on the I3 website of the European Innovation Council and SMEs Executive Agency.

- Guidelines for applicants incl. an FAQ section.
- Presentation and recording of the I3 instrument Info section (Strand 1 & 2a)

Horizon Europe (Pillar II)

Total programme budget 2021-2027

€ 93.5 billion

Participating countries

+ third countries associated to HE + other third countries

Pillar II of HE Relevant Clusters:

Cluster 1: Health

Cluster 4: Digital, Industry and Space

Cluster 5: Climate, Energy & Mobility

Relevant EU Missions:

Climate-neutral & smart cities

Relevant European Partnerships:

European Partnership - ERA for Health Research

Built4People Partnership

Support tools

- Partner Search Services
- Online manual guide on the procedures from proposal submission to managing your grant.
- Materials from HE Cluster 1 Info Day
- Materials from HE Cluster 5 Info Day
- Factsheet Tips and tricks to apply for Horizon Europe calls

General description

Horizon Europe 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. The Programme targets to invest approximately € 10 billion in R&I related to food, bioeconomy, natural resources, agriculture, fisheries, aquaculture, and environment in line with the objectives of the European Green Deal related to the Biodiversity Strategy to 2030, the Farm to Fork strategy, as well as the long-term vision for rural areas, and the Sustainable Development Goals. 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 work programmes for 2023-2025 for, different calls for proposals will be launched in the Cluster 1: Health, Cluster 4: Digital, Industry and Space and Cluster 5: Climate, Energy & Mobility, also in the areas of Health, Mobility and Construction. For Cluster 1: **Health**, the topics centre around the following destinations:

- Staying healthy in a rapidly changing society
- Living & working in a health-promoting environment
- Tackling diseases & reducing disease burden
- Ensuring access to innovative, sustainable & high-quality healthcare
- Unlocking the full potential of new tools, technologies & digital solutions for a healthy society

For Cluster 4: **Digital, Industry and Space**, the topics centre around the following destinations:

- Climate neutral, circular and digitised production
- Increased autonomy in key strategic value chains for resilient industry
- World leading data and computing technologies
- Digital and emerging technologies for competitiveness and fit for the Green Deal
- Open strategic autonomy in developing, deploying and using global space-based infrastructures, services, applications and data
- A human-centred and ethical development of digital and industrial technologies

For Cluster 5: **Climate, Energy & Mobility**, the topics centre around the following destinations:

- Climate sciences & responses for the transformation towards climate neutrality
- Cross-sectoral solutions for the climate transition
- Sustainable, secure & competitive energy supply
- Efficient, sustainable & inclusive energy use
- Clean & competitive solutions for all transport modes
- Safe, resilient transport & Smart Mobility services for passengers & goods

Call for proposals (non-exhaustive list)

Calls under Cluster 1: Health

Opening date: 19 January 2025

One-stage calls' deadline: 29 April 2025

- HORIZON-JU-IHI-2025-09-single-stage: Boosting innovation through better integration of fragmented health R&I efforts
- HORIZON-JU-IHI-2025-09-single-stage: Boosting innovation for a

better understanding of the determinants of health

- HORIZON-JU-IHI-2025-09-single-stage: Boosting innovation for better assessment of the added value of innovative integrated healthcare solutions
- HORIZON-JU-IHI-2025-09-single-stage: Boosting innovation for peopled centred integrated healthcare solutions
- HORIZON-JU-IHI-2025-09-single-stage: Boosting innovation through exploitation of digitalisation and data exchange in healthcare

Calls under Cluster 4: Digital, Industry and Space calls

There are still no new calls for 2025. The last round of calls recently finished, and a new one will be announced in the coming months.

Calls under Cluster 5: Climate, Energy & Mobility calls

There are still no new calls for 2025. The last round of calls recently finished, and a new one will be announced in coming months.

Advisory services

To obtain information about the abovementioned calls, please reach out to your National Contact Point here.

Funding for innovative start-ups under Horizon Europe (Pillar 3)

European Innovation Council (EIC)

Total programme budget 2021-2027

€ 10.1 billion[42]

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.

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. Most 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 1-4). Each project can receive up to € 4 million.

EIC Transition funds innovative activities of SMEs, start-ups and spinoffs that go beyond experimental proof of the principle in the laboratory (validation) with TRL 4-6. Each project can receive up to € 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 € 2.5 million and additional max. € 15 million of equity.

Call for proposals

The Pathfinder, Transition and Accelerator provide "Open" funding, which can support technologies and innovations in any field. In the case of the Pathfinder and the Accelerator, the Open funding is complemented by a set of "Challenges" which target specific technologies and innovations of strategic interest for the Union

- EIC Pathfinder: The deadline for the open funding is on 21 May 2025. The deadline for the Challenge funding is on 29 October 2025. This includes the challenge **Generative-AI based Agents to Revolutionize Medical Diagnosis and Treatment of Cancer**.
- EIC Transition: The deadline for the Open funding is on 17 September 2025.

EIC Accelerator: Short applications for the Open funding can be submitted at any time for full applications the deadline is on 1 October 1 2025. The EIC Challenge includes

[42] European Innovation Council: https://eic.ec.europa.eu/about-european-innovation-council_en (last access 26.02.2025)

GenAI4EU, which aims to create European Champions in Generative AI. This challenge supports startups and SMEs in developing, adapting, and integrating GenAI models, including real-world testing for certification and efficiency.[44]

Support tools

EIC FAQs: overview of the most asked questions from the EIC applicants and beneficiaries.

Advisory services

Reach out to your HE National Contact Point or to Access 2 EIC network supporting EIC applicants.

[44] European Innovation Council: https://eic.ec.europa.eu/eic-funding-opportunities/eic-accelerator/eic-accelerator-challenges-2025/genai4eu-creating-european-champions-generative-ai_en (last access 07.03.2025)

European Institute of Innovation and Technology (EIT)

Total programme budget 2021-2027

€ 3 billion

EIT funding for EIT Food

€ 354 million

Participating countries

+ third countries associated to HE + other third countries

Thematic priorities

- Urban Mobility
- Climate Change
- Cultural & Creative Sectors
- **Digitisation**
- Future of Food
- **Health Innovation**
- Sustainable Energy
- **Added-Value Manufacturing**
- Raw Materials

General description

As part of Pillar 3 "Innovative Europe", the European Institute of Innovation & Technology (EIT) primarily aims to strengthen sustainable innovation ecosystems across Europe, foster the development of entrepreneurial and innovation skills, and bring new solutions to global societal challenges to the market.

It brings together organisations across business, education, and research to find and commercialise solutions to pressing global challenges. For each global challenge, there is an ecosystem of partnerships called Knowledge and Innovation Communities (KICs). There are currently nine KICs that operate in the areas of climate change, cultural & creative sectors & industries, digital transformation, sustainable energy, food, health, raw materials, urban mobility and added-value manufacturing.

EIT Digital

The EIT Digital, is a leading European innovation and education organisation that focuses on fostering digital technology advancements and entrepreneurship. Its main aim is to foster a competitive digital Europe through mobilizing European innovation ecosystems comprising leading corporations, SMEs and startups, as well as educational institutions, such as universities or research institutes. It is involved in the education and policy thought on AI and organises events concerning the major topics around it.

EIT Manufacturing

The EIT Manufacturing is a 2019 established manufacturing community aiming to enhance people's lives through sustainable manufacturing practices and promoting sustainable innovation across Europe. The organisation considers the integration of ethics and circularity as key for the future of manufacturing in Europe. Concerning new

digital advancements, such as AI, the EIT decides to integrate it into the its education, even providing an MSc in Data Science and AI for a Competitive Manufacturing, as part of the EIT Manufacturing Master School.

EIT Health

The EIT Health as a Knowledge and Innovation Community brings together key actors from research, business & education and focuses on innovations in the area of health and aging. Several objectives are pursued by this EIT. First, it aims removing innovation barriers to strengthen healthcare systems in Europe. Second, awareness raising and knowledge sharing to promote the health of citizens. Third, developing health enterprises and innovative products and services to support the health economy in the EU. The EIT Health can draw upon around 120 partner organisations and works with thousands of start-ups to pursue the beforementioned objectives.

Call for proposals

There are no new calls concerning **EIT InnoEnergy** for 2025 yet. The documents and website only specify the last call, which closed in December 2024. There no mentions concerning next calls. More information is available here.

Information on calls for proposals published by the EIT and its flagships are available here.

European Innovation Ecosystems (EIE)

Total programme budget 2021-2027

€ ~ 527 million

Participating countries

+ third countries associated to HE

Thematic priorities

CONNECT

INNOVSMES

Call for proposals

- The **Eurostars** funding programme call opened on 10 January 2025, and has just recently closed on 13 March 2025. Future calls for proposals will be published here.
- Two recent **CONNECT** calls were closed in early September. Future calls for proposals will be published here
- **Innowwide's** last call call for market feasibility projects was opened on 23 July 2024, and closed on 15 October 2024. Information on the call is provided here.

Partner search & networking

Partner search is offered through the call website on the Funding and Tenders portal for each call. Also, the national funding body can help you to find project partners by contacting other national funding bodies in Eureka's network (consisting of over 45 member countries).

General description

As part of the Horizon Europe programme, the European Innovation Ecosystems aims at building interconnected, inclusive innovation ecosystems across Europe, encompassing national, regional and local ecosystems, to undertake and achieve collective ambitions towards the benefit of society, including the green, digital, and social transitions. Objectives are based on the New European Innovation Agenda. In this context, one can also mention the Regional Innovation Valleys that were created after a call in 2023.

Types of topics funded

Calls for proposals are divided into two focus areas. The **CONNECT calls** aim at elaborating interconnected European innovation Ecosystems through the existing capacities of national, regional, and local ecosystems. A special characteristic is that capacities and skills should be shared with less-represented actors and territories. In addition, the **European Partnership on Innovative SMEs/EUROSTARS-3** supports innovative SMEs to increase their research and innovation capacity and productivity as well as to access new markets by offering Eurostars and Innowwide funding.

EUROSTARS funding

Eurostars is a funding instrument that supports innovative SMEs and project partners (large companies, universities, research organisations and other types of organisations) by funding international collaborative R&D and innovation projects. **By participating, organisations can access public funding for international**

collaborative R&D projects in all fields. To apply, several criteria must be fulfilled, for instance:

- The project consortium needs to be led by an innovative SME from a Eurostars country[45] and is composed of at least two entities that are independent of one another.
- The project consortium includes entities from at least two Eurostars countries with at least one organisation coming from an EU or Horizon Europe Associated Country[46].
- The budget of the SMEs from the participating countries (excluding any subcontracting) is 50% or more of the total project cost.
- The project duration is 36 months or less.

  The amount of funding your organisation receives when you participate in a project is managed by your national funding body.

INNOWWIDE funding

Innowwide provides 6-month grants of € 60,000 to assist innovative small and medium-sized enterprises (SMEs) in evaluating the feasibility of their research or business aspirations in global markets. In other words, Innowwide funding could be used to assess whether your local partner (or subcontracted organisation) can cooperate with you in a future international R&D project or to understand whether your product-, process- or service-market combination could be commercialised in selected target market.

Innowwide funding is available only for SMEs in EU27 Member States or Iceland, Israel, Norway or Türkiye. However, you are allowed to subcontract to your partner in your selected target country in Africa, the Americas, Asia or Oceania.

Subcontracted partners sign a commitment before you submit your project application. To stay updated on open calls for projects, please follow the Eureka website.

[45] **Eurostars countries:** Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Türkiye, and the United Kingdom.

[46] **Eurostars countries which are not an EU member state or a Horizon Europe Associated Country**: Canada, South Korea, Singapore, South Africa, Switzerland, and the United Kingdom.

LIFE Programme: close-to-market projects

Total programme budget 2021-2027

~€ 5.4 billion[47]

Participating countries

Four relevant LIFE subprogrammes

- Climate Change Mitigation and Adaptation
- Circular Economy and Quality of Life
- Clean Energy Transition
- Nature and biodiversity

Call for proposals

Every year the EC publishes LIFE calls for proposals. Applicants for close-to-market projects can apply in both abovementioned areas. An overview of call for proposals in 2024 is provided here.

Support tools

- Dedicated page on support for applicants
- Materials from EULife23 INFO DAYS

Advisory services

Get in touch with your national contact point 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 also 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.

Relevant topics funded included reductions in CO2 emissions, business coaching as well as up- and reskilling and many more. To get inspired, find more examples of completed close-to-market LIFE projects here.

[47] European Commission (2025) https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/life2027 (last access 26.02.2025)

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

Total programme budget between 2021-2027

~€ 42 million

Participating countries

Thematic priorities

Strand 1

Technologies for net-zero emissions and critical raw materials

Strand 2

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

Call for proposals

The previous Eurocluster call was announced 2024, with the call closed on 5 February 2025. 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. In 2024, a new call has opened, with 16 new Euroclusters selected and starting to operate in 2025, with eight Euroclusters focusing on technologies for net-zero emissions and critical raw materials. The maximum project duration is 36 months. Each project can receive up to approximately € 2.625 million in funding.

Types of topics funded

The focus of the Euroclusters is divided into two strands. The first strand focuses on technologies for net-zero emissions and critical raw materials, while the second strand covers other value chains within or across the 14 EU Industrial Ecosystems.

Projects may only address one of the two strands.

Consortium Structure

Eurocluster consortia must consist of at least three cluster organisations from at least three different EU Member States. Additionally, the consortium must include at least one partner from a less developed region to ensure balanced participation and support regional innovation.

Target audience

Eurocluster projects primarily support clusterorganisations and cluster networks, with a strong focus on SME support. 75% of the grant must be allocated to SMEs through Financial Support to Third Parties (FSTP), which is limited to activities directly contributing to the project's main objective.

Additional information

More information can be found on the dedicated Eurocluster website on the ECCP.

INTERREG Europe

Total programme budget 2021-2027

€ 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

There is currently one call concerning the NEXT-Mediterranean Sea Basin (NEXT-MED) programme. It consists of a call from green transition projects, supporting energy efficiency, circular economy and climate adaptation among other things. The budget amounts to € 83.7 million, with an application deadline of 15 April 2025. More information can be found here.

Support tools

- Online library of project ideas
- The self-assessment tool to verify whether the suggested project idea is relevant to the programme
- A tailored guidance for project development

General description

Interreg Europe a series of EU funding programmes of interregional cooperation 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 Smarter and Greener Europe themes

Smarter Europe:

- Research & innovation capacities
- Digitisation
- SME competitiveness
- S3, industry and entrepreneurship
- Digital connectivity

Greener Europe:

- Energy efficiency
- Renewable energy
- Smart energy systems
- Circular economy
- Climate change

More connected Europe:

- Sustainable TEN-T
- Sustainable mobility

The list of projects approved in the first three call can be found here.

Advice services

Please see a list of national contact points

INTERREG specific programmes

INTERREG has four types of programmes: cross-border, transnational, interregional and outermost regions[48]. Concerning cluster organisations, it is primarily among the two first types where the focus should be set. First, Interreg cross-border cooperation, known as **Interreg A**, supports cooperation between NUTS 3 regions from at least two different Member States lying directly on the borders or adjacent to them. The goal is to solve shared challenges in border areas, create new growth opportunities and strengthen partnerships to support balanced development across Europe. Secondly, Interreg transnational cooperation, 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. Both sources of funding could be considered by clusters wherever they are located. To find the right programme that covers geographical area of your interest, please visit a dedicated portal with all Interreg programmes.

[48] Interreg (2025): https://interreg.eu/about/types-of-programmes/ (last access 05. 03. 2025)

Interreg South West Europe (SUDOE)

Total Programme Budget:

€ 125.2 million

Participating Countries

Thematic Priorities[49]:

- Preserving the natural capital and strengthening adaptation to climate change in SUDOE
- Promoting social cohesion and territorial and demographic balance in the SUDOE through innovation and transformation of productive sectors
- Promoting social cohesion and territorial and demographic balance in the SUDOE through social innovation, heritage, enhancement and services
- Strengthen the impact of SUDOE on the territories

Call for Proposals

The second call for proposals closed on 10 January 2025. For more information concerning next calls, please check this link.

General Description:

This programme focuses on preserving natural capital, adapting to climate change, and enhancing social cohesion in the mentioned South-West European countries. Key priorities include climate change adaptation, sustainable water management, biodiversity protection, and promotion of innovation in productive sectors. The programme also fosters social innovation, health system resilience, and the role of culture and tourism in economic development.

Specific objectives of the thematic priorities:

Preserving the natural capital and strengthening adaptation to climate change in SUDOE:

- Promoting climate change adaptation and disaster risk prevention and resilience, considering eco-system-based approaches
- Promoting access to water and sustainable water management
- Enhancing protection and preservation of nature, biodiversity and green infrastructure, including urban areas, and reducing all forms of pollution

Promoting social cohesion and territorial and demographic balance in the SUDOE through innovation and transformation of productive sectors:

- Developing and enhancing research and innovation capacities and the uptake of advanced technologies
- Developing skills for smart specialisation, industrial transition and entrepreneurship

Promoting social cohesion and territorial and demographic balance in the SUDOE through social innovation, heritage, enhancement and services:

[49] InterregSudoe (2025): https://5.interreg-sudoe.eu/gbr/sudoe-2021-2027/the-sudoe-programme (last access: 06.03.2025)

- Enhancing the effectiveness and inclusiveness of labour markets and access to quality employment through developing social infrastructure and promoting social economy
- Ensuring equal access to health care and fostering resilience of health systems, including primary care, and promoting the transition from institutional to family-based and community-based care
- Enhancing the role of culture and sustainable tourism in economic development, social inclusion and social innovation

Strengthen the impact of SUDOE on the territories:

- Other actions to support better governance of cooperation

Partner Search:

If you seek partners to support your project idea, please check the dedicated partner search platform.

Advisory Services:

Should you need any further assistance please see contact point offered at the web page.

Types of Grants:

The European Union's contribution to the SUDOE programme amounts to € 125.2 million from the ERDF fund, of which € 115.9 million will be for projects and the rest, this is € 9.3 million, for technical assistance. The programme authorities are designing the tools and procedures for the implementation of the programme.

Interreg Spain-France-Andorra (POCTEFA)

Total Programme Budget

€ 243 million

Participating Countries

Thematic Priorities

- Create a common space for knowledge and innovation
- Protect and consolidate ecological values
- Facilitate access to employment and training
- Build an inclusive and socially integrated space
- Promote sustainable tourism and develop culture
- Structure the space territorially, socially and economically
- Towards a more integrated cross-border space

Call for Proposals

Call for new proposals have been recently opening at the turn of the year. Three are currently open and several will open in the future.

Call for small projects:

The call for small projects of the INTERREG VI-A Spain-France-Andorra (POCTEFA 2021-2027) opened on 21 January 2025 and will close on 20 May 2025. More information concerning this call can be found here.

Second classic call for POCTEFA projects:

The second call for classic POCTEFA projects opened on January 2025 and will close on 22 April 2025. More information concerning this call can be found here.

Second call for projects from the Catalan Cross-Border Space (EsCaT) Functional Area aimed at small projects:

This second call from the EsCaT opened on 4 March 2025 and will close on 4 July 2025. More information on this call can be found here.

Information concerning future call can be found by following this link.

General Description:

This programme addresses the different economic, social, and territorial challenges across the three Pyrenean countries, Spain, France, and Andorra. It aims to create a more integrated and sustainable cross-border region establishing the promotion of knowledge, innovation, sustainable mobility, cultural heritage, and ecological conservation as its key priorities, while tackling issues such as employment, social inclusion, and rural depopulation. This border area is boxed in between of two coastal areas (Atlantic and Mediterranean) and the Pyrenean massif, which serves as both a physical and administrative border between the two Member States (Spain and France), with the Principality of Andorra at its heart. Consequently, this project faces a very large and diverse territory understanding around 13.7 million inhabitants, with a natural, historical and cultural heritage of great value.

Specific Objectives of the Thematic Priorities:

Create a common space for knowledge and innovation:

- Research and innovation
- Digitalisation
- Sustainable growth of SMEs

Protect and consolidate ecological values:

- Climate change and disaster risk prevention
- Access to water
- Circular economy
- Protection and conservation of nature

Facilitate access to employment and training:

- Inclusiveness in the labour market
- Equal access to education and training
- Build an inclusive and socially integrated space:
- Socio-economic inclusion through integrated actions
- Equal access to healthcare

Promote sustainable tourism and develop culture:

- Strengthening the role of culture and sustainable tourism

Structure the space territorially, socially and economically:

- In non-urban areas, promotion of local, social, economic, environmental and cultural development, natural heritage, sustainable tourism and security

Towards a more integrated cross-border space:

- Improve the institutional capacity of public authorities
- Improve the efficiency of public administration

Partner search & networking:

If you seek partners to support your project idea, please check the dedicated partner entities searcher.

Advisory services:

Should you need any further assistance, please send an email to this direction: info(@)poctefa.eu

Types of Grants:

Funding from the European Union through the European Regional Development Fund (ERDF) granted to the Spain-France-Andorra Territorial Cooperation Programme 2021-2027. The ERDF grant rate managed by POCTEFA that the projects receive will be 65% of the funding for the projects, except in those cases where there is State aid or other situations in which a minimum of self-financing is required.

Other intergovernmental and national funding for innovation

Vanguard Initiative / Vinnovate

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.

In this context, one can outline the new initiative Vinnovate which is part of the Vanguard Initiative. This initiative is focused on funding innovative projects that have the objective generating industry-led and strategic interregional projects. A Vinnovate call 2024 has been launched and will support projects at TRL 6-8. Projects costs need to be a minimum of € 100,000 and projects need to run for at least 36 months. At least one of the eight thematic domains of the Vanguard Pilots need to be addressed by the projects. More information about the Vinnovate application procedure is available here 2024 and on eligible projects is available 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 € 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 € 1.34 million. The final deadline for the EUREKA Network projects is 31 December 2025.

05

Turn your project idea into practice: private funds for innovative business initiatives

5. Turn your project idea into practice: private funding for innovative business initiatives

The recently published 2024 edition of the European Innovation Scoreboard shows that as the EU's innovation ecosystems are progressing, global competitors – and China in particular – are catching up quickly. While the EU performs strongly on indicators like doctoral graduates, international scientific co-publications, public sector R&D expenditure, and the share of SMEs introducing product innovations, it is looking more sluggish when it comes to private sector R&D expenditure, public-private co-publications, the collaboration between innovative SMEs and trademark applications.[50]

It is therefore **paramount to intensify private sector R&D investments**, public-private research collaboration, innovation collaboration among SMEs and the translation of research into commercially valuable IP rights. Clusters are the right place to make this happen not only since they can promote the use of private funding and provide relevant contacts (e.g., business angel networks, corporate venture capital), thereby supporting smaller companies in particular, but also established companies that need to be taken to the next level of development.

This chapter will give an overview of private funding opportunities and how they relate to innovation activities. It will thereby focus mainly on industrial AI application and lay a special emphasis on the Spanish context.

- The first part will then provide an overview of different sources of private funding for innovative businesses in the AI development for industrial applications centred on equity and debt financing. It will also point to business support services that help these firms to network and find markets for their products.
- The second part gives a short glimpse on the support coming from the EU for the activities of private financing actors, mostly in the form of co-financing and guarantees through the EIB and EIF.

[50] European Commission (2024): Press release on the 2024 edition of the European Innovation Scoreboard (EIS). https://ec.europa.eu/commission/presscorner/detail/en/ip_24_3666 (last access 28.02.2025); see also Greenacre, Martin; Francica, Eleonora (2024): Innovation report delivers 'wake-up call' for Europe. Science Business. 10.07.2024. https://sciencebusiness.net/news/horizon-europe/innovation-report-delivers-wake-call-europe (last access 28.02.2025)

Overview: Sources of private funding and business support services

Sources of (external) private financing for innovative businesses can be divided into equity and debt. Equity comes in different forms and from a range of different actors. This chapter covers the most important variants for innovative businesses, including venture capital, corporate venture capital, business angels and family offices. Furthermore, debt financing through bank loans, still the dominant form of business financing in the EU, will be covered in the second part of this overview.[51] Finally, the third part gives a short summary of available business support services facilitating the acquisition of financing for innovation projects. See also the Government of Aragon's information on business financing.

Equity financing

Equity financing means to raise capital by selling ownership stakes (equity) in a company to investors. In exchange for their investment, shareholders become partial owners of the business and may receive a portion of its profits or have voting rights in decision-making. There are **different sources of equity financing**, including venture capital firms, corporate venture capital, business angels, as well as family offices.

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 annual State of European Tech report.
- **Spaincap**, the Spanish investors' association, provides comprehensive information on the Spanish capital market.

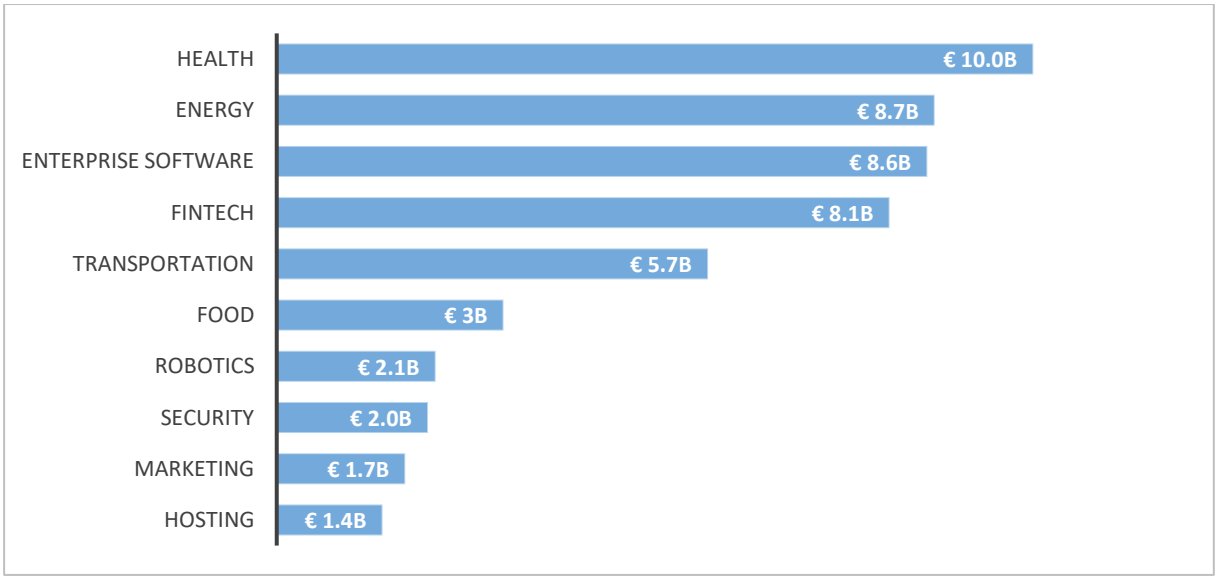
[51] Hobza, Alexandr et al. (2022): The financing of innovation. Quarterly R&I literature review 2022/Q2. Directorate-General for Research and Innovation. Available online: https://research-and-innovation.ec.europa.eu/system/files/2022-09/ec_rtd_quarterly-ri-review_022022.pdf (last access 28.02.2025).

Venture capital

Venture capital is generally expected to play a crucial role in the commercialization of innovative technologies and product ideas. Venture capital 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. Venture capital firms that are focused on specific sectors or innovation ecosystems can also provide valuable support beyond funding, including business strategy guidance, mentorship, and network connections.

Although venture capital certainly plays its role in financing innovative young businesses, it also comes with some limitations that are worth keeping in mind.[52] Those limitations derive from the typical business model of venture capital 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. Recently, however, venture capital funds are increasingly focussing on deep tech – a development that is actively supported by the European Commission.[53] In general, within each sector, start-ups that focus on scalable technologies are best positioned for venture capital investment.

Figure 8: Industries by venture capital investment, Europe, 2024



[52] For a more general evaluation of venture capital's role in financing innovation, see Lerner. J. & Nanda, R. (2020): Venture Capital's Role in Financing Innovation: What We Know and How Much We Still Need to Learn, Journal of Economic Perspectives, 34:3, 237-61. Available online: https://www.aeaweb.org/articles?id=10.1257/jep.34.3.237 (last access 28.08.2024).

[53] European Commission (2024): Commission announces first steps towards a network of VC investors in deep-tech innovation. Directorate-General for Research and Innovation. Available online: https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/commission-announces-first-steps-towards-network-vc-investors-deep-tech-innovation-2024-06-13_en (last access 27.08.2024).

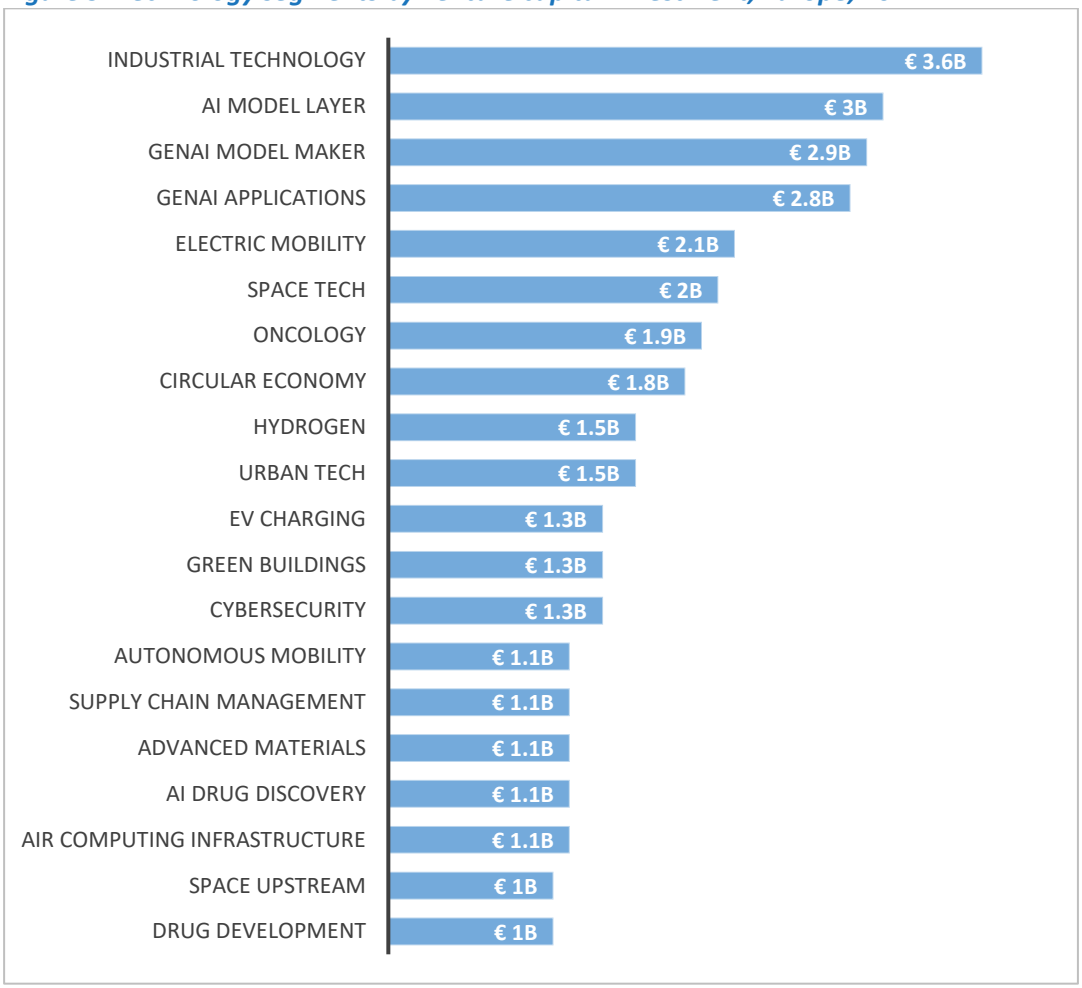
Source: ECCP (2025), own elaboration based on Dealroom data. Note that the figures have been converted from USD to EUR using the ECB currency converter's exchange rate of 7 March 2025.

The European venture capital landscape has been developing dynamically over the last decade, although the size of venture capital investment flows as a share of GDP is still far behind the US and banks remain the dominant providers of capital for the moment. Within the EU, Spain's venture capital market reached approximately €1.9 billion in 2024, about a quarter of the investment volume in France (€7.2 billion) and Germany (€7.6 billion), while being nearly twice the investment volume in Italy.[54]

As shown in Figure 8, health, fintech, energy, and enterprise software are the leading industries in venture capital investment in Europe (H1 2024). The health sector attracts the highest level of funding, reflecting the growing importance of AI applications in diagnostics, personalised medicine, and healthcare innovation. Similarly, energy, including renewable energy and energy-intensive industries, remains a major investment area, highlighting the role of AI in optimising energy management and supporting net-zero technologies. Additionally, the enterprise software sector, which includes AI-powered solutions for industrial transformation, continues to be a key recipient of venture capital funding.

[54] Dealroom (2025): Europe. Available online: https://dealroom.co/guides/europe (last access 27.08.2024). Data for 2024.

Figure 9: Technology segments by venture capital investment, Europe, 2024



Source: ECCP (2025), own elaboration based on Dealroom data. Note that the figures have been converted from USD to EUR using the ECB currency converter's exchange rate of 7 March 2025.

Looking at technology-specific venture capital investments, Figure 9 illustrates the continued dominance of AI-related technologies. The generative AI segment leads venture capital investment, followed by AI applications and AI model development. Beyond AI itself, mobility-related technologies such as electric mobility, autonomous mobility, and urban tech receive substantial funding, underlining the increasing relevance of AI-enhanced transportation and smart city solutions. Furthermore, cybersecurity emerges as a priority investment area, with AI-driven security solutions gaining traction as digital threats continue to rise. Investment in sustainable infrastructure is also notable, particularly in green buildings, the circular economy, and advanced materials. As seen in the figure above, these sectors benefit from AI applications in energy efficiency, waste reduction, and industrial automation, reinforcing the role of AI in enabling sustainability and smart city development.

Corporate Venture Capital

A specific form of venture capital is provided by established, large companies in the form of corporate venture capital (CVC).[55] 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.

- CVC is gaining importance across sectors in Spain. A 2024 study shows that 82% of respondents have invested in startups at some point while 67% have already established a consolidated CVC structure.[56]
- Most Spanish CVC investment goes into early-stage investment with 48% targeting 1-5 year old and 44% 6-10 year old companies.[57]
- Spanish corporate venture capital players across sectors include for example Telefónica's venture capital arm Wayra (ICT), Iberdrola's start-up programme PERSEO (energy), or Grifols' GIANT programme (healthcare).

Business Angels & Family Offices

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 overcoming the 'valley of death' and navigating the challenges of developing and commercialising innovative sustainable technologies. Family offices are entities that manage the wealth of wealthy families. Some family offices invest in startups and venture capital as part of their investment portfolio.

- Spanish business angels are organised in the Spanish Association of Business Angel Networks (AEBAN). Entrepreneurs looking for investment and support can register to be listed at the website.
- Aragon's main business angels network is Araban. Other networks like Zebra Ventures support establishing contacts between investors and entrepreneurs.
- Family Offices are usually working alongside business angels and are organised in the same or similar networks like at IESE Business Angels and Family Offices network based at the University of Navarra.
- On the European level, business angels are organised in the European Business Angels Network (EBAN) and Business Angels Europe.

[55] See also Siota, J.; Alunni, A-; Riveros-Chacón, P.; Wilson, M. (2020): Corporate Venturing: Insights for European Leaders in Government, University and Industry. European Commission, Joint Research Centre, Publication Office of the European Union, Luxembourg. Available online: https://publications.jrc.ec.europa.eu/repository/handle/JRC119084 (last access 03.03.2025).
[56] BackInvest (2024): Innovación con sabor español. El impacto nacional del Corporate Venture Capital. Available online: https://backinvest.io/#insights (last access 07.03.2025).
[57] BackInvest (2024).

Debt financing

Debt financing in the form of loans, credit lines or – more 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.

- The most recent round of the Survey on the Access to Finance of Enterprises (SAFE) in the euro areas, conducted by the ECB on 20 November 2024 and 18 December 2024 and focussing on SMEs, shows positive developments regarding access to bank loans over the two quarters.[58]
- While borrowing costs were exceptionally high in 2023[59], by mid-2024 European companies enjoyed significantly lower borrowing costs over their US competitors.[60] At the same time, European businesses expect the availability of external financing to improve further.[61]
- Under these improving conditions, financing innovation projects through bank loans becomes more feasible again after a difficult phase of rising interest rates. This is supported by the ECB's latest decision to lower its key interest rates by 25 basis points as of 12 March 2025.[62]
- Access to bank financing further increases for small firms that receive a public innovation subsidy.[63] (see also Chapter 4 and below on *The role of EU support for private funding*)

Business support services

Business support services, in a broad sense, for both startups and established SMEs are provided by a variety of actors.

- The Spanish Society for Technological Transformation (SETT) is a public business entity for financing and investing in advanced and transformative technologies linked to digital transformation, telecommunications, microelectronics, semiconductors, new disruptive digital technologies and the audiovisual sector.
- The Centre for Technological and Innovative development (CDTI) provides Spanish companies, entrepreneurs and startups with business support on how to finance growth. Relevant tools this public company dependent from the Spanish government provides are R+D+I aid, internationalisation portal as well as aid help desk.

[58] ECB (2025): Survey on the Access to Finance of Enterprises in the euro area. Fourth quarter of 2024. January 2025. Available under: https://www.ecb.europa.eu/stats/accesstofinancesofenterprises/pdf/ecb.safe202501~e940f53e7c.en.pdf (last access 10.03.2025).
[59] Kraemer-Eis, Helmut et al. (2023): The European Small Business Finance Outlook 2023. EIF Research and Market Analysis. Working Paper 2023/96. Available under: https://www.eif.org/news_centre/publications/eif_working_paper_2023_96.pdf (last access 10.03.2025).
[60] Healy, Euan (2024): 'Reverse Yankee' deals boom as Europe's low borrowing costs lure US groups. Financial Times. 17.05.2024. Available under: https://www.ft.com/content/b5260974-be06-4e56-a792-1b07b20de4cc (last access 03.03.2025).
[61] ECB (2025).
[62] See https://www.ecb.europa.eu/press/pr/date/2025/html/ecb.mp250306~d4340800b3.en.html (last access 10.03.2025).
[63] Chiappini, Raphael et al. (2022): Can direct innovation subsidies relax SMEs' financial constraints? Research Policy 51:5. Available under: https://www.sciencedirect.com/science/article/abs/pii/S004873332200021X (last access 10.03.2025).

- The Aragonese equivalent is the CEEIAragon, with more than 50 companies and 300 employees under its umbrella. Programmes like neo and matriX support innovators and entrepreneurs with mentoring, networking and training.
- On the European level, the European Institute for Innovation and Technology's (EIT) 'communities' focused on 'global challenges', such as EIT Digital, EIT Health, EIT InnoEnergy or EIT Urban Mobility are organising different stakeholders around their innovation ecosystem and regularly collaborate with private investors to organise networking and matchmaking events with startups and young enterprises. EIT offices, community hubs and members can be discovered via the EIT ecosystem map.
- Specific support for startups is offered, for example, by EIT Urban Mobility in the form of the Mobility Corporate Venture Builder. It supports entrepreneurs in designing and validating their business case.

The role of EU support for private funding

The **EU** 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.[69] 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. According to the latest report, EIB Group activity in Spain in 2023 was up by 14% from the previous year at €11.39 billion.[70]

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.

[69] See also https://single-market-economy.ec.europa.eu/smes/funding-and-support_en (last access 10.03.2025).
[70] EIB (2024): EIB Group activity in Spain in 2023. Available online: https://www.eib.org/attachments/lucalli/20240045_factsheet_spain_2023_en.pdf (last access 10.03.2025).

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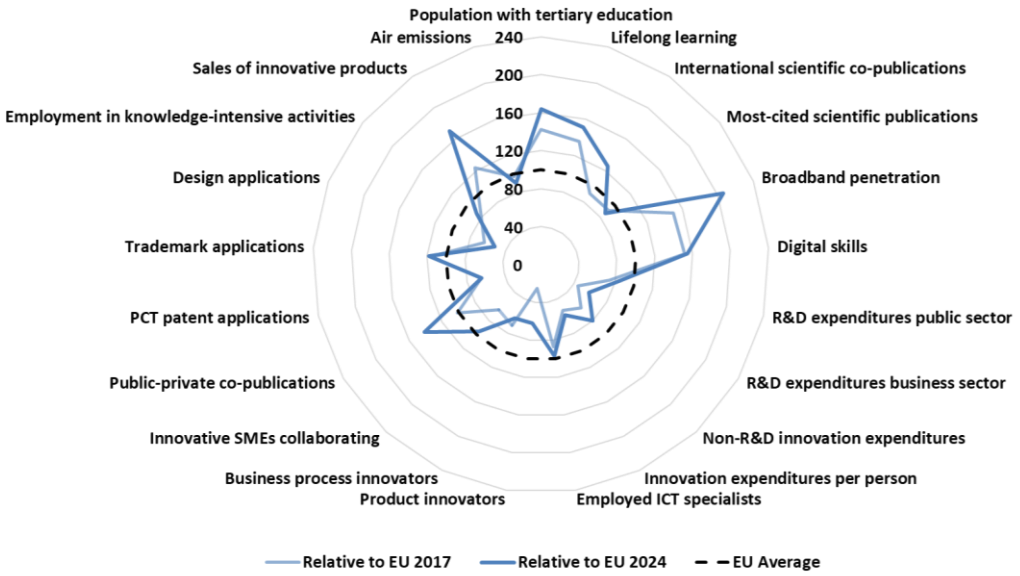
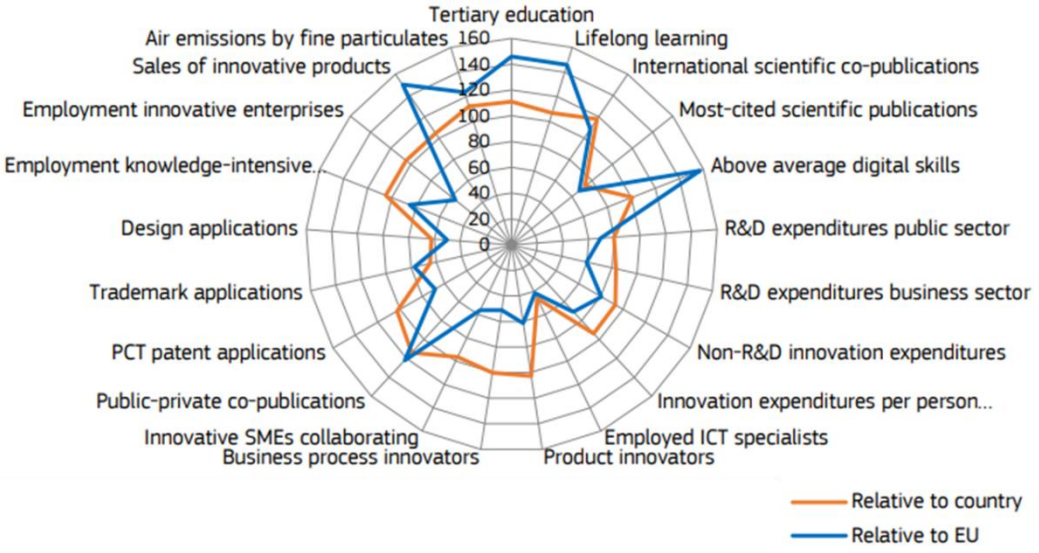
Annex

Figure 10: Innovation performance of Spain in the European Innovation Scoreboard



Source: ECCP (2025), own elaboration based on the European Innovation Scoreboard 2024.

Figure 11: Innovation performance of Aragon in the Regional innovation Scoreboard



Source: European Commission (2023): Regional Innovation Scoreboard 2023.

Table 1: Overview of cluster organisations in Aragon and their main addressed EU industrial ecosystems

No.	Cluster organisation (original name)	Cluster organisation (English name)	Assigned main Industrial Ecosystem
1	Asociación Aeronáutica de Aragón (AERA)	Aragon Aeronautical Association	Aerospace and Defence, Digital
2	Asociación Clúster para el Uso Eficiente del Agua (ZINNAE)	Water Efficiency Cluster	Agri-Food
3	Asociación Cluster de Automoción de Aragón (CAAR)	Aragon Automotive Cluster	Mobility, Transport & Automotive
4	Asociación Cluster de la Energía de Aragón (CLENAR)	Aragon Energy Cluster	Renewable Energy
5	Asociación de Empresas de Componentes para Aparatos Elevadores (AECAE)	Association of Companies for Elevator Components	Construction
6	Asociación Española de Fabricantes Exportadores de Maquinaria para Construcción, Obras Públicas y Minería (ANMOPYC)	Spanish Association of Manufacturers and Exporters of Construction, Public Works and Mining Machinery	Construction, Energy Intensive Industries
7	Asociación I+D+i en Aragón (IDIA)	Aragon R&D&I Association	Health
8	Clúster Aragonés de los Medios de Producción Agrícolas y Ganaderos (CAMPAG)	Aragonese Cluster of Agricultural and Livestock Production	Agri-Food
9	Clúster de Empresas TIC, Electrónica y Telecomunicaciones de Aragón (TECNARA)	Aragon ICT, Electronics and Telecommunications Cluster	Digital, Electronics
10	**Clúster de la Maquinaria Agrícola de Aragón (CMAA)**	Aragon Agricultural Machinery Cluster	Agri-Food, Energy Intensive Industries
11	Clúster de la Salud de Aragón (ARAHEALTH)	Aragon Health Cluster	Health
12	Clúster Logístico de Aragón (ALIA)	Aragon Logistics Cluster	Mobility, Transport & Automotive
13	Clúster Turismo Sostenible (TSAC)	Sustainable Tourism Cluster	Tourism
14	Clúster Español de Ganado Porcino (I+PORC)	Spanish Swine Cluster	Agri-Food
15	Cluster Aragonés de Alimentación (INNOVALIMEN)	Aragonese Food Cluster	Agri-Food
16	**MetalHub – Clúster del Metal de Aragón**	MetalHub – Aragon Metal Cluster	Energy Intensive Industries

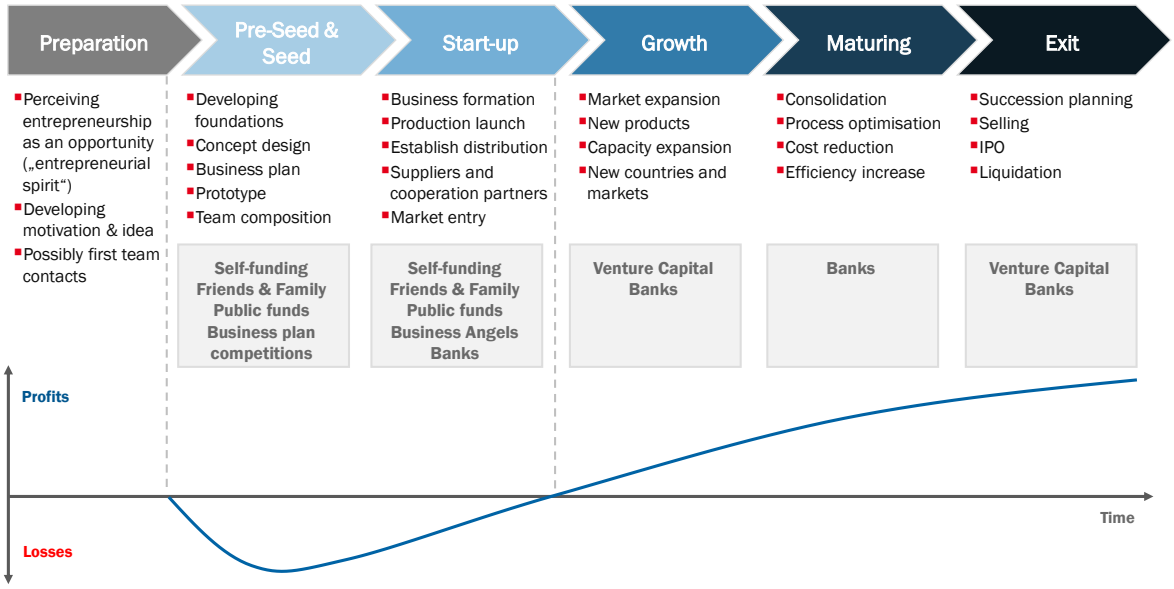
Source: ECCP (2025).

Financing innovation: The European Valley of Death

There is a yawning gap between Europe's world-class research and inventiveness and its sluggish commercialisation of innovation. Startups 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. 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.[71]

The Valley of Death occurs in the stage after initial funding (e.g., from public funds or business angels) ends before institutional investors like banks and venture capital are ready to support the market expansion of proven and market-ready products (see Figure 12).

Figure 12: Start-up life cycle and financing



Source: Own elaboration by Prognos (2025).

The Valley of Death is, however, not only experienced by start-up entrepreneurs but also by SMEs and their partners looking for external funding for innovation projects. Financing an innovation project from the start to its commercialisation is a challenge and it can take multiple interlocking streams of funding – public and private – to deliver it.

[71] European Patent Office & European Union Intellectual Property Office 2019 and Siota et al. 2020, p. 16.