



# **Fostering collaboration through mapping, analysing and interlinking of European Entrepreneurial Regions – Phase II**

Regional ecosystem in-depth mapping for the Region of  
Navarra



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Navarra

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## TABLE OF CONTENTS

<b>Executive summary</b> .....	<b>1</b>
<b>1. Introduction</b> .....	<b>4</b>
<b>2. Presentation of the regional ecosystem</b> .....	<b>5</b>
<b>3. The actors in the entrepreneurial ecosystem</b> .....	<b>8</b>
<b>3.1. Market services and ecosystem builders</b> .....	<b>8</b>
3.1.1. Market services for start-ups and scale-ups.....	8
3.1.2. Public sector intermediaries' support to start-ups and scale-ups.....	10
<b>3.2. The role of entrepreneurs (start-ups and scale-ups)</b> .....	<b>11</b>
3.2.1. Overview of the entrepreneurial dynamics.....	11
3.2.2. The landscape of start-ups and scale-ups.....	12
<b>3.3. SMEs and large companies in the entrepreneurial ecosystem</b> .....	<b>14</b>
3.3.1. Established enterprises' interaction with the ecosystem .....	14
3.3.2. Large companies' interaction with the ecosystem .....	14
<b>3.4. Research System and Universities</b> .....	<b>15</b>
3.4.1. General overview of the research and higher education performance in the region	15
3.4.2. The landscape of R&I ecosystem players.....	16
<b>4. Framework conditions for entrepreneurship</b> .....	<b>18</b>
<b>4.1. Human capital</b> .....	<b>18</b>
4.1.1. Overview of human capital assets in the region.....	18
<b>4.2. Financial capital</b> .....	<b>19</b>
4.2.1. General overview of access to finance in the region .....	19
<b>4.3. Culture</b> .....	<b>19</b>
<b>5. Policy-mix for entrepreneurship</b> .....	<b>21</b>
<b>5.1. National framework for entrepreneurship support</b> .....	<b>21</b>
<b>5.2. Regional development policy</b> .....	<b>22</b>
5.2.1. Regional governance arrangements .....	22
5.2.2. Regional policy strategies and policy instruments supporting entrepreneurs and scale-ups .....	22
<b>5.3. Experiences of interregional cooperation on entrepreneurship</b> .....	<b>27</b>
<b>6. Impact of Covid-19 pandemics on the regional entrepreneurial ecosystem</b>	<b>29</b>
6.1.1. Impact of COVID-19 pandemics on entrepreneurial activities.....	29
6.1.2. Impact of COVID-19 on entrepreneurial activities at sectoral level.....	29
6.1.3. Policy responses.....	30
<b>7. Assessment of the entrepreneurial ecosystem</b> .....	<b>32</b>
7.1.1. Assessment of challenges faced by entrepreneurs .....	32
7.1.2. Challenges faced by SMEs and large companies .....	32
7.1.3. Challenges related to market services and ecosystem builders.....	33
7.1.4. Challenges related to the R&I system.....	33
7.1.5. Challenges related to framework conditions.....	33
7.1.6. Assessment of the regional policies for entrepreneurship .....	34
<b>8. Regional SWOT and conclusions</b> .....	<b>35</b>
8.1.1. Maturity of the regional ecosystem .....	35
8.1.2. Impact of the COVID-19 pandemics .....	35
8.1.3. Updated regional SWOT as basis for interregional collaborations .....	36

<b>APPENDIX I Bibliography.....</b>	<b>38</b>
<b>APPENDIX II List of interviewees.....</b>	<b>42</b>
<b>Appendix III LinkedIn and Skills analysis.....</b>	<b>43</b>
<b>Appendix IV Crunchbase/Dealroom Based Analysis .....</b>	<b>45</b>

## **TABLES**

Table 1 SWOT Analysis of the region of Navarra .....	2
Table 2 Overview of entrepreneurial activities in the region .....	14
Table 3 Overview of research sector performance in the region .....	16
Table 4 Overview of interregional cooperation experience.....	28
Table 5 SWOT analysis of the region of Navarra .....	36
Table 6 Overview of interviews .....	42

## **FIGURES**

Figure 1 Regional Competitiveness Index 2019 - Navarra and EU average .....	6
Figure 2 Diagram of the ecosystem of Navarra .....	7
Figure 3 Overview of start-ups/Scale-ups and VC in Navarra.....	13
Figure 4 Type of investment received and disclosed by start-ups and scale-ups (2000-2020)..	19
Figure 5 Overview of the Navarra Smart Specialisation Strategy .....	24
Figure 6 Positioning of Navarra regarding its entrepreneurial ecosystem .....	35

## EXECUTIVE SUMMARY

The Chartered Community of Navarra, *Comunidad Foral de Navarra* in Spanish, is a region located in the north of Spain bordering with the Basque Country, La Rioja and Aragon and sharing with France 163 kms of mountainous border. The region accounts for 2.2% of the total size of the country, but hosts less than 1.4% of the Spanish citizens, making it one of the less densely populated regions. The main urban areas are Pamplona, Tudela and Valle del Egüés, hosting 40% of the population. The Region is internationally famous for its Festival of San Fermin and the running of the bulls as depicted by Ernest Hemingway in his novel *The Sun Also Rises*.

In regard to its economic activity, the most important sectors in the region are services with almost a 60% of the total, followed by industry 28%, building 7.4% and energy 3%. Overall, the industrial fabric of Navarra represents 28% of the GDP of the region, 13 points higher than the Spanish and EU average. There are also more than 120 multinational companies based in the region. The region does not have a long tradition of entrepreneurship, however, there has been a shift during these past years.

The governance of the region relies on the Government of Chartered Community of Navarra. The region is uni-provincial, it is not divided into provinces as it is the case in other Spanish regions, keeping the political power centralised. This configuration also allows for close ties among the different regional entities supporting entrepreneurship, R&D and innovation. Their role is to coordinate the regional actions and initiatives and to provide entrepreneurs with financial support as well as coaching, networking opportunities and access to accelerators or incubators. In addition, there are several innovation and technologies centers in the region as well as two universities and several clusters.

The city of Pamplona hosts 30% of the population of the region, and also offers programmes supporting entrepreneurs, but in most of the cases in collaboration with other regional actors. Therefore, most of the available initiatives supporting entrepreneurs rely on regional, national and European actors for governance and budget.

The start-ups and scale-ups of the region are mainly from the following fields: professional services, healthcare, agri-food, biotechnology, energy, entertainment, and machinery. When it comes to start-ups and scale-ups with an advanced technology focus the top sectors are cleantech, biotech and MedTech.

The RIS3 strategy states the most important and strategic sectors for the region, where Navarra would like to further develop. The selected sectors are a mix of established sectors in the region such as mechatronics and automotive industries or agri-food and some emerging one such as creative and digital industries and integrated tourism. The region is also involved in several interregional networks such as Vanguard Initiative or Interreg projects. These collaborations offer the region the opportunity not only to network and strengthen their ties with other similar regions but also to implement collaborative projects, exchange good practices and learn from advanced regions.

The region already has a established and functioning system of support to entrepreneurs. However, it is highly dependent on public actors, with no private initiatives also supporting it financially or bringing new ideas and support programmes. Until recently, due to the culture and tradition of the region, entrepreneurship was not perceived as viable option. This is slowly changing thanks to the increased popularity of terms such as start-up or entrepreneur, but also thanks to the support programmes implemented in the region. The region has some of the highest shares of inhabitants with higher education for whom entrepreneurial activities are also an opportunity to stay in the region.

In spite of the existing positive conditions, it is important that the ecosystem continues evolving and staying attractive for locals but also capable of attracting foreign talent and investment. The ecosystem has some well-established public actors, but private support is non-existent, making it an evolving ecosystem with room to improve. The Government has also implemented specific strategies to recover from the COVID-19 crisis, which can also become a source of opportunities to the region.

Table 1 SWOT Analysis of the region of Navarra

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• High rate of industrial activity and competitive and dynamic industrial sectors: automotive, food, machinery and equipment, renewable energies and bio-health technologies.</li> <li>• Population with a high level of university profiles.</li> <li>• High number of companies that introduce technological innovations and new products.</li> <li>• Quality of entrepreneurship: high percentage of companies that survive into the mid-term.</li> <li>• Closeness and accessibility of regional administration, with important legislative competences and its own differentiated tax regime.</li> <li>• High export share of products of medium-high and high technological level.</li> <li>• Presence in Navarra of more than 125 multinationals from more than 20 countries.</li> <li>• Cohesive support to entrepreneurs by the public sector.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of culture of cooperation and clustering, both at local level and outwards.</li> <li>• Atomised business fabric, with very small companies and self-employed workers (except in manufacturing companies).</li> <li>• Insufficient number of companies with decision making centre in Navarra.</li> <li>• Low performance in non-technological innovation.</li> <li>• Gradual decrease in investment in R&amp;D and patents.</li> <li>• Poorly developed ICT sector for the 4.0 industry challenge.</li> <li>• Lack of private support to entrepreneurs</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Improvement of cooperation between companies, technological centres and universities as a way to increase commercial and industrial development of existing intellectual property.</li> <li>• Coordination of the public sector around a common strategic vision.</li> <li>• Boosting the bio-economy and circular economy, making use of knowledge from agro-food, energy efficiency and waste and resource management.</li> <li>• Foster, develop clinical and bio-medical research.</li> <li>• Improve the regional image abroad by placing value on strengths, attracting investment.</li> <li>• Based on the advances made in social dialogue, continue to progress with the greatest possible involvement of economic and social stakeholders in furthering and consolidating a new company culture of the 21st century.</li> </ul>	<ul style="list-style-type: none"> <li>• Relocation of companies to developing countries with low labour costs.</li> <li>• Aging workforces in industry, lack of labour incorporation of young people and brain drain.</li> <li>• Risk of complacency.</li> <li>• Productivity evolution model that is passive.</li> <li>• Future risk from early secondary school drop-out higher than in the best regions.</li> <li>• Need to improve recognition of the role of entrepreneurs and their social contribution.</li> </ul>



- Commitment to stable, mid/long-term of R&D financing.

Source: Smart Specialisation Strategy of Navarra – Update 2016 – 2030 (Gobierno de Navarra, 2016) and EER Application (Gobierno de Navarra, 2019)

## **1. INTRODUCTION**

This report has been prepared in the framework of the project entitled 'Fostering collaboration through mapping, analysing and interlinking of European Entrepreneurial Regions' launched by the European Commission's Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs and the Executive Agency for Small and Medium sized Enterprises (EASME). This project is funded by the COSME programme.

The objective of this project is to strengthen the impact of existing actions aimed at further developing start-up and scale-up support. It aims at fostering collaboration across the European Entrepreneurial Regions (EER) and developing and implementing concrete collaborative action plans that will foster scale-ups and entrepreneurs along common thematic priorities.

This project builds on the long-standing experience of the EER initiative of the Committee of the Regions. The EER label has been awarded to regions for the commitment and policies to make their region one of the most resilient and ambitious places in Europe with forward-looking actions. Strategic topic areas are identified based on mapping, analysing and interlinking of EER labelled regions.

In this context, the objective of this report is to map the regional entrepreneurial ecosystems of the participating EER regions focusing on the analysis of their actors, policies and market-enhancing services and also exploring the potential linkages within and across the regional entrepreneurial ecosystems.

Phase I of the project ran between January 2019 and July 2020, with the involvement of 10 EER Regions: Catalonia, Île-de-France, Lower Austria, Marche, Lombardy, Western Greece, Central Macedonia, Flanders, North Brabant, Northern and Western Ireland.

Phase II of the project started in September 2020 and will last until January 2022. It welcomed another 8 regions that will build on the work from phase I. The new regions are Asturias, Valencia, Navarra, Helsinki-Uusima, Malopolska, Pomorskie, Gelderland and Northern Ireland. The latter regions will be further referred to as "EER II" regions in this report.

## 2. PRESENTATION OF THE REGIONAL ECOSYSTEM

The Chartered Community of Navarre, *Comunidad Foral de Navarra in Spanish*, is the 11th autonomous community of Spain in terms of size with 10,391 km<sup>2</sup> and 2.2% of the total area. Navarra is the 5th smallest region in terms of population (656.487 in January 2020) (Instituto Nacional de Estadística, 2021). Pamplona/ Iruña is the capital and is further divided in 5 regional units, *merindades*. Almost a third part of the population is based in the capital city.

Navarra is located in the north of Spain and borders with the Basque Autonomous Community, La Rioja, and Aragon in Spain and Nouvelle-Aquitaine in France, sharing 163 kms of border.

The most important sectors in the region are service companies (58,7%), industry (27,7%), building (7,4%), energy (3%) and agricultural, stock, breeding and hunting (3,3%). Overall, the industrial fabric of Navarra represents 28% of the GDP of the region, 13 points higher than the Spanish and EU average. There are also more than 120 multinational companies based in the region.

The region has an airport with limited international flights but is well connected to other four bigger and more relevant international airports (Bilbao and Zaragoza in Spain, Biarritz and Bordeaux in France). Additionally, it has daily high-speed train connections with Madrid and Barcelona and will be part of the European Lisbon-Paris axis in the near future.

Regarding the European Cohesion Policy category, the region is considered a *more developed region* (European Commission, 2014) and a *moderate innovator* in the 2019 Regional Innovation Scoreboard (European Commission, 2019).

The regional GDP in 2018 was 20 282.08 million euros (Eurostat, 2020), and a GDP growth rate of 3%.72 in 2018. When looking at the GDP per inhabitant, Navarra has the 3<sup>rd</sup> highest value in Spain (Eurostat, 2020), 34,300 euros, after the regions of Madrid and the Basque Country, 38,300 and 36,300 euros respectively. The growth of the regional Gross Value Added was of 2.7% in 2018.

Navarra has kept a relatively low level of unemployment in the last decade, being always together with the Basque Country the regions with the lowest value. Navarra's unemployment in 2019 was 8.2% (Eurostat, 2020), the lowest value since 2008. Employment rates are also among the highest in the country, with a 68% of employment rate (Eurostat, 2020) among the 15-64 age group in 2019.

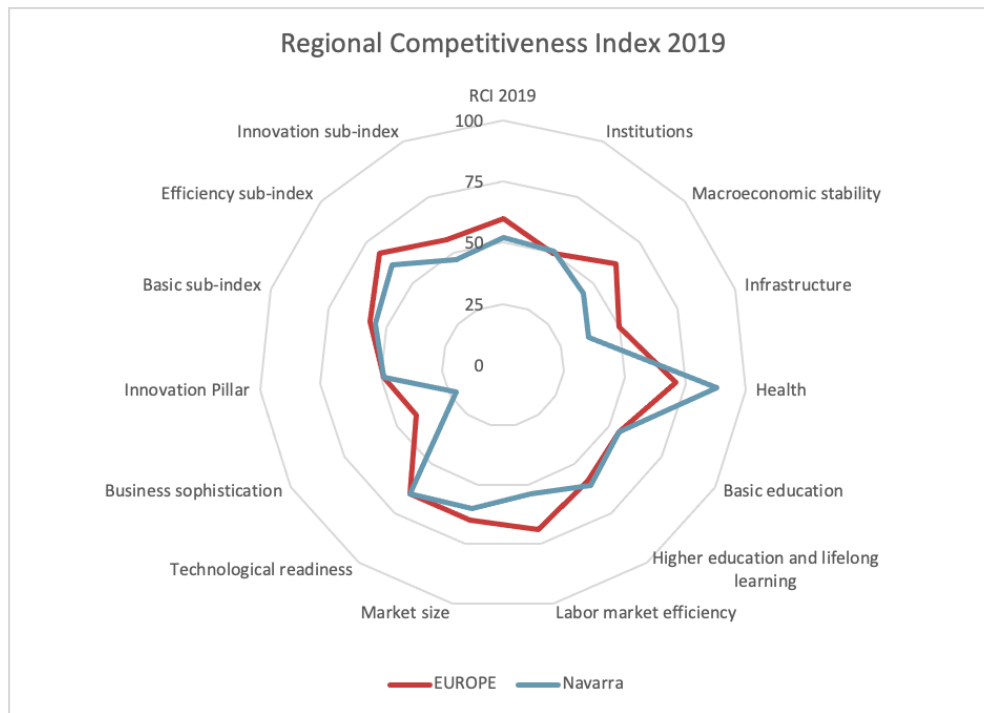
In 2017 there were 47.058 active enterprises in the region (Eurostat, 2020). The most relevant sector is the wholesale and retail (10.524), followed by professional, scientific and technical activities and construction, 8.488 and 6.702 respectively. 205.482 workers were employed in total by the active enterprises mentioned above. 2,600 new enterprises were created in 2014 and have survived to 2017 (Eurostat, 2020). The survival rate was of 55,39 in 2017 (companies created on 2014) and the death rate was of %7,55 in 2016.

The GVA of the region is mainly generated by the services sectors (60%), the industry sector accounts for the 37.9% and the primary sector brings the remaining 3.5% (European Commission, 2020). The real growth rate of the GVA in Navarra was of 2,7 in 2018 (Eurostat, 2020).

The Regional Competitiveness Index (European Commission , 2019) classified Navarra in the fourth position among the Spanish regions, but in the 165<sup>th</sup> among all the regions analysed, that is the bottom half. As Figure 1 shows below, there are several areas for Navarra to improve, most notably macroeconomic stability, infrastructure, labour

market efficiency and business sophistication. According to the Regional Competitiveness Index 2019, overall, the Region is below the EU average, but slightly better than most of the other Spanish regions.

Figure 1 Regional Competitiveness Index 2019 - Navarra and EU average

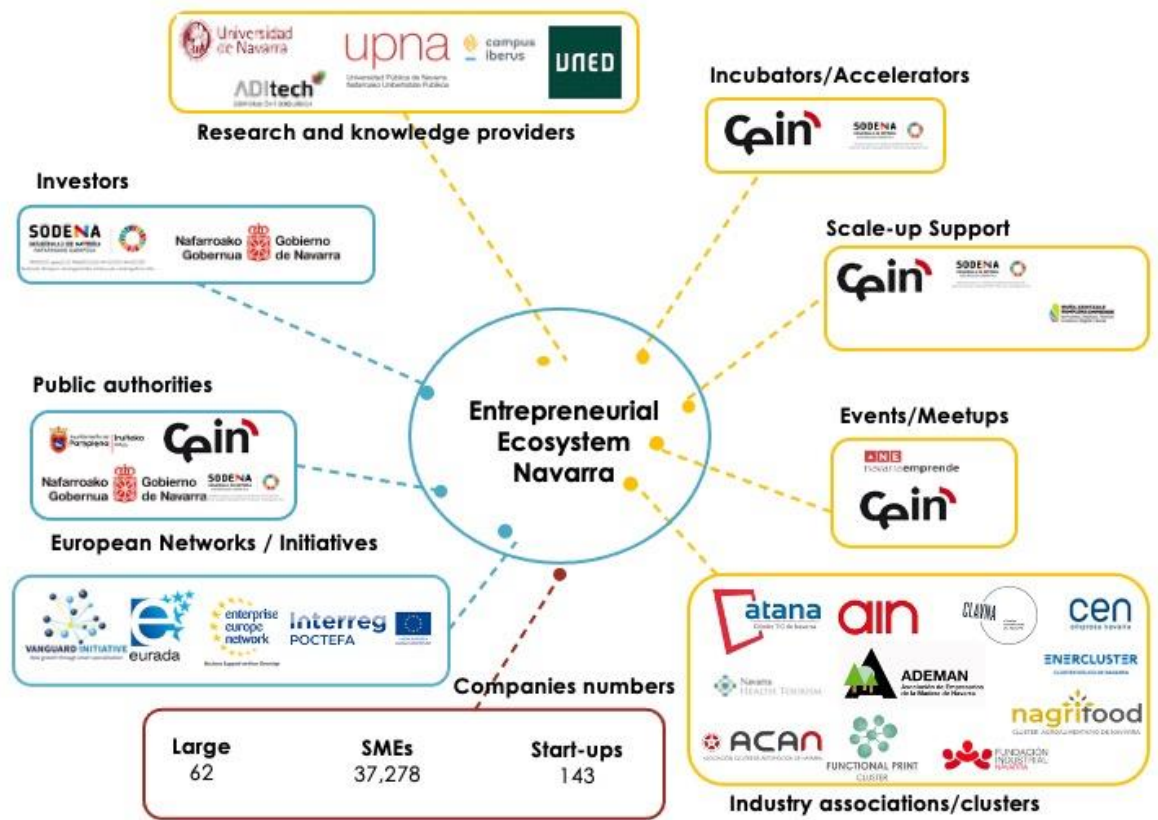


Source: Authors based on EU Regional Competitiveness index 2019 (European Commission , 2019)

Finally, it should be mentioned too that Navarra has its own taxation system, independent from the National one. The region is in charge of collecting its own taxes and a part is transferred to the national tax office in exchange of the services not transferred that the National government takes care of.

Most of the indirect taxes (e.g., VAT, tax on alcohol, tobacco, or fossil fuels) must respect European Treaties, hence are the same in every Spanish region. However, there are some others (E.g., Personal Income Tax, Assets, Companies, Inheritance, etc.) over which the region can define a different regulation, always maintaining the same fiscal pressure as in the rest of the state.

Figure 2 Diagram of the ecosystem of Navarra



Source: Authors

## 3. THE ACTORS IN THE ENTREPRENEURIAL ECOSYSTEM

### 3.1. Market services and ecosystem builders

#### 3.1.1. Market services for start-ups and scale-ups

Navarra hosts a Digital Manufacturing Innovation Hub, **NAVARDMIHub** (European Commission, 2021), since 2016, and focuses on IoT and Cyber-physical Systems (CPS). NAVARDMIHub aims to make the most of the synergies and capabilities already present in the regional innovation ecosystems, in terms of industrial innovation, effective technology transfer, business commitment and regional tools for activating the value chain. The Digital Innovation Hub offers the following services: access to competence centres; access to finance in a one stop-shop way; advisory services and personalised training. The NAVARDMIHub is involved in different initiatives at regional, national and international level.

The region also hosts **incubators and accelerators** to support the creation and the speed up of the enterprises. However, all of them are managed by public institutions. **Co-working** spaces are also spread around the region, to allow entrepreneurs to work from there, some of them are private (Coworking Spain, 2021) and some other are implemented by public organisations. However, most of them are located in the area of Pamplona, the capital city.

One of the co-working spaces, **Dinabide** (Dinabide, 2021), offers also access to facilities where the users have collaborative robotics from a basic to an advanced level, including additive manufacturing. Additional actions linked to 3D printing with plastic thread and 3D scanners are planned. The objective of this action is to generate the type of professionals demanded by a fully digital industry in the present highly competitive and globalised context.

There are several businesses associations in the region with the objective of supporting entrepreneurs and entrepreneurships. **CEN** (Confederación Empresarial Navarra, 2021) is the Confederation of Navarrese Entrepreneurs and is the umbrella association of other 42 organisations focusing on specific economic sectors, geographical areas or women and young entrepreneurs. It offers strategic support to companies, IT support, as well as lending facilities to the members. One of them is **AJE Navarra** (AJE Navarra, 2021), which focuses notably on the young entrepreneurs and supports them in their entrepreneurial endeavours.

The **Navarra Industrial Foundation** (Fundación Industrial Navarra, 2021) is a non-for-profit association founded in 2014 by the Official Association of Industrial Engineers of Navarre and the Association of Industrial Engineers of Navarre. As a trans-sectorial cluster, their main objective is to promote the industrial and economic development of Navarre by helping companies to become more competitive. They organise diverse activities always with the goal of promoting collaboration, mutual support and shared learning.

The **Fundación Navarra Para La Excelencia** (Fundación Navarra para la Excelencia, 2021) was created in 1999 on the initiative of the Government of Navarra, with the aim of promoting good management practices and Models of Excellence among all organisations in the region. Since 2015, they have had the legal entity of a private non-profit foundation, managed by a business board of which the Government of Navarra is also a member. Their main objective is through a collaborative project involving people, companies, institutions and organisations from the most diverse sectors, to achieve an improvement in the competitiveness, effectiveness and efficiency of companies and organisations in Navarra, whatever their size and area of activity, through the improvement of their management systems. They work around five areas of action: Dissemination, formation, implementation, evaluation, and acknowledgement.

Additionally, there are six **clusters** operating in the region based on the classification done by the regional government (SODENA, 2021): ACAN - Asociación Clúster Automoción de Navarra<sup>1</sup> (automotive sector); FUNCTIONAL PRINT<sup>2</sup> (functional and additive printing); NAGRIFOOD - Clúster Agroalimentario de Navarra<sup>3</sup> (Agri-food sector); ENERCLUSTER - Clúster Eólico de Navarra<sup>4</sup> (Wind energy); CLAVNA - Clúster Audiovisual de Navarra<sup>5</sup> (Audio-visual sector) and ATANA - Clúster TIC de Navarra<sup>6</sup> (ITC sector). Additionally, there are also some entrepreneurial associations installed in the region that have received support from the government as well: AIN - Asociación de la Industria Navarra<sup>7</sup> (Industry 4.0 and circular economy); AEHTN - Asociación de Empresas de Hostelería y Turismo de Navarra<sup>8</sup> (health tourism); and ADEMAN - Asociación de Empresarios de la Madera de Navarra<sup>9</sup> (wood construction). Due to their nature and their culture, the clusters in the region focus their support mostly on already established companies, and not that much on the creation of new companies.

**ADITech** (ADITech, 2021) founded in 2013 is a technological foundation with the legal entity a private non-profit foundation that gathers six **technological centres** in the region (AIN, CENER, INTIA, CNTA, Lurederra, NAITEC. During the first years after its foundation, ADITech used to have a service to support entrepreneurship. Nowadays, due to the close collaboration with CEIN, it is part of the activities they offer.

ADITech also acts as coordinator for the Navarran R&D&I System (SINAI). **SINAI's** goal is to coordinate the relevant actors and to revitalise the synergies between science, technology and business in Navarra. It is comprised of the research centres (CIMA, CSIC and Navarrabiomed), the technological centres mentioned above, the two main universities of the region, and the R&D unit of companies (e.g., Centro STIRLING).

There are **three universities** present in the region: Universidad de Navarra, Universidad Publica de Navarra and UNED, the national distance learning university. They offer different services to support and promote entrepreneurship among their students. UNAV also has collaboration programmes with CEIN, one of them is the eight edition of the Diploma in Management and Business Creation in Science, that has this year 23 students from different branches of science at the University of Navarra (Navarra Emprende, 2020).

The University of Navarra has also recently started the **InnCommon** (Universidad de Navarra, 2021) initiative, targeting entrepreneurial alumni. It is a community where alumni can share their ideas and entrepreneurial projects and where they would have the opportunity to receive free advice if needed and where you they can share their experience, meet other entrepreneurs or continue their training. The University of Navarra has also launched an incubator for fashion and retail companies, but it is based in Madrid, not in Navarra <sup>10</sup>, where the university also has facilities.

The **Entrepreneurs Club of the Fundacion Empresa Universidad de Navarra** (Universidad de Navarra, 2021) was founded in 2006 and since then has given support to more than 5000 students and alumni in one of the more than 350 training events organised. The initiative gives support and training to those students interested in starting a business. The support is organised around for programmes: The Advanced

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<sup>1</sup> See <https://clusterautomocionnavarra.com>

<sup>2</sup> See <http://functionalprint.com/>

<sup>3</sup> See <http://nagrifoodcluster.com/>

<sup>4</sup> See <http://enercluster.com/>

<sup>5</sup> See <http://clavna.com/>

<sup>6</sup> See <http://www.atana.org/es/>

<sup>7</sup> See <http://www.ain.es/>

<sup>8</sup> See <http://navarrahealthtourism.com/>

<sup>9</sup> See <https://www.ademan.org/>

<sup>10</sup> See <https://atelierbyisem.es/en/home-eng/>

Cycle of Entrepreneurship, the YUZZ Programme, the Diploma in Management and Creation of Science Companies and the University Entrepreneurship.

Apart from regional organisations, **Enterprise Europe Network** (EEN) is also present in the region. Navarra represented by SODENA is also member of **EURADA** (EURADA, 2021), the European Association of Regional Development Agencies.

Unlike other regions participating in EER, Navarra does not host any global start-up/scale-up service providers. There is also a lack of private initiatives supporting entrepreneurship and provided market services for start-ups and scale-ups in the region. The majority of the support is provided by public bodies or organisations supported by the regional administration. While they provide a comprehensive and coordinated support thanks to the close ties among them, they are limited by their nature and budgets. Likewise, there is a high dependency on the public sector, which might negatively impact the support received by the entrepreneurs when it comes to a negative period to the economy of the region, or in case the government does not want to continue supporting it.

### *3.1.2. Public sector intermediaries' support to start-ups and scale-ups*

The public sector intermediaries play a bigger role in the support to start-ups and scale-ups than the private sectors. There is a public-private network to enhance the synergies between the different actors that support entrepreneurship and the private initiative. The proximity of the authorities, universities, technology centres and business organisations and local development agencies, creates an ideal space for communication and creativity for business. Their main actors are:

**SODENA** (SODENA, 2021; SODENA, 2021), Sociedad de Desarrollo de Navarra, S.L., is the public company coordinating development of the strategic plan and is the instrument of financial support, mainly through venture capital. Due to its nature, SODENA is the most active organisation supporting start-ups and scale-ups in the region. The main financial instruments they use to support companies is venture capital. SODENA behaves as an active venture capital partner, supporting the management of the company, and being involved in the management board and supporting the company through its extensive network. SODENA is self-financed, mostly by the interests of the loans it provides.

Between 2015 and 2019, SODENA supported 51 companies, and of them 11 were closed, giving a failure rate of 21.56%. Likewise, SODENA only provides financial support to companies that have strongly ties with the region, that are based there and that the project will bring economic and other benefits to the region. Therefore, it is very rare that they leave the region afterwards.

**CEIN** (CEIN, 2021), the agent promoting entrepreneurship, is aligned to make technology, financing and counselling for entrepreneurs/businesspeople a reality. They support to innovative start-ups. They offer support services, access to big companies, personalised mentoring, meetings between companies and with start-ups support companies, access to facilities and innovative spaces such as pilot plants. They also offer incubator (focusing on different economic sectors) and accelerator services, including an online accelerator. They have several entrepreneurial programmes focusing on different entrepreneur profiles. They also organise events, seminars and trainings and prizes to the best innovative business idea.



CEIN hosts **3 incubators** (CEIN, 2021): Vivero de Innovación<sup>11</sup>, Vivero de Innovación Agroalimentario<sup>12</sup> and Navarra Factori<sup>13</sup>, each of them focusing on some particular enterprises. CEIN also offers online accelerator services to companies<sup>14</sup>, which have proved very useful and have been highly demanded during the COVID-19 pandemic. Additionally, SODENA also manages an Agrifood accelerator, Orizont<sup>15</sup>.

The region also hosts several **sectorial economic development organisations** such as Cederna Garalur<sup>16</sup> focused on the development of the mountain area, or Anel<sup>17</sup> working on social economy. For example, Anel offers several services for the creation of companies, as well as mentoring services and diverse trainings. There are also several **development agencies** focused on different geographical areas of the region such as Zona Media<sup>18</sup> or Sakana Garapen Agentzia<sup>19</sup>. They all offer tailored support and advise to entrepreneurs.

The **Regional Employment Service** (Gobierno de Navarra, 2020) also offers several aids and subsidies areas such as entrepreneurship and self-employment labour insertion of people and groups with special difficulties, training and professional guidance, etc.

As mentioned in the previous section due to the limited number of private initiatives supporting scale-ups and start-ups in the region, the public sector is acting as catalyser of all initiatives. Due to their deep involvement in the region, the strong linkages with all actors and their long experience, they have a complete overview of the situation in the region and can identify the needs and problems that scale-ups and start-ups have. The different actors work closely together which also helps to have a smooth interaction among them and offer 360 degrees support to the webpreneurs, allowing them to move from one type of support to another, based on their growth and scale.

## 3.2. The role of entrepreneurs (start-ups and scale-ups)

### 3.2.1. Overview of the entrepreneurial dynamics

Of the 3.363.197 companies existing in Spain in 2019, 44.224 were based eradicated in Navarra (Instituto Nacional de Estadística, 2021). More than half of the enterprises (24.864) do not have any employees, and 11.434 only have up to 2 employees, and 3.931 have between 3 and 5. As the number of employees increases, decreases the number of companies: there are only 143 companies with a range of employees between 100 and 199, 19 with employees between 500 and 999 and 4 companies with more than 5000 employees.<sup>20</sup>

Due to the administratively burdensome process to dismantle a company in Spain, it is usual that companies are not closed even if the activity has ceased. These companies are colloquially known as *zombies* and do not provide a conclusive view of the reality.

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<sup>11</sup> See <https://www.cein.es/crecimiento-para-tu-empresa/viveros-de-innovacion/vivero-de-innovacion-noain/>

<sup>12</sup> See <https://www.cein.es/crecimiento-para-tu-empresa/viveros-de-innovacion/vivero-de-innovacion-agroalimentario/>

<sup>13</sup> See <https://www.cein.es/crecimiento-para-tu-empresa/viveros-de-innovacion/navarra-factori/>

<sup>14</sup> See <https://www.cein.es/crea-tu-empresa/aceleradora-empresarial-cein/>

<sup>15</sup> See <https://www.orizont.es/que-es-orizont/> and <https://www.sodena.com/index.php/es/capital-riesgo/capital-semilla-start-up/aceleradora-orizont.html>

<sup>16</sup> See <http://www.cederna.eu>

<sup>17</sup> See <https://www.anel.es>

<sup>18</sup> See [www.navarramedia.es](http://www.navarramedia.es)

<sup>19</sup> See <https://www.sakanagaratzen.com>

<sup>20</sup> The division by employees is: 1 to 2 - 11.434; 3 to 5 - 3.931; 6 to 9 - 1.636; 10 to 19 - 1.150; 20 to 49 - 742; 50 to 99 - 213; 100 to 199 - 143; 200 to 499 - 77; 500 to 999 - 19; 1000 to 4999 - 11 and 5000 or more 4.

Since the 1960s, when the region started its industrialisation process, more than 125 multinationals from 20 countries have been established in the region (Invest in Navarra, 2021). Some of the most relevant ones are Volkswagen, BSH, General Mills, Fagor, Nucap Industries, or KYB Group.

### *3.2.2. The landscape of start-ups and scale-ups*

In regard to the number of start-ups and scale-ups <sup>21</sup>, there are 143 at the moment in the region according to data from Dealroom. The total number has increased in 40 new companies since 2015, which is an increase of a 38%.

Start-ups and scale-ups in the region belong mostly to three industry categories: 19 companies are categorised as professional services, 18 as healthcare and 15 in agri-food. The next sectors more represented are biotechnology, energy, entertainment, machinery, electronics and marketing services with between 5 and 7 companies.

Some start-ups also have a more advanced technology focus. Among the 16 companies identified, they focused on cleantech (6 companies), biotech (4 companies), MedTech (2 companies) and AI, nanotech, 3D printing and IoT (1 company each).

The most common sectors among start-ups and scale-ups are also partially aligned with the priorities of the Smart Specialisation Strategy of the region. The priorities sectors are: agri-food industry, mechatronics and automotive industry, renewable energies and resources, health-biopharmaceutical industry, integrated tourism industry and the creative and digital industries.

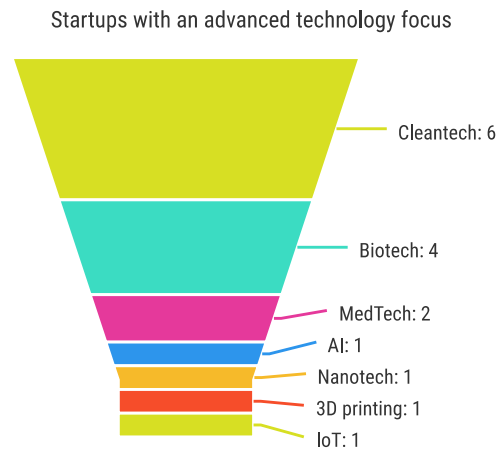
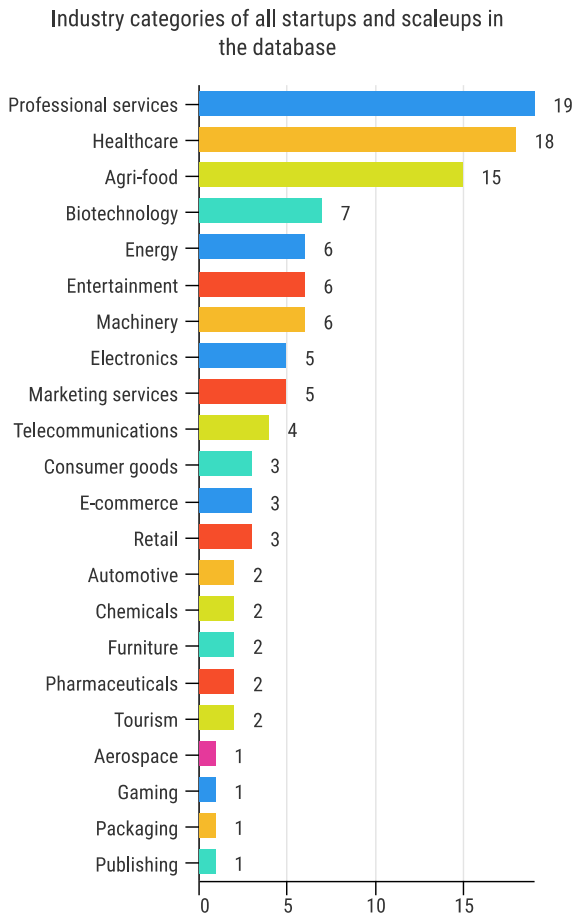
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<sup>21</sup> In the context of this report scale-ups are defined as “companies past the search phase and rather in the execution phase of the business model (Onetti, 2014). According to the OECD (2007) a scaleup is a company who has an average annualized return of at least 20% in the past 3 years with at least 10 employees in the beginning of the period”.

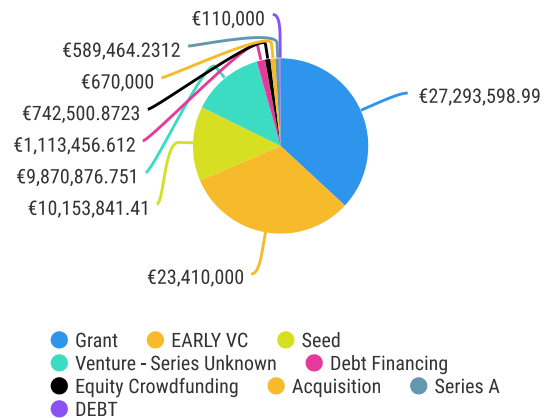
Figure 3 Overview of start-ups/Scale-ups and VC in Navarra

## Navarra

Number of startups and scaleups: 143  
 Number of startups established after 2015: 40  
 registered in the Crunchbase/Dealroom joint  
 database



Type of investment received (disclosed) 2000-2020



### Highest VC investment in startups:

- Telum Therapeutics is a biotechnology company that develops new treatments for infectious diseases based on the use of lytic enzymes from bacteriophages. It raised a total of €4.1M in funding over 1 seed round on Jul 13, 2020.
- Ikan Biotech is the first Contract Research Organisation specialised in developing of new enzybiotics combining with preclinical services using zebrafish. Ikan Biotech raised a total of €2.8M in funding over 4 rounds.
- NabraWind Technologies is a renewable energy company that designs and develops advanced wind technologies for wind turbine components as well as engineering services advisory. NabraWind Technologies raised a total of €1.9M in funding over 3 rounds. Their latest funding was raised on Oct 8, 2019 from a Venture - Series Unknown round.

Source: Technopolis Group analysis based on Crunchbase and Dealroom, 2020

The table below offers a comparative of the entrepreneurial activities in the region and the other participating regions in the EER Phase 2. Navarra hosts the lower number of innovative companies in comparison with the other regions, only 294 in comparison with the 2,103 companies based in the regions of Helsinki-Uusimaa. In relation to the total number of active companies, innovative companies are just a 0.6% of the total, also far from the 1.7% of the region of Helsinki- Uusimaa.

Table 2 Overview of entrepreneurial activities in the region

EER region	N of innovative companies (Crunchbase & Dealroom)	N of active enterprises in Eurostat, last available year	% of innovative companies in total active enterprises	N of startups	% of startups in total active enterprises
Text					
Northern Ireland	1185			48	
Genderland	1268	117.061	1,1	89	0,076
Helsinki-Uusimaa	2103	125.898	1,7	219	0,174
Malopolskie	687	172.615	0,4	70	0,041
Pomorskie	447	172.615	0,3	53	0,031
Asturias	407	73.890	0,6	13	0,018
<b>Navarra</b>	<b>294</b>	<b>47.058</b>	<b>0,6</b>	<b>11</b>	<b>0,023</b>
Valencia	1340	385.991	0,3	150	0,039

Source: Crunchbase and Dealroom data compiled by Technopolis Group, 2020

### 3.3. SMEs and large companies in the entrepreneurial ecosystem

#### 3.3.1. Established enterprises' interaction with the ecosystem

Smart and medium-sized companies represent the main industrial structure of the region. There are some programmes in the region that connect bigger companies with start-ups and SMEs.

For example, **Impulso Emprendedor** (CEIN, 2021) is a comprehensive acceleration program for the development and implementation of innovative business initiatives promoted by the Government of Navarra. It is open to entrepreneurs from any background who have an innovative project with growth potential that they want to make a reality in Navarra. The programme is sponsored by 6 leading companies in their sector at national and international level. Each of them provides an economic endowment of 8,000 euros for the selected projects, and all of them mentor the participating start-ups. Through the programme leading companies and from the region mostly, support start-ups. Interviewees mentioned how usually local companies are more willing to mentor small companies.

In addition, according to the interviewees the business incubators and accelerators of the region also provides opportunities for interaction and collaboration among companies that are part of it. Since almost all support services are provided by CEIN or SODENA who are also very close to the main established companies, when they identify potential synergies with start-ups, they put them in touch.

#### 3.3.2. Large companies' interaction with the ecosystem

Large companies based in the region are represented mostly by productive plants belonging to multinational corporations. These big plants are characterised by their cutting-edge technology, the significant export capacity and their driving force on the rest of the regional economy. They belong to two of the most relevant sub-sectors: car manufacturing and machinery and equipment. The industrial activity in the region has been diversifying for the last 20 years, thanks to the development and implementation of a renewable energy industry, focusing mostly on wind-power industry.

The interviewees have said that the interaction of large companies with the local ecosystem and start-ups is very limited. As mentioned, large companies have mostly foreign capital and production facilities are implemented in Navarra. Their structures are very close and with little decision power in the region, therefore it is very complex to engage with them, and to involve them in mentoring activities.

Interviewees also highlighted how the services provided by CEIN and most notably the incubators fill in the gap. There are several programmes that connect established local companies with start-ups.

### **3.4. Research System and Universities**

#### *3.4.1. General overview of the research and higher education performance in the region*

The regional higher education system includes two public universities (Universidad Pública de Navarra and the Universidad Nacional de Educación a Distancia) and one private university, the Universidad de Navarra, one of the most prestigious in the State. Additionally, the region also has an extensive network of vocational training centres.

After an increase in 2017 to 54.1%, the population aged 30-34 with tertiary education in Navarra has been reduced to 49.2%. In spite of a worsening situation, it is above the national average in the same year (42.4%) and the EU average (40.7%). All in all, Navarra is placed 19th among EU regions in terms of highest level of qualified people in science and technology (Gobierno de Navarra, 2019).

Since the first regional regulatory framework in 1982, the regional government has had an active role defining and implementing different regional innovation policies, targeting the reinforcement of the regional scientific and technological research infrastructure, the stimulation of innovation capabilities and the performance of the business sector.

In spite of the long-lasting policy support to innovation R&D expenditure are being reduced since 2011, accounting for 1.61% of the regional GDP, in comparison to the Spanish average of 1.19% and the EU average of 2.04%. Almost 70% of R&D expenditure is done by private companies, 14 percentage point above the Spanish average. The number of employees in the high-tech sector has also changed during the last years, being at 7100 in 2018. This only represents 1% of the national employment in the sector, and 2.5% of the total employment in the region, below the 4.1% at EU level.

ADITECH is an umbrella organisation covering most of the technology centres of the region, it has 11 Centres in 4 main sectors: Agri-food, Biotech, Energy and Industry. In 2015 the Network hosted 850 researchers and had a revenue of 60 million EUR per year (Gobierno de Navarra, 2019). All of this leads to have the highest levels of education and qualification in the state. The region has been supporting and incentivising Research and Development and Innovation funding for decades.

One of the strengths of the system is that the concrete specialisation of the research done in the region. The region might not have as many research groups or as big as in some other communities in Spain, but they are specialised in very concrete and advanced areas. Another strength of the system is the tight collaboration ties among the diverse actors. However, this is also a weakness since the collaboration has to be boosted, it does not always happen in a natural way. The role of a coordinator has proved very useful for this.

On the other hand, the main weakness of the R&D systems is the size. Navarra is a small region, and so are the technological centres. They do not have the capacity to be present in all relevant European networks and collaboration platforms, their size

preventing them from being more active. Therefore, interregional collaboration initiatives enable the region to learn more about other regions' initiatives.

Almost all of Navarra's patenting activity takes place in the manufacturing sector, with a 97% of the total. The remaining 3% of the patents are from activities linked with the construction sector. Navarra had a stable patent activity during the last 10 years, with an average of 73 patents between 2010 and 2016. However, the data available for the last two years, 2017 and 2018, show a decline in the patenting activities with only 34 and 15 patents respectively.

The five most active organisations in number of patents are companies in the case of Navarra: Gamesa with 80 patents is the most active one and Acciona Windpower is on second position with 47. Both companies develop their activities in the energy sector, which is one of the key sectors for the region.

Regarding the H2020 participation of Navarra, the performance is below the average of the 8 EER regions. Navarra participated in 151 projects between 2014 and 2018, far from the 734 in which the region of Helsinki-Uusimaa was involved in. The total contribution was 63,74 million euro, also half of the average of 120 million.

Most of the H2020 applications were from private organisations for profit (84), followed by Research and Technology Organisations (38), universities (15) and other organisations (14). The amount of funding received was also distributed following the same order: private organisations received more than half of the total amount, 36,5 million; RTOs received 16,5; Universities 6,4 and other organisations 4.5 million.

The top sectors in regard to H2020 participation are Energy, Advanced Manufacturing and health, some of the key sectors of the region.

*Table 3 Overview of research sector performance in the region*

Indicator	Value	Average value in EERII regions
Total nr of EPO patents	566	2437
Total nr of co-applied patents	73	142
Share of co-applied patents	13%	15%
Top 3 regions for co-application	Munich (10%), Hamburg (9%), Zaragoza (7%)	n. a
Total nr of H2020 participations	151	268
Top sectors of H2020 participations	Energy 21,63 million euros ADMA 20.93 million euros Health 9.16 million euros	ADMA 27.37 million euros TLC/ICT 26.14 million euros Energy 25.18 million euros

Source: author based on data compiled by Technopolis Group and ISMERI Europa

#### *3.4.2. The landscape of R&I ecosystem players*

As mentioned, CEIN works closely with the University of Navarra with the objective of promoting entrepreneurial activities among students of scientific and technical degrees.

The University Laboratory for the Creation of Innovative Companies (LUCE) is a service for the entire university community (students, teaching staff, research groups, employees, etc.) which has the objective of promoting and encouraging the creation of innovative companies. It is a space that promotes and encourages favourable attitudes among students towards innovation and entrepreneurship and that brings together and promotes all activities aimed at creating innovative companies. Furthermore, the LUCE

will seek to promote the leadership role that the University can play, as a participant in business creation programmes, in the development of positive and favourable attitudes towards innovation and business creation. LUCE was launched in 2006 thanks to the collaboration of the European Business and Innovation Centre of Navarre (CEIN), the Faculty of Economic and Business Sciences of the UPNA and the Association of Young Entrepreneurs (Asociación Jóvenes Empresarios).

The interviewees mentioned that lately there has been an increase in the creation of start-ups by students, mostly in technological and health sectors. This is partly thanks to the work done by LUCE, but also to the change of mindsets of many students who now consider more the option of becoming entrepreneurs.

There are close collaboration ties in the region among technology centres, research centres and the universities. In 2020, the regional government provided 17.2 million (Gobierno de Navarra, 2020) euros to 46 projects in the framework of their collaborative research and development programme. In total 101 proposals were received, and the topics ranged from automation and mechatronic to food chain and health or renewable energy and resources.

The government also provides funding to the training and education of new researchers (Gobierno de Navarra, 2020). The programme provides funding on the one hand to researchers willing to pursue a PhD in a topic of interest to the region (687.180 euros), and to join the work of the SINAI, the regional research, development and innovation system. The other part of the funding will support the international mobility of PhD students with 88.000 euros.

## 4. FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP

### 4.1. Human capital

#### 4.1.1. Overview of human capital assets in the region

In 2019, the region had 4035 inhabitants leaving it to go to other countries and 8145 inhabitants left for another autonomous communities in Spain, both numbers are higher than in the previous years. In both cases between 76% and 81% of the emigrants belong to the age group 16-64 years old. In the case of those leaving to other regions in Spain 69% of them held the Spanish nationality, whereas in the case of emigrants going abroad a 70% had another nationality and 80% were born in another country. This indicates that most of the people born in Navarra leaves the region for another part of the Spain and not that much for other countries (Insituto de Estadística de Navarra, 2021).

Available LinkedIn data provides a snapshot of what is the uptake of concrete skills in the region. At the moment there are two main trends at European level: the green transition and the digital transition, also known as the twin transition. Due to the increase of European funds and opportunities in the two areas, it is key that regions have the right skills in their workforce, in order to make the most out of the present context.

Among the analysed regions, Navarra ranks first on number of professionals with environmental skills in technical industries, with a 7.0% of the employees having them. Other regions such as Malopolska only have a 1.2% of employees with environmental skills in technical industries.

However, in the case of professionals with advanced digital skills in manufacturing and ICT industries, Navarra is positioned at the bottom of the list, with only a 6.7% of the professionals having advanced digital skills. In this case, the region of Helsinki-Uusima is positioned on top of the list with 18.2% of employees also having advanced digital skills.

The Government also published the **Strategy for Navarre's citizens abroad** (Gobierno de Navarra, 2019) with the objective of improving relations with the citizens of Navarre abroad and to strengthen the link between the people of Navarre living outside the region. The strategy has 3 main axes: The "communication-connection" axis seeks to strengthen communication between Navarre and its citizens living abroad, maintain the feeling of belonging to Navarre, facilitate contact and exchange between the Navarrese diaspora itself, and observe its evolution. The "retention and return" axis aims to facilitate the voluntary return to Navarre and avoid the involuntary departure of people from the region. The last axis, "active cooperation", defines the measures aimed at promoting cooperation with the citizens of Navarre abroad and the international projection of the public area.

The Government of Navarra has also launched the **Banco PIN del Talento** (Gobierno de Navarra, 2021), a service whose main objective is to bring Navarrese companies closer to professionals with experience in the international field, so that they can contribute to the improvement of the business and productive fabric of Navarra.

As part of their Leadership and People Management for **Start-ups initiative** (CEIN, 2021), CEIN also offers training programmes to support the development of Leadership and team management skills. It looks in depth at areas such as company values and culture, goal setting, communication, confidence building, conflict management, leadership styles, giving feedback, resilience, uncertainty management, etc. It consists of three sessions, group and practical, aimed at CEOs. In a fourth session we will work



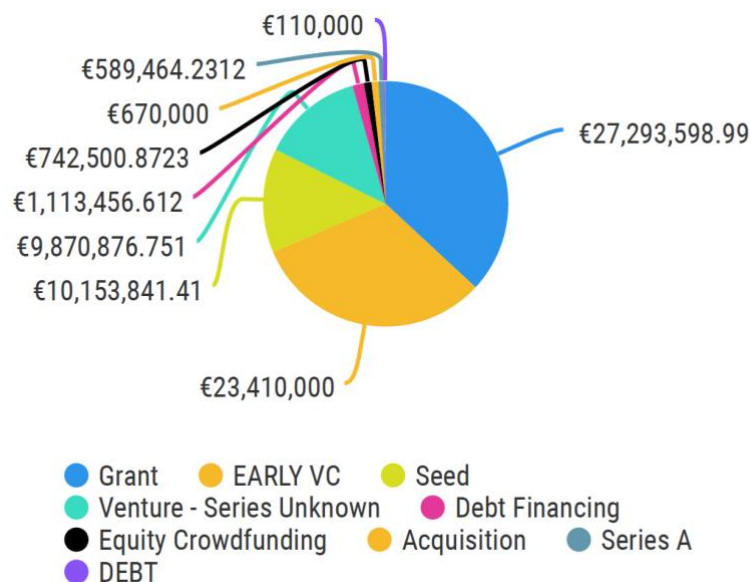
individually with each company and its team to go deeper into the most relevant topic for the CEO. The programme will end with an individualised action plan for each participating start-up.

## 4.2. Financial capital

### 4.2.1. General overview of access to finance in the region

The start-ups and scale-ups in the region have mostly access to grants when they are in need of financial support. Between 2000 and 2020 the data available in Crunchbase and Dealroom show that 27.3 million euros were given in grants to start-ups in the region. The second type of investment received was early venture capital with a volume of 23.4 million euros. Slightly more than 10 million euros were raised as seed capital and almost 10 million as Venture of unknown series in the same period.

Figure 4 Type of investment received and disclosed by start-ups and scale-ups (2000-2020)



Source: Technopolis Group analysis based on Crunchbase and Dealroom (2020)

The interviewees validated these results, stating how the bigger provided of support is the regional government, through the grants but also through venture capital activities funnelled by SODENA. The presence of non-public actors is almost non-existent, with just a few small family offices that invest in a reduce number of companies. The inclusion of more private actors in the Navarrese ecosystem will be beneficial to the start-ups and might be able to support those companies that do not belong to the strategic sectors of the region.

## 4.3. Culture

Overall Spain is not a country with a long-standing tradition and culture of entrepreneurship. Studies show that the national indicators on percentage of entrepreneurs %6,2 are below both the EU and USA average values (GEM, 2019). Among the Spanish regions, Navarra is not the most entrepreneurial one according to the interviewees.

According to the World Bank's Doing Business report, Spain ranks in the 30<sup>th</sup> position overall when it comes to measuring business regulations. However, in relation to the

sub-indicator on starting a business the position descends until the 97<sup>th</sup>. The report also offers some insights at city level, and Pamplona came third in the overall position among the 19 analysed Spanish cities (Data from 2015), but it was the worst city where to start a business.

This is a consequence of a series of factors, besides the above-mentioned business regulations. However, in relation to the sub-indicator on starting a business the position descends until the 97<sup>th</sup>. The report also offers some insights at city level, and Pamplona came third in the overall position among the 19 analysed Spanish cities (Data from 2015), but it was the worst city where to start a business.

A second factor is that subjects and courses on entrepreneurship are not common in the academic curriculum. Fortunately, this is slowly changing. For example, the University of Navarra has a Diploma in Management and Business Creation in Science (Universidad de Navarra, 2020). The diploma is focused on students and alumni of technical degrees that would like to start a business related to their studies. It is organised together with CEIN, and it is very well accepted among students. In spite of this initiative, the interviewees mentioned that entrepreneurship should be part of the academic curriculum at earlier stages such as middle school or high school, instead of only at university level.

A third factor is that entrepreneurship is not well perceived by society. It is common that when people take the decision to start a business, their friend and family are usually against it and try to make them change their mind. Similarly, failure is also penalised. However, the interviewees also mentioned that the figure of *serial entrepreneur* is also becoming more usual in the region.

**Negocios en Navarra** (Negocios en Navarra, 2021), Business in Navarra, was founded in 1990 as a monthly publication focusing on regional economic information, during the last decades they have positioned themselves as a relevant and verified source of information. They distribute an average of 3.000 copies per month. Every year since 1991, they also award the *Entrepreneur of the year*, giving prestige and visibility to the contribution of entrepreneurs to society.

Additionally, AMEDNA, the Association of Women Entrepreneurs and Directors of Navarre (AMEDNA, 2020) also gives awards to the businesswoman, female manager and female entrepreneur of the year<sup>22</sup>. CaixaBank, one of the biggest banks in Spain, also gives a regional Premios Emprendedor XXI<sup>23</sup> to the most innovative company with the greatest impact on each territory. All these awards are widely covered in the local and regional media.

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<sup>22</sup> See <https://www.diariodenavarra.es/noticias/negocios/dn-management/2019/11/21/tres-premios-para-ensalzar-talento-femenino-las-empresas-671732-2541.html>

<sup>23</sup> See <https://dayonecaixabank.es/descubre-los-ganadores-de-la-13a-edicion-de-los-premios-emprendedor-xxi/>

## 5. POLICY-MIX FOR ENTREPRENEURSHIP

### 5.1. National framework for entrepreneurship support

At national level the Directorate General of Industry and Small and Medium Enterprises – **DIGIPYME** (Gobierno de España, 2020), which is part of the Ministry of Industry, Trade and Tourism, has the objective of facilitating and promoting fluid communication with companies and actors in the diverse sectors in which the Ministry's action is projected, with particular emphasis on the implementation of policies to support and promote small and medium enterprises (SMEs), in order to encourage and promote their business and improve their competitiveness.

DIGIPYME provides support for potential entrepreneurs. They provide information about the legislation and legal requirements, tools to prepare a SWOT and a business plan and business models simulators among others. DIGIPYME also coordinates ENISA and CERSA<sup>24</sup>. The first focuses on finding and using new financial instruments to support SMEs, mostly by offering participative loans, the later provides counter guarantee or partial coverage of the risk assumed by the Mutual Guarantee Societies with the small and medium companies that need additional guarantees to solve their financial problems, prioritizing the financing of investments and innovative projects, as well as the micro companies and those of new or recent creation.

The **Chambers of Commerce of Spain**, with support of the European Social Fund, has created the national programme “**España emprende**” (Camara de Comercio de España, 2020) with the objective of starting new entrepreneurial activities.

In February 2021, the Spanish Government published the “**España Nacion emprendedora**” (Gobierno de España, 2021) strategy. The strategy lays the foundations for unleashing and stimulating talent through three levers: education, R&D&I and innovative entrepreneurship. The vision of the document is that in the year “2030 Spain will be an Entrepreneurial Nation, making innovative entrepreneurship the icebreaker of a new model of country”. The strategy proposes 50 measures, classified in five groups: priority measures, investments, entrepreneurial public sector, scalability and talent. Some of the measures are:

- The creation of Marca España Nación Emprendedora (Spain Entrepreneurial Nation Brand), which protects initiatives related to innovative entrepreneurship and the creation of RENACE, the National Network of Entrepreneurship Centers, a network of incubators and accelerators and venture builders with the capacity to develop talent.
- The launching of the National Office of Entrepreneurship, to coordinate and organize support services for entrepreneurship in collaboration with public and private agents.
- The International Women's Talent Attraction Program to position Spain as a benchmark country for women professionals.
- The Visa Program, to improve the program of access to work visas for foreign professionals who, for example, want to create or transfer their company to Spain.

The strategy will have a budget of 4.200 million euros for the period 2021 and 2023, and will boost investment, competitiveness and the attraction of talent to Spanish technological ventures. The strategy will be the digital agenda of the country for the

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<sup>24</sup> ENISA – Empresa Nacional de Innovacion SA and CERSA - Compañía Española de Reafianzamiento, S.A.

next 10 years, and the roadmap for a more competitive and prosperous country. The ten strategic sectors identified are: industry, tourism and culture, mobility, health, construction and materials, energy and ecological transition, banking and finance, digital and telecommunications, agri-food and biotechnology.

One of the main actions of the strategy is the approval of the draft bill for the Law for the Promotion of the Emerging Companies Ecosystem, known as the **Start-ups Law**. This is a law that will recognize the specificity of emerging companies with a high potential for growth and generation of employment, wealth and innovation. A law that "will facilitate administrative procedures, will help to retain and attract the necessary talent, will promote the rapprochement between Vocational Training, the University and emerging companies, and will include tax advantages and investment incentives". The first developments of the Law took place in 2019 with a public consultation but they have been delayed until now.

## 5.2. Regional development policy

### 5.2.1. Regional governance arrangements

Spain is a relatively decentralised state, where autonomous communities have authority to regulate several sectors. According to the article 56 of the Statute of Navarra<sup>25</sup>, Navarra has exclusive competences in the "*Planning of economic activity and promotion of economic development within Navarra*", under which we can find the development of policy instruments to support entrepreneurship at regional level.

The Department for Economic and Business Development (Departamento de Desarrollo Económico y Empresarial in Spanish) of the Regional Government is in charge of the design and implementation of policy in the areas of employment, industry, and Smart Specialisation among other topics. The main policy instrument in this area is the II Plan de Emprendimiento en Navarra 2017-2019 (Gobierno de Navarra, 2017). The plan is under revision at the moment and will be ready in the first semester of 2021 (In June 2020 it was not published yet).

Other organisations involved in the implementation policies and actions supporting entrepreneurship are the **European Business Innovation Centre of Navarra (Centro Europeo de Empresas e Innovación de Navarra, CEIN)** (CEIN, 2021). CEIN's goal is to boost the economic development of Navarre by stimulating the entrepreneurial spirit and supporting the creation of new companies. Their main challenges are to support the creation of unique, differentiated companies with growth ambitions and to promote entrepreneurial values, especially among university and vocational training students.

**SODENA** (SODENA, 2021) is in charge of the financial instruments, namely venture capital, to support business development in the region. SODENA is a limited company, which main stakeholder is the regional government. It is present in the different phases of business project that contribute to the development of the region.

### 5.2.2. Regional policy strategies and policy instruments supporting entrepreneurs and scale-ups

There are several strategic documents that make reference to supporting entrepreneurs and entrepreneurship in the region. Most of them have been valid for the period 2017 – 2020 and at the moment (June 2020) the updates have not been published yet.

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<sup>25</sup> Ley Orgánica 13/1982, de 10 de agosto, de reintegración y mejoramiento del Régimen Foral de Navarra.

As part of the division of competences in Spain, the autonomous communities have the competences to establish their own R&D policy as well as instruments to support this activity, as long as they do not contradict the national legislation. The **Science, Technology and Innovation plan 2017 – 2020** (Gobierno de Navarra, 2016) is the result of this and has the objective of re-positioning Navarra as an innovation leader in Europe. With this overarching objective in mind, the plan proposes 7 axes: Investment in public and business R&D&I; Creation of favourable conditions for innovation; Promotion of international collaboration; Development of a Science and Technology Law; Transfer of knowledge from the laboratory to the market; Consolidation of the resources of the Navarre Innovation System (SINAI), promoting excellence. The plan has some actions that are focused on entrepreneurship.

With the publication of the **Social Economy Plan 2017-2020** (Gobierno de Navarra, 2017), Navarra became the first European region to include such an initiative in its RIS3. The plan had the objective of promoting growth and strengthening the competitiveness of the Social Economy business fabric and to contribute to an increase in sustainable employment, to provide an innovative response to social needs and to the development of a more participatory and cohesive society.

Ahead of the finalisation of the implementation time, the plan has achieved its objectives (Gobierno de Navarra, 2020). The plan aimed to increase the number of people employed by at least 20% (3,300 jobs in absolute numbers) and to ensure that 10% of the companies created in Navarra were social economy companies, compared with 7% before the start of the plan. It was expected that 300 companies would be set up and 324 have already been created. However, those are not the only improvements, if in 2015, there were 1,064 social economy companies, at the moment there are more than 1,250. And if at that time they employed 16,430 people, now they are more than 20,000. Among the jobs created in the social economy as a whole, the 2,498 that correspond to direct jobs in cooperatives and labour companies stand out. Furthermore, during this time, the sector's turnover has gone from 1,953 to 2,400 million euros. Building upon the positive outcomes, a second edition of the plan will be published in the near future.

The **Digital Strategy of Navara 2030** (Gobierno de Navarra, 2020) is aligned with the EU Next Generation recovery plan and the priority "A Europe fit for the digital age", directing and promoting the digital transformation of the region for a greener, more digital, egalitarian and resilient economy and society. Some actions are transversally linked with entrepreneurship.

Even if not fully focused on entrepreneurship, **The Industrial Plan 2020** (Gobierno de Navarra, 2017) also has some actions on this area: the business acceleration programme with the objective of favouring the development of projects in the initial stages in priority industrial chains and attracting projects to reinforce Navarre's value chains; business succession programme based on employee participation or other formulas such as entrepreneurs taking over; and open innovation and intra-enterprise programme favouring intra-enterprise frameworks.

The **Internationalisation Plan 2017 – 2020** (Gobierno de Navarra, 2017) has three main objectives: Promoting the internationalisation of the territory; To achieve the promotion of exports and the establishment of Navarrese companies abroad, with emphasis on the priority sectors for Navarre; and to Promote the attraction of foreign investment in priority areas.

Other initiatives such as the **Entrepreneurship Plan** or the **Plan Reactivate Navarra – Nafarroa Suspertu** (Gobierno de Navarra, 2020) are further detailed in other sections of the report.

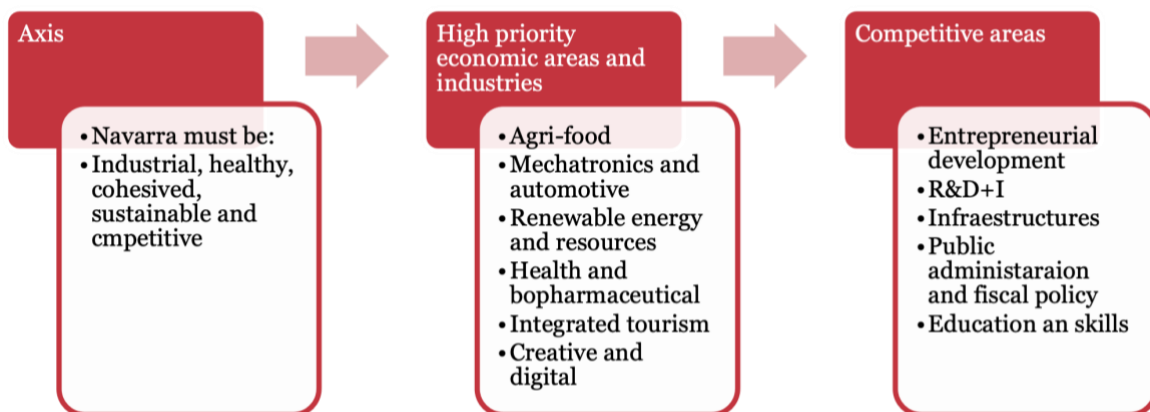
### 5.2.2.1. Regional Specialisation strategy

**The Navarra S3** (Gobierno de Navarra, 2016), designed in 2016, aims to boost Navarra's economy in its transformation towards a knowledge economy, with a greater capacity to incorporate technology into industrial processes, products and services, becoming a more innovative, productive and export-oriented economy, while looking for efficiency by using natural and energy resources, and for greater social and territorial cohesion. The S3 Strategy includes the four main pillars of the SBA as promoting entrepreneurship, reduction of regulatory burden, access to finance and markets and internationalization, through the elaboration of concrete plans developed during 2017, following an open participatory process.

The RIS3 of Navarra has the objective of boosting the regional economy in its transformation towards a knowledge economy, with a greater capacity to incorporate technology into industrial processes, products and services. This will lead to become a more innovative, productive and export-oriented economy, while at the same time aiming for the efficient use of natural and energy resources for a greater social and territorial cohesion.

The region has five main axis an industrial, healthy, cohesive, sustainable and competitive Navarra and six high priority economic areas are proposed agri-food industry, mechatronics and automotive industry, renewable energies and resources, health-biopharmaceutical industry, integrated tourism industry and the creative and digital industries. Apart from the thematic strategic areas, the strategy also identifies 5 competitive areas: entrepreneurial development, R&D+I, infrastructures, public administration and fiscal policy, and education and skills.

Figure 5 Overview of the Navarra Smart Specialisation Strategy



Source: Authors based on The Navarra S3 (Gobierno de Navarra, 2016)

As part of the *entrepreneurial development* the objectives are to support the transformation of the industrial fabric of the region preparing it for the industry of the future; promote business competitiveness through the cluster model, growth and internationalisation policies; and to promote new business models through organisational innovation and labour participation. The policy instruments to do this are the Industrial Plan, the clusters policy, actions of entrepreneurial growth, the entrepreneurship plana, the internationalisation plan and the social economy plan.

The first RIS3 was implemented in 2016 and will be in place until the publication of the next strategy. At the moment the new strategy is being designed and will be published in the near future, with no clear publication date. SODENA is also in charge of developing and publishing the RIS3.

In 2019, SODENA published the evaluation of the implementation of the RIS3 strategy so far (SODENA, 2019). According to it the 93% of the budget allocated to 2018 has been executed and 75% of the quantitative objective have been achieved.

#### 5.2.2.2. *Policy instruments supporting entrepreneurs and scale-ups*

In Navarra, there are several initiatives and policy instruments supporting entrepreneurs and scale-ups. The public sector is very active, and the two main players are CEIN and SODENA, supported by the Regional Government. CEIN offers many types of support to entrepreneurs, but not financial support that is offered by SODENA.

Before launching a project, the phases of testing, experimentation and adaptation is important, since it helps to improve what is offered already and to adjust it to the needs of the client, enhancing the success potential. Among the broad range of services offered by CEIN, one of them is the **"Prototyping project"** (CEIN, 2015). The programme is targeted to entrepreneurs who want to develop a prototype of their new business ideas and to companies who want to launch a new business line. The objective of the programme is to ensure that participants manage to define and execute an action plan in which they use their own prototype to improve and/or validate their project. In this way, they will be able to take the decisions they consider most appropriate based on the reality of the market they are targeting and minimise the risks involved.

In addition, CEIN also offers the **"De Start-up a Scale-up"** (CEIN, 2021) programme. The programme has the objective of helping start-ups identify the growth levers of the start-ups and to provide them guidance and specialised advice to develop an individual action plan that will help them to grow and to scale. The programme is divided in three main building blocks: legal pillars for addressing the scaling-up plan; define your scaling-up plan; and tools for agile business management in the growth and scaling-up phase. In order to participate in this initiative, the start-up need to be based in the region, with a will to grow, a defined a validated business model, sales and a dedicated team

The establishment of the website ***navarraemprende.com*** (Navarra Emprende, 2021) is led by CEIN and one of the key actions of the entrepreneurship plan. The website offers information and services to the entrepreneurs of the region and agglutinates the offering of the *Red navarra de apoyo al emprendimiento, integrated by diverse organisms and entities working on entrepreneurship in the region.*

The objectives of the website are:

- Give clear and complete information about entrepreneurship in Navarra.
- Help the entrepreneurs of Navarra to start their company.
- Support the collective of freelancers in the day-to-day of their activity.
- Promote knowledge of the activities of the Navarre network to support entrepreneurship.

*The website also provides information about the available subsidies and loans (Navarra Emprende, 2020) for the entrepreneurs and the creation of new companies. The information is not focused only in the local or regional mechanisms, but also provides a brief overview at national level.*

Some of the services offered by SODENA and CEIN focuses specifically on scale up support. As described later on, SODENA also offers loans to companies with growth potential that offer an added value to the region.

SODENA offers financial support mostly to companies already rooted in the region, and that will bring more opportunities to the region. Therefore, the number of start-ups leaving the region is minor, since they do not come to Navarra just to be supported, but already implemented here.

They offer financing through participation in the company's share capital as a minority partner, as well as strategic collaboration to facilitate the company's development in its early stages. The participation in the company, with a duration between 3 and 8 years, can reach up to 400,000 euros. They offer three different options<sup>26</sup>:

- **Capital Semilla<sup>27</sup>**: Support the *semilla* projects with the only guarantee of the entrepreneurial project through convertible participative loans with the following main characteristics: Up to 100,000 euros of maximum investment with an average "ticket" of 50,000 euros; it has a subordinate nature; it is Convertible into capital and in case there is a new round of external financing, the company value for SODENA will be discounted.; total term of 5 - 8 years and a grace period of 1 - 3 years and it has a fixed interest rate (Euribor+3%) + variable depending on activity and results. The sum of both interest rates will not exceed 10%. With an opening commission of 0.5%.
- **Start-up capital Navarra<sup>28</sup>**: investments are done through Start up Navarra and the financing is done by participating in the company's capital as a minority partner. The characteristics are investment between 100.000 and 400.000 euros (average ticket size 200.000 euros), the participation in the company will be between 5% and 45%; and the participation in the capital of the companies is temporary and for a period between 3 and 8 years.
- **Capital lanzamiento expansion<sup>29</sup>**: offers financial and strategic support to SMEs with high growth potential and that require more than 400,000 euros. The support can be used for: product development to reach market; organic and/or inorganic growth; integration projects with other companies; replacement of shareholders; implantations of foreign companies in need of a local partner; and acquisition of the company by the management team or by another company. The characteristics are acquisition of a share between 5% and 45%; a maximum term of 10 years: presence on the Director's Boards; disinvestment foreseen in the shareholders' agreement; option to convert the loan into capital. Sometimes this support can be complimented with participative loans.
- **Navarra tech transfer<sup>30</sup>**: Started in 2017 the fund provides the financial resources and accompaniment to promote and support the creation of technological companies in the region, focusing mostly in the strategic sectors. They offer up to 500.000 euros per project. The fund has private investors, leading business groups in their sectors (Agrifood, Health and Engineering) with a majority participation, accompanied by SODENA through FEDER funds, with a percentage close to 50%.

SODENA is also in charge of managing **Start Up Capital Navarra** (Start Up Capital Navarra, 2021), a Business Promotion Company promoted in collaboration with the Regional Government. 22 companies, both private and public, participate in the financial, industrial and university fields and in business promotion. They finance business projects that are in the early stages of development, with high growth potential

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<sup>26</sup> See <https://www.sodena.com/index.php/es/capital-riesgo/capital-semilla-start-up.html>

<sup>27</sup> See <https://www.sodena.com/index.php/es/capital-riesgo/capital-semilla-start-up/capital-semilla.html>

<sup>28</sup> See <https://www.sodena.com/index.php/es/capital-riesgo/capital-semilla-start-up/start-up.html> and <https://www.startup.es/index.php/actividad/como-trabajamos>

<sup>29</sup> See <https://www.sodena.com/index.php/es/capital-riesgo/capital-lanzamiento-expansion.html>

<sup>30</sup> See <http://navarratechtransfer.clavemayor.com>



for Navarre. They must be innovative or differentiated projects that enable a new activity to be undertaken in the market and create qualified employment for Navarre.

The **ERDF Programme for Navarra** (European Commission, 2014) has the objective of boosting economic growth and contributes to the achievement of Europe 2020 targets for smart, sustainable and inclusive growth. It should create jobs and boost productivity, particularly in SMEs. The main vehicles for achieving the objectives of this strategy are ERDF/ESF Operational Programmes 2014-2020. The ERDF Programme for the Navarra Region boosts economic growth and contributes to the achievement of Europe 2020 targets for smart, sustainable and inclusive growth. It should create jobs and boost productivity, particularly in SMEs. One of the main priorities of the region is to Enhance SMEs' competitiveness and internationalisation. The ESF programme has the objective of facilitation the Enhance SMEs' competitiveness and internationalisation.

### 5.3. Experiences of interregional cooperation on entrepreneurship

The community of Navarra has actively participated in interregional projects with the aim of sharing experiences, knowledge and good practices. Several of these projects focus on entrepreneurship and SME support policy.

During the period 2014 – 2020, the Region of Navarra has been involved 58 inter-regional collaborations projects in 5 programmes, being the total value of EU funding €27.3 million, and acted as leader of 15 projects (European Commission, 2021). Apart from projects Navarra has also been involved in 89 partnerships, both types covering 30 themes.

In the specific topic of SMEs and entrepreneurship, the region has been involved in 5 projects and 8 partnerships for 2.32Millions of EU funding.

Navarra has engaged into inter-regional cooperation with the bordering regions of Basque Country (ES) and Nouvelle Aquitaine (FR) in the context of the project COMPETITV'EKO (European Commission, 2021). It has the aim of building on cross-border cooperation as tool for the competitiveness of the SMEs in the three regions and focuses on strengthening cross-border collaboration between innovation actors and companies likely to stimulate technological and non-technological innovations.

Additionally, Navarra signed an interregional collaboration agreement with Kujawsko-Pomorskie (PL), Region of Piura (Peru) (Gobierno de Navarra, 2020). Navarra has also signed in November 2020 an agreement with Wallonia (Belgium) in order to collaborate in the area of creative industries. There are additional agreements with Gansu (China) on the areas of tourism, renewable energies and agro-alimentation (Gobierno de Navarra, 2019) and Nevada (United States) on the topics of renewable energies, smart cities, transport and higher education (Gobierno de Navarra, 2018). The region has also close collaboration ties with the aforementioned regions of Basque Country and Nouvelle- Aquitaine (Gobierno de Navarra, 2020) as well as other Spanish and French regions part of the Interreg Poctefa<sup>31</sup>. Navarra is also one of the Spanish regions part of the Vanguard Initiative <sup>32</sup>, a network bringing together European Regions.

The region participates in the following S3 Thematic Platforms (European Commission, 2021):

- **Agri-food:** Traceability and Big Data in the agri-food value chain and Smart Sensor Systems 4 Agri-food
- **Energy:** Marine Renewable Energy

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<sup>31</sup> See <https://www.poctefa.eu>

<sup>32</sup> See <http://www.s3vanguardinitiative.eu>

- **Industrial modernization:** Advanced manufacturing for energy applications; Advanced materials on batteries; Artificial Intelligence and Human Machine Interface; Bioeconomy - Innovative use of non-food biomass; Efficient and Sustainable Manufacturing; Safe and sustainable mobility; SME integration to Industry 4.0, Social Economy; and Cultural and Creative Ecosystem

The table below shows several examples of cross-border cooperation projects carried out by the Region of Navarra.

*Table 4 Overview of interregional cooperation experience*

Funding scheme	Project name	Duration	Partner regions
Interreg POCTEFA	COMPETITV'EKO	2016 - 2019	ES and FR <a href="https://keep.eu/projects/20578/">https://keep.eu/projects/20578/</a>
Interreg Europe 2014 - 2020	SME ORGANICS - Enhancing SME competitiveness and sustainability in the organic sector	2016 - 2020	IT, BE, FI, PL, RO, FR Navarra leading <a href="https://keep.eu/projects/18896/">https://keep.eu/projects/18896/</a>
Interreg Europe 2014 - 2020	Inside Out EU - New approaches to improve SME internationalisation support policies	2017 - 2021	UK, IT, HU, SE, NO, NL, ES <a href="https://keep.eu/projects/18805/">https://keep.eu/projects/18805/</a>
Interreg Europe 2014 - 2020	40Ready - Strengthening SME capacity to engage in Industry 4.0	2019 - 2023	IT, LT, ES, RO, PL, BE, FI <a href="https://keep.eu/projects/21564/">https://keep.eu/projects/21564/</a>
Interreg Europe 2014 - 2020	NOVACONS - Strategic Change: Innovation of the New Industry of Construction	2015 - 2018	FR and ES <a href="https://keep.eu/projects/20581/">https://keep.eu/projects/20581/</a>
Vanguard Initiative	Bioeconomy	Ongoing	ES, DE, IT, BE, PL, SE, UK, FI <a href="http://www.s3vanguardinitiative.eu/pilots/bio-economy">http://www.s3vanguardinitiative.eu/pilots/bio-economy</a>
Vanguard Initiative	Efficient and sustainable manufacturing	Ongoing	DE, ES, FI, IT, BE, PT, FR, UK, SI, NL, AT, BE <a href="http://www.s3vanguardinitiative.eu/pilots/efficient-and-sustainable-manufacturing-esm">http://www.s3vanguardinitiative.eu/pilots/efficient-and-sustainable-manufacturing-esm</a>
Vanguard Initiative	New nano-enabled products	Ongoing	FR, DE, NL, ES, FI <a href="http://www.s3vanguardinitiative.eu/pilots/new-nano-enabled-products-pilot">http://www.s3vanguardinitiative.eu/pilots/new-nano-enabled-products-pilot</a>
S3 Partnership	Advanced materials on batteries	October 2018 - now	ES, SI, FR, NO, DE, IT, FI, BE and NL <a href="https://s3platform.jrc.ec.europa.eu/en/advanced-materials-for-batteries">https://s3platform.jrc.ec.europa.eu/en/advanced-materials-for-batteries</a>

Source: authors based on keep.eu, Vanguard Initiative and S3 Platform

When participating in this type of interregional initiatives the region is looking for exchange of good practices and information of successful initiatives and collaboration opportunities. Interregional initiatives are also a source of business opportunities for the companies of the region, not only to do business but also to get in touch with ecosystems or regions that have knowledge that could be relevant and beneficial for them.

## **6. IMPACT OF COVID-19 PANDEMICS ON THE REGIONAL ENTREPRENEURIAL ECOSYSTEM**

### *6.1.1. Impact of COVID-19 pandemics on entrepreneurial activities*

Navarra was one of the Spanish regions more strongly hit during the first wave of Covid-19. Since the start of the pandemic in March there have been 39,414 cases and 863 deaths in the region. In order to ease the comparisons, there were 60,866 per million of inhabitants (Data in November 2020).

Apart from the human and social impact of the pandemic, the enterprises of the region have also been affected from the pandemic. In the first semester of the year, the exports were 4.264M euros and the imports were 2.104 M euros. The volumes were a 21% less than one year ago, reducing the trade balance by half (Navarra Capital, 2020).

During the first and second wave of the pandemic, several companies have started ERTES<sup>33</sup>, and administrative procedure to regulate the workers in these unprecedented times.

### *6.1.2. Impact of COVID-19 on entrepreneurial activities at sectoral level*

Due to the lockdown and the limitations in movements in the region and from other surrounding regions, there have been several initiatives in the hotel and restaurants sectors that have not been implemented as it was planned before the pandemic.

When it comes to closed companies, it is not easy to quantify the impact, since in many occasions companies are not closed due to the complex bureaucratic process in the country. Available data show that in February 2020 there were 47,064 self employed citizens in Navarra and the value only went down to 46,905 in August 2020, therefore remaining quite stable.

The interviewees stated that due to the pandemic and the lockdown, there are some sectors that have benefitted from the situation whereas some others have been heavily affected. In the region there are several companies working on the food chain, and in that case the performance has been unequal. Whereas some have been positively affected by the COVID-19 pandemic, some others have been strongly affected. Therefore, it is not possible to generalise. The lockdown had a clear impact on the hotel and restaurants sectors, due to the limitations in movement that were in place for a long period of time.

Some start-ups in the areas of health services, disinfectants and plastic protection equipment have also been benefitted from the COVID-19 pandemic for obvious reasons. However, in these cases, it is not possible to state if the positive trend will be kept over time.

Policy intervention can also support companies to improve their competitiveness. Interviewees stated how support should be given to enterprises to transition towards online commerce and platforms, since there has been an increased in the online consumption due to the limitations. Digitalisation has been perceived as an opportunity for many companies in the region to improve their value proposition.

In the case of hotels and guest houses, they need to be supported to improve and, in some cases, develop webpages, in order to increase their online presence and business

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<sup>33</sup> ERTE stands for Expediente de Regulación Temporal de Empleo - Temporary Labour Force Adjustment Plan.

opportunities. In addition, they also need to be supported to make their spaces more secure and suitable to implement the security restrictions.

When asking interviewees about the potential of interregional cooperation, they mentioned that there were some bottlenecks with material at the beginning of the pandemic, but the local market was able to provide solutions. However, they would be interested in more nontangible opportunities, as networking, capacity building and knowledge exchange.

### 6.1.3. Policy responses

#### 6.1.3.1. Regional level

At regional level, SODENA has implemented a **"COVID-19 loan programme"** (SODENA, 2021). The objective is to alleviate the effect and the financial needs, basically of working capital, derived from the crisis and health alert generated by COVID-19, SODENA will be able to grant loans of up to 15 million euros during the financial year 2020. The loans will be of an ordinary or participating nature, in the latter case an agreement between the parties may be envisaged to allow for cases of capitalisation. Beneficiaries can be companies (all types of companies regardless of their age, even start-up companies, or their size, with the exception of companies from the real estate or financial sectors) that carry out their economic activity in Navarra (any activity except for the property and financial sector), without any debts due to public administrations or in a crisis situation prior to the state of health emergency. The loans can be used to finance liquidity needs and other of structural costs.

Likewise, SODENA is also offering **"ELKARGI - SONAGAR guarantee line"** (SODENA, 2021) in order to support companies and self-employed workers with regard to COVID-19. The measure allows to finance the amount of fixed structural costs equivalent to approximately six months of ordinary business operation. For a maximum amount of 1 million euros, at Euribor + 0.5% and a guarantee opening fee of 0.25%. 100% of the risk of the operation is covered, as SODENA assumes up to 20% of the counter-guarantees that are usually required, while the remaining 80% is borne by Elkargi and Sonagar together with the state guarantee company (CERSA). In addition, the beneficiary companies are exempted from paying the costs of maintaining the guarantees that are borne by the mutual guarantee societies and SODENA.

Pamplona City Council and CEIN have launched the **"Think and Act"** (CEIN, 2021) programme, aimed at businesses in the capital that have temporarily suspended their activity due to the situation generated by e Covid-19. The aim of the programme is to provide support and tools for traders so that they can face up to the current context and make progress in adapting to the future scenario, in order to be closer to their customers. People who plan to undertake in the trade sector may also take part. To this end, the programmed training focuses on the one hand, on strategic actions focused on customer knowledge. And, on the other hand, in the handling of digital tools for online communication actions.

The **Reactivation Plan Navarra 2020-2023 / Nafarroa Suspertu** (Gobierno de Navarra, 2020), led by the Government of Navarra, has the objective of proposing a strategy for reactivating the economy and society of Navarra after the COVID-19 pandemic. The document proposes both short-term measures to tackle the most pressing immediate problems generated by the pandemic, and a medium-term outlook for 2020-2023 that will enable the region to overcome the crisis in terms of intelligent specialisation; in other words, it will know how to link Navarre's industrial and technological capabilities to the changes taking place in the markets and the demands of Europe.

The Committee discussed the implementation of 15 Challenges, adapting the pre-existing Challenges of the Intelligent Specialisation Strategy, so that the focus of work on several of the challenges is modified to cover the most immediate aspects of the crisis (such as "safe and digital" tourism, or "healthy and local" food), but other challenges not previously included in the S3 are also prioritised, such as one specific to Trade ("innovation in local trade"), and another two aimed at sustaining and boosting the region's business fabric. One of these, "support for the business fabric", proposes facilitating financial support and continuity for businesses in crisis, avoiding the destruction of fabric; the second, "strengthening and rooting industry" proposes combining financial and industrial policy measures to promote the growth of industry, the analysis of the sustainability of value chains (for both environmental and social reasons) and the internationalisation of strategic supplies (such as some health products). Within this framework, the importance of talent management is highlighted, as well as the business model, and in this context, labour relations, and therefore, business and social agents.

The document also identifies five growth trends that should be used as an opportunity to reformulate an "intelligent" way out of the crisis, both for companies and for the region. These are as follows: Acceleration of the digitalisation of the economy and society; Slowing down globalisation; Accelerating the energy transition and the fight against climate change as the most relevant future socio-environmental challenge; Boosting the knowledge economy and open innovation and prioritising the "core" economy.

Between 2021 and 2023, the plan will have an allocation of 989.41 million euros from the General Budget of Navarra. To this amount, according to the regional government, must be added "resources from the state and EU reconstruction programmes, other European funds, the mobilisation of private resources and debt". In total, it includes 190 measures (Navarra Capital, 2020).

The 190 measures provided for in the plan are grouped into seven areas of work with 46 priorities for action: transforming the economy for digitisation; accelerate the ecological transition; structuring the territory in a sustainable way; promoting social cohesion; deepening the framework of coexistence; reaffirming the leadership of the public; external action.

#### *6.1.3.2. National level policy responses*

At national level, the government has provided enterprises with flexibility with the payment to the social security, especially in the cases of companies that forced their employees into part-time or part unemployment. Additionally, there has been an effort to introduce programmes that support the digitalisation and R&D of enterprises, in order to facilitate the spread of teleworking.

Spain has also implemented programmes allowing the enterprises to postpone the payment of taxes. Funding has been made available to business and specific sectors or type of enterprises that have been severely affected by the pandemic.

Finally, regions will receive EUR 2.8 billion through early transfer of funds under the regional financing framework of 2020 to support additional health expenditure (European Committee of the Regions, 2020).

## 7. ASSESSMENT OF THE ENTREPRENEURIAL ECOSYSTEM

### *7.1.1. Assessment of challenges faced by entrepreneurs*

For an ecosystem to become complete and efficient, it is crucial to identify the specific challenges that actors of the ecosystem face. Some challenges can apply to all actors in the ecosystem, whereas other challenges apply specifically to one group (e.g., start-ups or scale-ups).

Entrepreneurs in Navarra receive support and guidance mostly from the public sector, through SODENA and CEIN. The two entities divide among them the support, SODENA focusing more on the financial support to the entrepreneurs, and CEIN on the training, mentoring as well as providing access to incubators, accelerators and its related services.

The main challenge that entrepreneurs face is to even consider entrepreneurship as a viable option. The culture and tradition of the region, prevents many potential entrepreneurs to embark into creating a company on their own, instead of working for the already existing companies. Interviewees have stated how this mentality is slowly changing, but still there are many *mental barriers*. As described in previous sections, there are various public initiatives that are trying to promote entrepreneurship as an option among students, mostly among students with scientific backgrounds.

Once this first barrier is overcome, the next barrier that entrepreneurs face is the lack of diverse funding opportunities. In the region, most of the financing opportunities come from the public sector. This poses a limitation since the resources they have to invest are limited, and in most of the cases need to be invested in areas of interest for the region, such as those identified as priority in the RIS3 strategies. The lack of existing private funding is a challenge and limitation of the region that should be further address, since it is preventing the ecosystem from evolving.

The mapping of the region and the interviews conducted show that there are several initiatives targeting start-ups. However, specific support for scale-ups is limited. It is not only important to offer the right tools for start-ups to be created, but also to help them in their growth path. The lack of appropriate support in the region for scale-ups might have a negative impact on them, forcing them to move to regions or ecosystems where they are better supported. This is another important challenge to be addressed in order to allow the ecosystem to grow.

### *7.1.2. Challenges faced by SMEs and large companies*

A major opportunity, which is at the same time a challenge and a threat for SMEs and large companies in the region, is competition at national, European and international levels. Companies need to stay updated with the latest technological trends and needs, in order to remain competitive in the current context. In order for this to happen, the labour market needs to provide them with the technical and specific skills that are needed.

As consequence of the burdensome administrative process to close a company, the regional services do not have an accurate picture of how many companies are in the region. This should be tackled, in order to make sure that the products and services that the public services offer are adequate to the needs of the region.

Interviews have also highlighted how it is complex to develop collaboration programmes between established companies and those that are starting. Large companies based in the region are mostly depending on foreign capital and they do not tend to engage with the local ecosystem. This is a lost opportunity for both sides, since start-ups could work

for and learn from large companies, but large companies could also benefit from the services and products from the start-ups. The public sector should develop incentives for collaboration to happen more often.

#### *7.1.3. Challenges related to market services and ecosystem builders*

As highlighted in other sections, the public sector acts as catalyser in the ecosystem of Navarra. The presence of private actors is marginal, limited to a few coworking spaces, as well as some small family offices that invest and fund companies.

This set-up makes the region very dependent on the public sector and the type of policies that the government is implementing at any given time. The main gap is the lack of funding diversity that the entrepreneurs can access.

Interregional collaboration could bring to the region some private actors that provide market services and that are already established in other EER regions. Another option could be the creation of programmes to allow start-ups of Navarra to access ecosystems and services provided in other regions.

#### *7.1.4. Challenges related to the R&I system*

The Research System of the region is built on ADITech, that connects the existing technology centres of the region, and connects them with other actors. Overall, the region has a strong R&I system, even if not as developed as neighbouring regions like the Basque Country. ADITech is also present in Brussels, which allows the region to be involved in relevant European networks and to participate in international projects.

As mentioned, the region has several technology centres in key economic areas. However, the interviews have shown that there is little collaboration among them and the entities supporting entrepreneurs. It could be beneficial for the technology centres to develop in-house capabilities to better support start-ups in their areas.

#### *7.1.5. Challenges related to framework conditions*

##### *7.1.5.1. Access to finance*

There is available funding in the region, however it mostly comes from public actors. This creates a dependency towards them that does not allow the ecosystem to evolve naturally. Most of the initiatives funding are also aligned with the overarching strategies and priority sectors of the region. Likewise, scale-ups often cannot access the volume of investments that their growth path requires.

The COVID19 pandemic has also redirected funds to the support of those sectors more strongly hit by the crisis, and to health services. While the health sector has received more than 100 million euros, the commerce, tourism and SMEs have received 13 million euros, behind many other areas like education, access to housing or social services.

Interregional collaboration could allow to diversify the funding sources that the Navarrese companies can apply to.

##### *7.1.5.2. Human capital*

The quality of the human capital available in the region and formed at the two regional universities is very high. The region also has one of the highest shares of population with higher education. However, it is still difficult to find the more specific and technical skills. This is not only due to brain drain towards other more attractive regions in the country, but also due to an incapacity to attract foreign talent.

Specific training on how to become an entrepreneur is also important. There are several initiatives that have the objective of teaching entrepreneurship skills to more technical profiles.

The COVID-19 pandemic can also have a negative impact on the human capital of the region. The economic crisis might force some start-ups to stop operating, which will make disappear the knowledge that they accumulated.

Interregional collaboration can be beneficial for the human capital of the region. By allowing international exchanges with other regions, the region can gain knowledge that is not existing at the moment.

#### *7.1.6. Assessment of the regional policies for entrepreneurship*

Navarra has a strong system supporting entrepreneurship in the region. The small size of the region and its centralisation, allows for an easy coordination among the actors. The region has a clear division of support measures among the existing actors.

However, the region needs to continue developing policies that could better support scale-ups, since that is missing in their strategy. There is also a lack of incentives in regional policies for private investors to invest in start-ups and scale-ups, making them very dependent on the public sector.

The RIS3 is considered also the backbone of the system, since it identifies the strategic sectors for the region, but also makes links with other existing policy documents and strategies. The new version of the RIS3 has not been published yet (June 2020), but it's expected to continue having a pulling role in the region.

The recent developments at national level, most notably the España Nación Emprendedora Strategy, should also be taken into account in case some adjustments of the support provided in the region are needed.



## 8. REGIONAL SWOT AND CONCLUSIONS

### 8.1.1. Maturity of the regional ecosystem

The entrepreneurial ecosystem of Navarra can be considered to be evolving. It is important to also take into consideration the size of the region when assessing the status of its ecosystem; it cannot be compared with the ecosystem present in the capital region of some countries, such as in the case of Helsinki-Uusima.

The ecosystem cannot be considered nascent since there are several actors in the region supporting start-ups and scale-ups at different levels and involved in the ecosystem. At the same time, the ecosystem is not mature yet, as it does not offer enough support to guarantee a systemic renewal of new companies, scale-ups and mergers and acquisitions. The ecosystem is not known either as an entrepreneurial ecosystem at a European scale.

The ecosystem in the region is evolving. There are start-ups that are created and there is a cohesive range of support measures coordinated by the public sector. However, there is a lack of collaboration between small companies and the larger companies based in the region. These collaborations would be beneficial from both sides and would allow the start-ups to increase their reach and open the other for other markets. The region is one of the best ones in Spain based on the share of inhabitants with technical skills. However, there is an increase in technical and specific skills for which the region is not prepared. Likewise, potential technical entrepreneurs lack the basic entrepreneurial skills needed to become successful entrepreneurs. Furthermore, for the ecosystem to keep evolving, private investment in start-ups and scale-ups should be incentivized and public funding should also focus on supporting scale-ups, not only early-stage companies.

Navarra has a high potential to become a competitive region at national and European level within the limits of the size of its territory. The region is already better placed than many other Spanish regions of a similar size. There is a large pool of highly educated individuals who only need to acquire the right skills to become successful entrepreneurs. The quality of the R&D&I institutes of the region makes it a strong competitor in industry and energy sectors. The existing strategies in the region are also focused on the development of those sectors where Navarra is already stronger.

The region has the means to foster entrepreneurship and has programmes enhancing it, but to develop an effective ecosystem, programmes including all types of actors and all sizes of enterprises are needed. Collaboration projects between regional stakeholders and with European regions will help to attain the objectives of the region regarding the competitiveness of the regional actors.

Figure 6 Positioning of Navarra regarding its entrepreneurial ecosystem

Stage of EE	Nascent	Evolving	Mature	Sustainable
Does the system rely more on:				
Market-forces		X		
Policy interventions		X		

### 8.1.2. Impact of the COVID-19 pandemics

The COVID-19 pandemics has affected the region, specially at the beginning of the lockdown in early 2019. In regard to the number of self-employed entrepreneurs the total number has remain stable, which indicates that only a small number of entrepreneurs have been forced to stop operating.

The lockdown and the restrictions on the movement, both in the region and from and to the region, has have a positive impact on the digitalisation of many companies and business, since they have been forced to become more digital. It has also had a positive impact on the innovation of the companies, in order to help them to better face the situation. There have been some sectors that have had an increased market demand, whereas in other cases the effect has not been that positive.

The pandemic has also forced the public sector to adapt its services and support programmes. CEIN now offers online incubation and acceleration programmes, in order to overcome the restrictions and keep the necessary protection measures. These initiatives have been very well received by the start-ups. The government has also developed new support programmes targeting the recovery of the whole economy.

The impact of COVID-19 on the economic fabric has been important and recovery will take time. But regional stakeholders are receiving help from regional, national and European entities. The COVID-19 pandemics has mainly helped regional actors to realise the importance of having a strong digital component in many sectors.

### 8.1.3. Updated regional SWOT as basis for interregional collaborations

Based on the conclusions from the previous sections, the table below presents strengths, weaknesses, opportunities, and threats.

Table 5 SWOT analysis of the region of Navarra

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• High rate of industrial activity and competitive and dynamic industrial sectors: automotive, food, machinery and equipment, renewable energies and bio-health technologies.</li> <li>• Population with a high level of university profiles.</li> <li>• High number of companies that introduce technological innovations and new products.</li> <li>• Quality of entrepreneurship: high percentage of companies that survive into the mid-term.</li> <li>• Closeness and accessibility of regional administration, with important legislative competences and its own differentiated tax regime.</li> <li>• High export share of products of medium-high and high technological level.</li> <li>• Presence in Navarra of more than 125 multinationals from more than 20 countries.</li> <li>• Cohesive support to entrepreneurs by the public sector.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of culture of cooperation and clustering, both at local level and outwards.</li> <li>• Atomised business fabric, with very small companies and self-employed workers (except in manufacturing companies).</li> <li>• Insufficient number of companies with decision making centre in Navarra.</li> <li>• Low performance in non-technological innovation.</li> <li>• Gradual decrease in investment in R&amp;D and patents.</li> <li>• Poorly developed ICT sector for the 4.0 industry challenge.</li> <li>• Lack of private support to entrepreneurs</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Improvement of cooperation between companies, technological centres and universities as a way to increase commercial and industrial development of existing intellectual property.</li> <li>• Coordination of the public sector around a common strategic vision.</li> </ul>	<ul style="list-style-type: none"> <li>• Relocation of companies to developing countries with low labour costs.</li> <li>• Aging workforces in industry, lack of labour incorporation of young people and brain drain.</li> <li>• Risk of complacency.</li> </ul>

- Boosting the bio-economy and circular economy, making use of knowledge from agro-food, energy efficiency and waste and resource management.
  - Foster, develop clinical and bio-medical research.
  - Improve the regional image abroad by placing value on strengths, attracting investment.
  - Based on the advances made in social dialogue, continue to progress with the greatest possible involvement of economic and social stakeholders in furthering and consolidating a new company culture of the 21st century.
  - Commitment to stable, mid/long-term of R&D financing.
- Productivity evolution model that is passive.
  - Future risk from early secondary school drop-out higher than in the best regions.
  - Need to improve recognition of the role of entrepreneurs and their social contribution.

Source: Smart Specialisation Strategy of Navarra – Update 2016 – 2030 (Gobierno de Navarra, 2016) and EER Application (Gobierno de Navarra, 2019)

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## APPENDIX II LIST OF INTERVIEWEES

The stakeholders below were interviewed as part of the preparation of the report.

*Table 6 Overview of interviews*

Name	Organisation	Date of interview
Maria Victoria Iriarte	SODENA	4 November 2020
Maria Sanz de Galdeano	CEIN - Centro Europeo de Empresas e Innovación de Navarra	6 November 2020
Jorge Molina	ADITECH	30 November 2020
Luis Goñi	SODENA	9 December 2020
Beatriz Irala	Delegation of the Navarra Government in Brussels	24 November 2020

The author would like to thank them for their contributions and insights on the Entrepreneurial Ecosystem of the region of Navarra.



## APPENDIX III LINKEDIN AND SKILLS ANALYSIS

<b>DEFINITIONS</b>	Digital Skills
Technical industries	Technical industries on LinkedIn that refer to industries related to - Manufacturing (NACE code C) - Information and Communication (NACE code J) - Professional, scientific and technical activities (NACE code M)
Professionals with advanced digital skills	Number of LinkedIn users with at least one skills from the list of identified advanced digital skills
Total number of professionals	All LinkedIn users
Employment in the technical industries from Eurostat	SBS data by NUTS2 regions and NACE rev2 Employment in - Manufacturing (NACE code C) - Information and Communication (NACE code J) - Professional, scientific and technical activities (NACE code M)

<b>DEFINITIONS</b>	Environmental Skills
Technical industries	Technical industries on LinkedIn that refer to industries related to - Manufacturing (NACE code C) - Information and Communication (NACE code J) - Professional, scientific and technical activities (NACE code M) - Electricity, gas, steam and air conditioning supply (NACE code D) - Water supply, sewerage, waste management and remediation activities (NACE code E) - Construction (NACE code F) - Transportation and storage (NACE code H) - Accommodation and food service activities (NACE code I)
Professionals with environmental skills	Number of LinkedIn users with at least one skills from the list of identified environmental skills
Total number of professionals in technical industries	All LinkedIn users in technical industries

<b>DEFINITIONS</b>	Environmental Skills
Employment in the technical industries from Eurostat	<p>SBS data by NUTS2 regions and NACE rev2</p> <p>Employment in</p> <ul style="list-style-type: none"> <li>- Manufacturing (NACE code C)</li> <li>- Information and Communication (NACE code J)</li> <li>- Professional, scientific and technical activities (NACE code M)</li> <li>- Electricity, gas, steam and air conditioning supply (NACE code D)</li> <li>- Water supply, sewerage, waste management and remediation activities (NACE code E)</li> <li>- Construction (NACE code F)</li> </ul>

## **APPENDIX IV CRUNCHBASE/DEALROOM BASED ANALYSIS**

Primary data on venture capital and private equity investment in innovative start-ups and firms have been sourced from Crunchbase and Dealroom databases. Both databases consist of a sample of innovative, investment-backed technology active companies in the EU27 and competing economies such as the US.

With the objective to have a more robust sample and better data coverage for the EU27, the datasets of Crunchbase and Dealroom have been merged, notably the information on venture-backed tech companies, their average total and last investment, year of foundation, type of investment and activity and industry description. Crunchbase data was matched with Dealroom data, using the names of the companies as a common identifier. The companies' names do not indicate any differences in Crunchbase and Dealroom, but additional cleaning of the data was necessary. Duplicate companies were removed from the sample.

Crunchbase is a widely trusted source of information on venture capital backed innovative companies. Dealroom is a provider of similar type of information in Europe having a better coverage about tech start-ups and scale-ups in the EU27. Crunchbase information includes investments and funding information, founding members and individuals in leadership positions, mergers and acquisitions, news, and industry trends. Originally built to track start-ups, the Crunchbase website contains information on public and private companies on a global scale. Crunchbase sources its data in four ways: through a venture programme, machine learning, an in-house data team and the Crunchbase community. Members of the public can submit information to the Crunchbase database. These submissions are subject to registration, social validation and are often reviewed by a moderator before being accepted for publication.

Dealroom is an online-based platform that provides business information about innovative organisations and their investment stages from seed-stage to late growth-stage. It enables investors to track companies' progress and decide the appropriate time to invest in them. Nevertheless, it is increasingly used in studies for economic research as well. It is particularly used as a source of information on start-up activity and financing within and across countries as well as regions. It covers 77% of information in comparison with the official statistical evidence. In comparison with Crunchbase data source, the Dealroom platform covers 30% more organisations for EU countries.

Crunchbase has been explored by several scholars including the OECD to reflect about innovative start-ups and venture capital investment. Although the coverage of Crunchbase varies across countries and technology-oriented sectors are much better covered, it is one of the most popular databases to analyse entrepreneurial behaviour. Since Crunchbase is more and more recognised as a primary data source for investors, entrepreneurs have an incentive to register on the website (Breschi et al., 2018). It is based on a crowd-sourcing process, where registered users can complement and revise information not just on their own profiles but suggest further information to be included on other profiles too. Following Breschi (2018), comparisons with other sources suggest that the coverage of Crunchbase is quite comprehensive for start-ups. When comparing the coverage of Crunchbase to the OECD Entrepreneurship Financing Database, the results show similarity across the two data sources. The share of investments accounted for the United States appear comparable across the two sources (Dalle et al. 2017).

In order to analyse firms and start-ups involved in the development or active deployment of advanced technologies, we relied on the regional and industry categorisation of Crunchbase and tagging system of Dealroom.



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