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VIADUCT

Research-based spin-off creation: VIADUCT INTERREGIONAL ANALYSIS REPORT 2024



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1 Introduction to VIADUCT project

“Valorising public research to drive technology transfer and commercialisation through the creation of spin-off companies (VIADUCT)” is an international project financed by the Interreg Europe programme, with the contribution of the member states.

The VIADUCT project aims to promote knowledge transfer and commercialisation of public research by addressing key barriers related to the creation and establishment of spin-off companies through the improvement of regional policy instruments. This ambitious goal will be achieved through targeted actions for improving research infrastructure, promoting exchange of experiences, innovative approaches, and capacity building to identify, disseminate, and transfer good practices among regional policy actors.

Spin-off companies are a significant source of innovation, facilitating increased knowledge transfer between quadruple helix actors (universities, research centres, public and private sectors). Furthermore, spin-off companies can provide high-quality jobs and high-value-added products and services, forming a crucial part of mobilising science, technology, and innovation, thus driving regional cohesion and development. Nonetheless, their creation faces significant challenges related to research commercialisation, including:

- Low entrepreneurship culture among researchers, where career orientation favours research and academic careers.
- Difficulty in identifying research results that can be turned into business ideas.
- Lack of business skills among researchers and research managers.
- Regulations that do not support knowledge transfer through spin-off companies.
- Limited access to funding due to a lack of tangible evidence for securing financing.
- High business risk and market uncertainty due to the disruptive nature of products or services.

The project consortium consists of seven project partners: University of Zaragoza (ES), West Regional Development Agency (RO), SATT Conectus Alsace (FR), Kaunas Science and Technology Park, Public Institution (LT), Western Development Commission (IE), Municipality of Pieve di Soligo (IT), Council of Tampere Region (FI), and ASTP (NL). The total budget for the project is almost 1.8 million euros, and the project will be carried out from March 2023 to May 2027.

2 Objectives and methodological approach

2.1 Introduction to the territorial analysis

One of the first steps of the learning process carried out in VIADUCT is to analyse how is each region dealing with the commercialisation of public research through spin-off creation. The objective of this analysis is to assess if the current methodologies and support measures are working well, to identify in which areas each region could improve by learning from others, and to find synergies and complementarities among regions that will guide the learning process.

This analysis consists of three activities: a joint thematic survey, a regional study report, and an interregional analysis report. Both the survey and the regional report have been conducted by 7 partners in their regions.

This interregional analysis report compiles the regional results gathered at project level in a comparative way, in order to find synergies among regions that may have emerged from the survey and regional reports.

2.2 Introduction to the VIADUCT Joint Thematic Survey & Regional Reports

The joint thematic survey on Research-based Spin-off Creation, conducted as part of the VIADUCT project, aimed to gather valuable information to guide the improvement of the support and promotion measures addressed to spin-off companies in different European regions, thus contributing to their growth and success.

The survey was jointly designed by project partners and intended for the following target groups:

- **Spin-off Companies:** The survey was aimed at companies originally established to bring innovations from public research laboratories or centres to the market. This includes both already established spin-off companies and those in the planning or development phase.
- **Researchers and Business Founders:** The survey was also intended for researchers and business founders who have potential or are interested in establishing spin-off companies or already had experience in this process.
- **Stakeholders and Supporters:** The survey was open to other stakeholders, such as regional development agencies, research institutions, universities, funders, and others who support and promote the creation and growth of spin-off companies.

With this diverse range of participants, the survey aimed to provide a comprehensive perspective on research-based spin-off creation and related development issues, which can

further support to foster collaboration and the sharing of good practices in these areas among seven European regions.

The survey consisted of six separate sections, each of which assessed one of the main barriers of the spin-off creation process: lack of entrepreneurial culture, difficulties to find potentially transferable research results, lack of business management skills of researchers, difficulties to access to funding, legal procedures not conducive to create a spin-off company, and difficulties to consolidate already existing spin-offs businesses. Besides, an extra question intended to assess if there is any relation in the success of a spin-off company with the smart specialisation strategy of the region.

The survey was distributed among R&D&I agents among the 7 regions. Each partner compiled their answers at regional level and elaborated a regional study report, which analysed the results obtained and drew some conclusions on how effective are current measures / methodologies on each region, and how the spin-offs support system should be improved.

2.3 Objective of the interregional analysis report.

The objective of the interregional analysis report is to compare how are situations going on the different regions, based on the answers gathered through the survey, and to find synergies and complementarities among different partners. All these will allow us to guide the learning process towards transferring knowledge among partners, ultimately leading to improving spin-off supporting measures in all regions.

2.4 Methodological approach

The survey was carried out between July and October 2023. Altogether 277 answers were gathered. In the following figures, the responses are presented by type or organization and by position of the respondent.

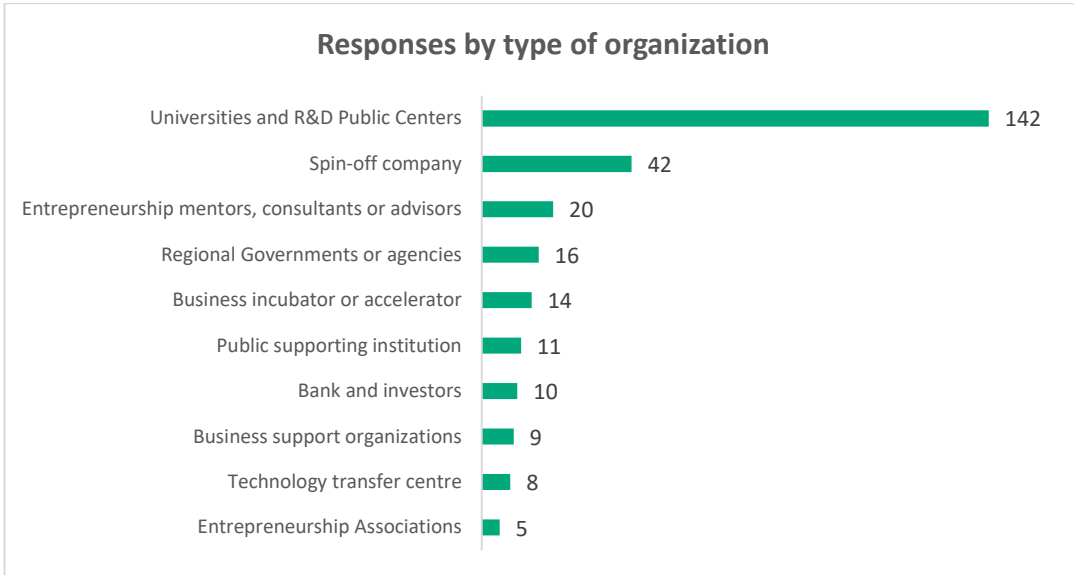


Figure 1. Number of responses by type of organization.

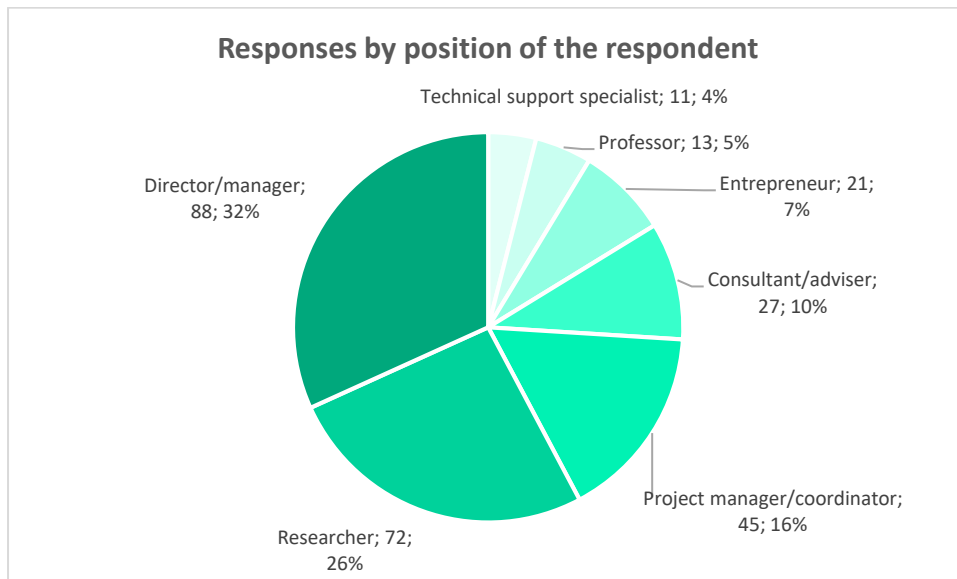


Figure 2. Number of responses by position of the respondent.

As shown in the Figure 1, most of the responses come from people working at Universities and R&D Public Centers (51,26%), followed, by far, by spin-off companies (15,16%). This is a noteworthy point that requires consideration, as it significantly influences the information derived from the survey and may pose a limitation, especially when comparing differences among types of organizations.

Furthermore, it should be acknowledged that accuracy may be compromised when comparing responses based on the positions of the respondents. This is because respondents may hold multiple positions, such as researchers who have also founded a spin-off (holding positions as

both researchers and entrepreneurs), or directors/managers in different organizations who may also have roles as researchers, consultants, entrepreneurs, etc. For this reason, the analysis will primarily focus on differences among types of organizations and regions. Nevertheless, any significant differences identified in respondent profiles will be highlighted.

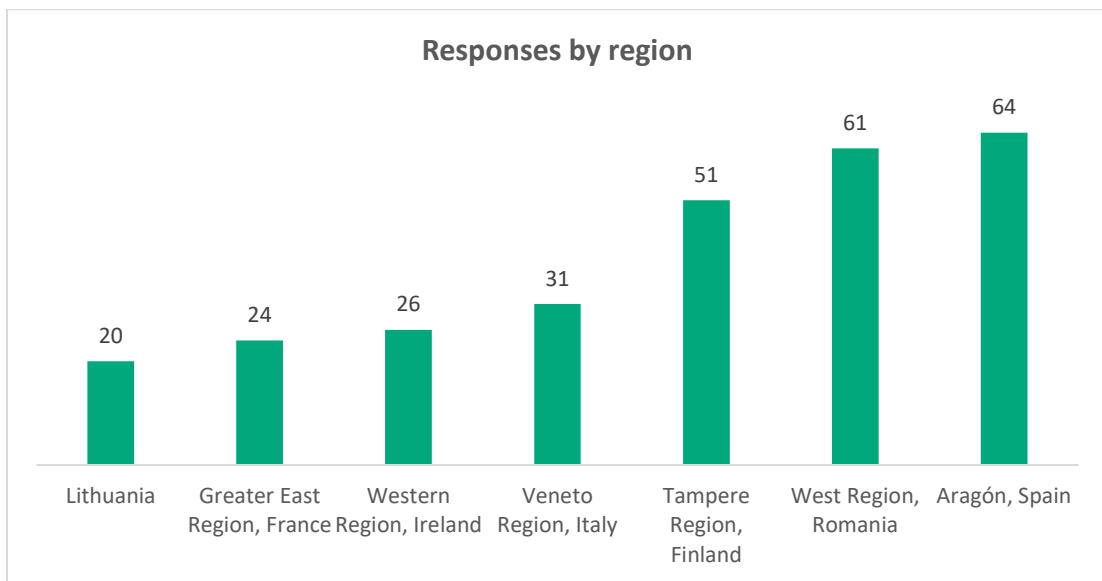


Figure 3. Number of responses by region.

In terms of differences among regions, it is important to highlight variations in the number of respondents across different geographic areas. While all regions have a sufficient number of responses to extract relevant information, the discrepancies in the number of replies from each region must be taken into consideration when assessing the data.

This report is organized following the structure of the survey, which was divided in sections each of which corresponds to the spin-off creation barriers analysed, to facilitate its comprehension.

3 Interregional Analysis Report

3.1 Survey Results

3.1.1 Promotion of entrepreneurial culture

- **How do you evaluate the entrepreneurial culture among public researchers in your region?**

The respondents were instructed to rate the entrepreneurial culture among public researchers in their region on a scale from 1 to 4, with 1 corresponding to "very unsatisfactory" and 4 corresponding to "very satisfactory".

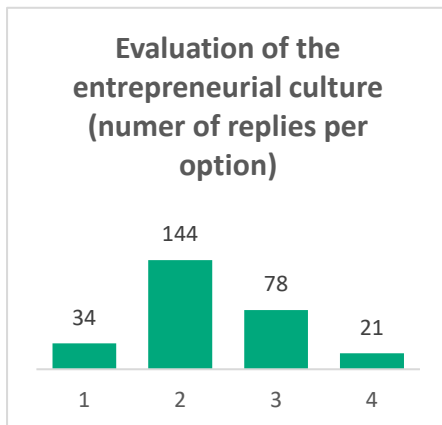


Figure 4. Number of replies per option.

On average, key stakeholders indicated that the entrepreneurial culture among public researchers was more likely to be unsatisfactory, with a score of 2.31. There were no significant differences among types of organizations, with the lowest scores coming from Entrepreneurship Associations (2.00) and the highest from Regional Governments or agencies (2.62). Similarly, there were no notable distinctions based on the positions of the respondents, with Entrepreneurs scoring 2.1 and Professors scoring 2.46.

However, when examining differences among regions, the variations are slightly more pronounced, as illustrated in Figure 6. Respondents from Aragón region, from Spain, have the lowest evaluation (1.94), while Lithuania presented the most favourable view on the topic (2.75).

- How do you find the support measures to promote entrepreneurial culture among public researchers in your region?

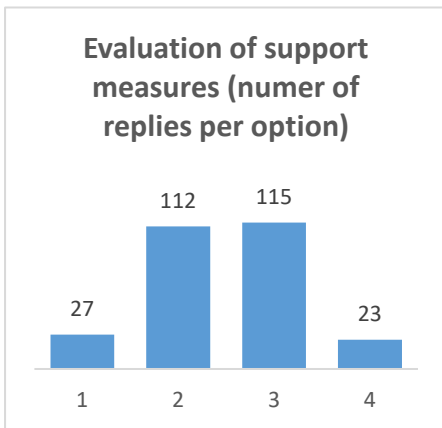


Figure 5. Number of replies per option.

This question follows the same structure as the previous one, employing a ranking system from 1 (very unsatisfactory) to 4 (very satisfactory).

In this case, the perspective is slightly more favourable than in the previous question but still falls short of being satisfactory, with an average of 2,48. The observation that respondents have a more positive view of the measures taken to promote entrepreneurial culture compared to the evaluation of the entrepreneurial culture itself suggests that relevant stakeholders acknowledge ongoing efforts to foster entrepreneurial culture among researchers.

Similar to the previous question, there are no significant differences among responses from individuals holding different positions. Concerning the type of organizations, Banks and investors exhibit the most positive perception, averaging 2.8, whereas Entrepreneurship Associations present the least favourable outlook, averaging 2.00.

Regarding regions, as depicted in Figure 6, the Greater East Region in France, the Western Region in Ireland, and Lithuania display the most satisfactory views on the measures taken to promote entrepreneurial culture. In contrast, the Aragón region in Spain still holds the least satisfactory perspective on the topic. Notably, all regions, except the West Region in Romania, express a more positive view on this question compared to the previous one.

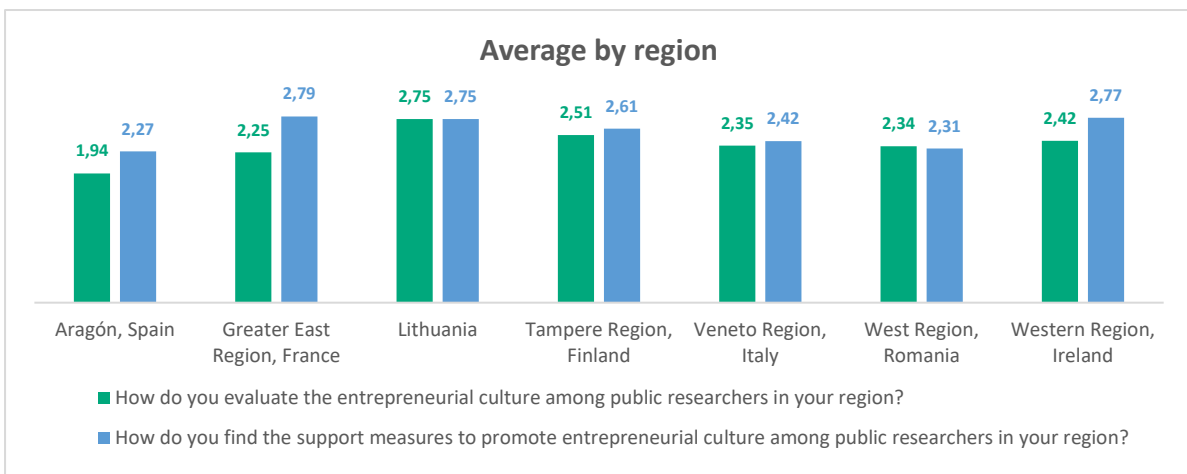


Figure 6. Average by region.

- **What public tools/initiatives could be implemented to promote the entrepreneurial culture amongst public researchers?**

This was an open-ended question, allowing respondents to suggest as many initiatives as they wished. Out of the 277 participants, 272 provided responses. The suggestions have been systematically categorized, and the outcomes are presented in Figure 7. Some respondents made multiple suggestions that could be classified into more than one category, explaining why there are more suggestions than the total number of replies.

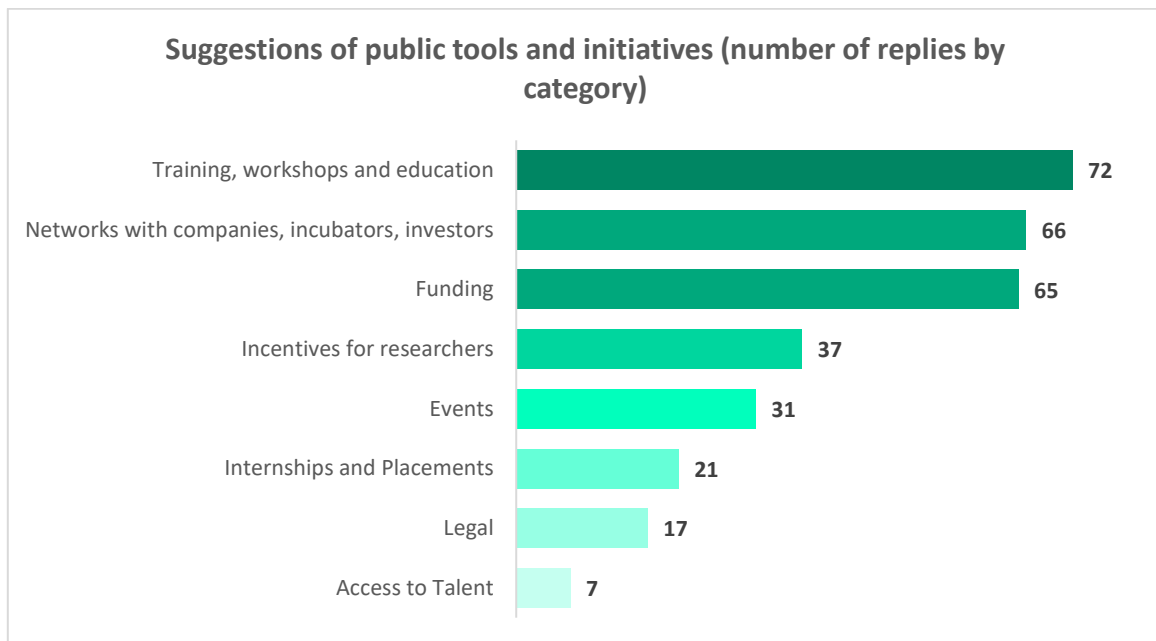


Figure 7. Number of replies by category.

The most commonly shared suggestion, prevalent across all regions, emphasizes the necessity of creating more **educational and training programs in topics related to entrepreneurship and technology-based venture creation**. This includes a wide range of topics, like intellectual property, funding and investments, business development, sales and marketing, etc. Despite some responses indicating the existence of educational programs, it appears that these may not be tailored to the specific needs of researchers, thereby lacking the appeal necessary to encourage their attendance.

Another prominent aspect highlighted is the **scarcity of networking opportunities**. Respondents assert the existence of a gap between academia and private companies, emphasizing the insufficient initiatives aiding researchers in establishing relevant networks for launching spin-offs. Researchers need the support of incubators and accelerators and other entities in order to meet with investors, mentors and other relevant stakeholders. Here, it should be noted that some participants have highlighted the importance of having access to **success stories and role models**. Funding is identified as equally critical, with responses indicating a lack of **funding opportunities for venture creation and**

early-stage high-tech companies. Researchers often encounter resource-intensive endeavours, and a common barrier across regions is the limited access to specific funding instruments and private investors interested in companies at these stages.

Additionally, the respondents have also suggested that it would be important to set-up **incentives for researchers** who are willing to start their own ventures. Economic incentives and the option to allocate working time to business activities are cited as the most significant motivating factors. Other suggestions involve **facilitating access to talent** and **promoting internships and placements** for researchers to work at private companies, providing firsthand experience and creating valuable connections.

Notably, responses from different regions are similar, indicating that researchers face common challenges across the various locations participating in the VIADUCT project.

Conclusions and interregional comparative for this section

Despite some regional variations, it appears evident that there is a clear need for further development and enhancement of entrepreneurial culture among public researchers. Survey participants indicated that the current entrepreneurial culture among public researchers tends to be unsatisfactory, with a score of 2,31. However, there is a slightly more positive perception of the support measures implemented to promote entrepreneurial culture among this group, with an average score of 2,48. Nevertheless, these measures seem to have a limited impact on fostering entrepreneurial culture among researchers.

Common barriers exist in all the regions for promoting entrepreneurial culture among researchers. Training and education emerge as the primary limitations. Although some participants note the existence of specific courses and initiatives aimed at increasing entrepreneurial knowledge among researchers, these programs may be too broad, and researchers might feel that they are not tailored to their specific needs, thus limiting their interest. Facilitating connections with relevant stakeholders and providing funding opportunities are also identified as areas for improvement.

In general, the suggested measures align with the idea of considering the unique situation of researchers when implementing initiatives to foster entrepreneurship among this collective. Often, initiatives aimed at fostering entrepreneurship are too general and fail to account for the special circumstances of research-based venture creation. Researchers hold other positions and have to balance their research activity with their work at the company. Also, their ventures are often knowledge and technology-based, requiring significant capital.

When introducing new measures to enhance the entrepreneurial culture among researchers, it is crucial to give careful consideration to the unique situation of researchers. Failure to do so may limit the effectiveness of these measures.

3.1.2 Search and valorisation of research results

- **Do you know who to turn to within your organization and/or region if you identify a research result that could be brought to market?**

In this question, respondents were asked about their awareness of the specific contacts to approach within their organizations when identifying research results for potential commercialisation; they had to choose among three options (Yes, No, Not applicable to me). Figure 8 illustrates that a vast majority of respondents are aware of whom to contact within their organizations when identifying relevant research results.

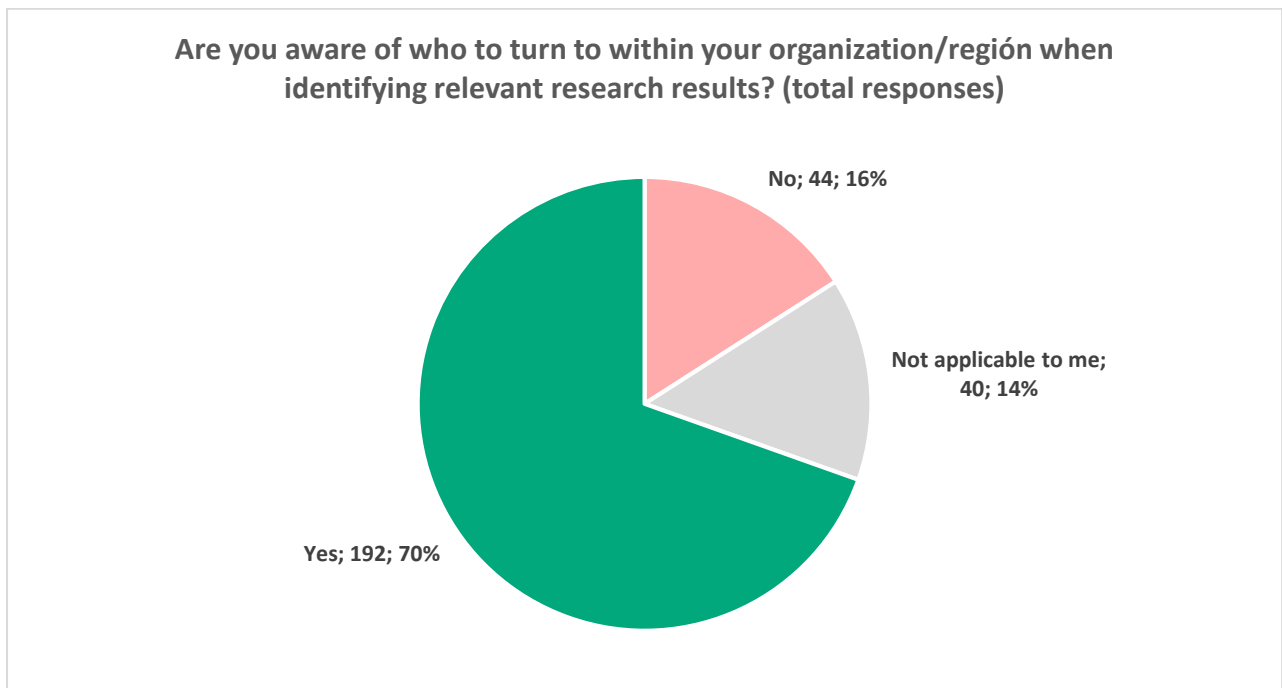


Figure 8. Percentage of replies by option.

This question is mainly targeting researchers and professors, and it is surprising to observe that this group has the highest percentage of replies indicating a lack of knowledge about who is responsible within their organization to communicate relevant research results, as shown in Figure 9.

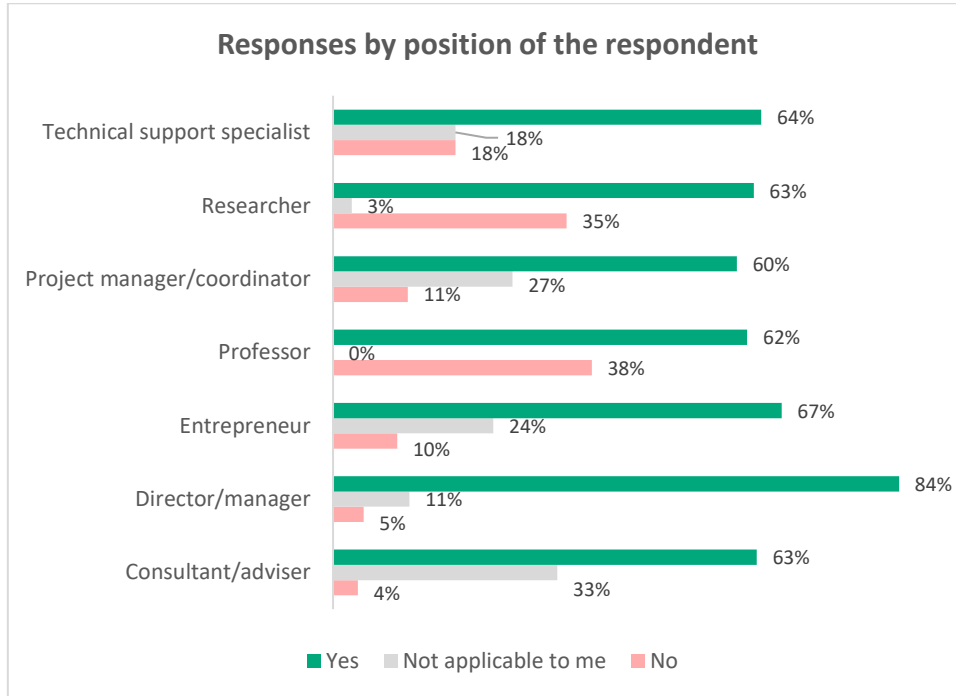


Figure 9. Percentage of replies by option and position of the respondent.

Upon closer analysis, out of the 30 researchers and professors who replied "No," 19 are from the West Region, Romania. In this region, there appears to be a pressing need for organizations to establish structures and procedures facilitating researchers in communicating and seeking assistance for the commercialization of their results. It's noteworthy that not all regional universities and research centers in this region have a technology transfer office or a similar center within their premises, creating a bottleneck for technology transfer and spin-off creation.

With the exception of the West Region in Romania and, to a lesser extent, the Tampere Region in Finland, it appears that all other regions have clear structures and procedures enabling researchers to communicate and initiate the commercialization process of their relevant results, as evidenced in Figure 10.

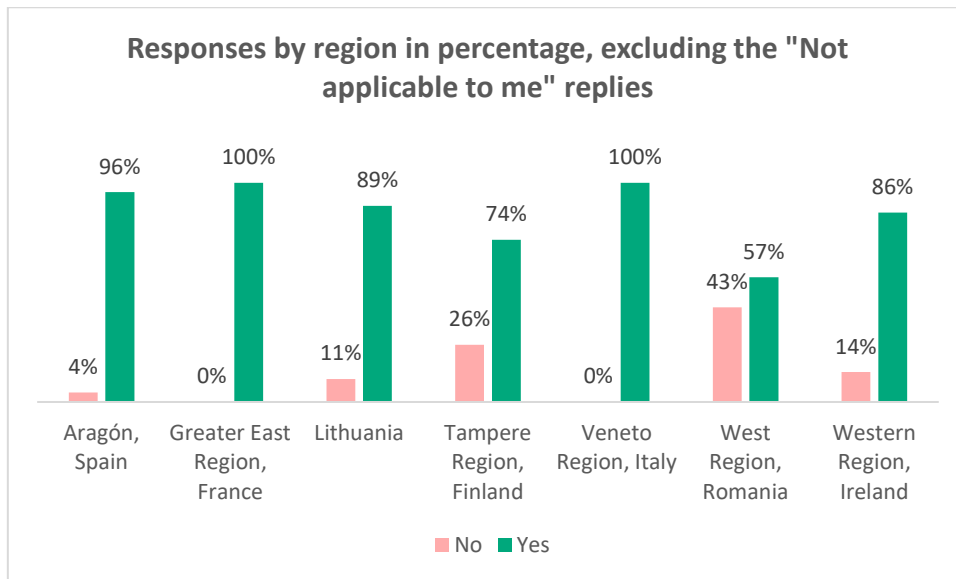


Figure 10. Percentage of replies by option and region (excluding “Not applicable” responses)

- **How are research results with valorisation potential identified in your public research organization?**

In this question, participants had to choose among different options: Both are proactive; I am not aware of it; Not applicable to me; Researchers communicate their findings; The public research organization looks for research results to be valorised. The question is structured as a multiple-choice question where respondents must choose one option.

Similar to the previous question, this one specifically targets researchers. Figure 11 compares the responses from researchers with the total responses. The figure illustrates a higher percentage of researchers stating that they are the proactive party in identifying the valorisation potential of their results compared to the overall impressions. This observation is intriguing and may indicate a lack of awareness among researchers about the role of the Technology Transfer Office (TTO) or similar structures within their institutions.

Additionally, it is noteworthy that 19% of researchers are not aware of how relevant research results for valorisation are identified in their institutions. While this percentage may not be high, it underscores the need for ongoing efforts to communicate to researchers about all the technology transfer and valorisation activities conducted by their institutions and how they can actively participate and benefit from them. It is important to highlight that there are some differences among regions in this point, in Veneto region from Italy, for instance, all researchers are aware of the valorisation process, whereas in Tampere region from Finland, 30% of the researchers are not aware of the valorisation process.

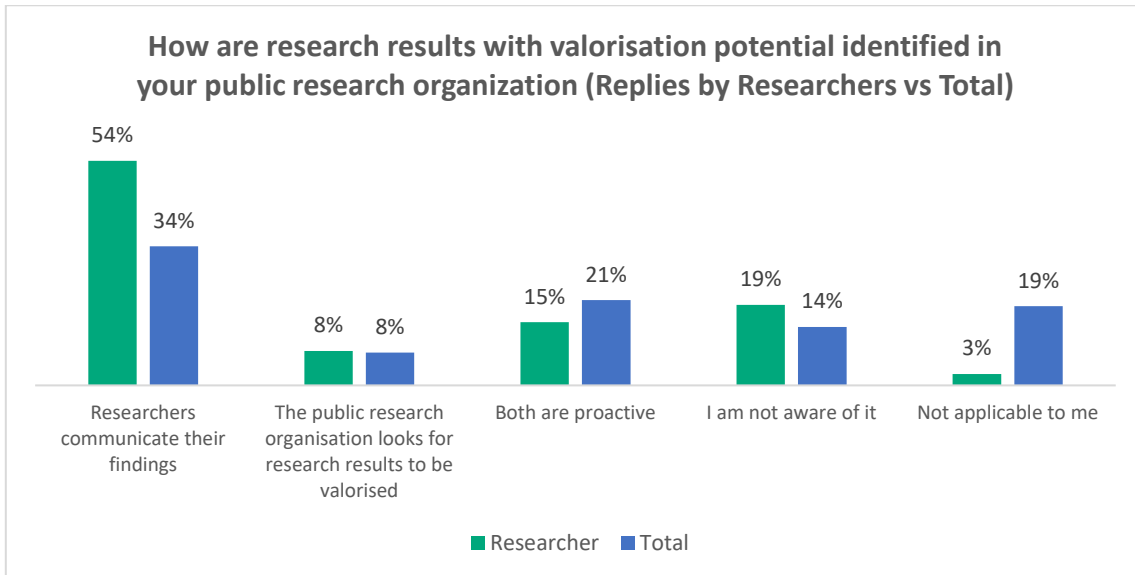


Figure 11. Percentage of replies by option, comparing researchers and the total responses

- **How would you suggest improving the process of valorising research results within your organization / region?**

This is an open-ended question where participants were free to suggest any measures they deemed appropriate. Not all participants responded; a total of 187 suggestions were collected. These suggestions were then grouped and categorized as presented in Figure 12.

Upon analysing the suggestions, it is noteworthy that over a quarter, 27% precisely, are related to creating stronger connections with relevant stakeholders. This encompasses a diverse range of stakeholders, such as investors and private companies. The suggestions also cover various measures aimed at ensuring researchers are more engaged with the "real world," like networking events, as expressed by many survey participants. It appears that respondents believe researchers should have increased interaction with the industry to better understand real-world problems and incorporate market insights into their research. Strengthening these connections would, in turn, enhance the valorisation process. Researchers, by being more in tune with market needs, could develop their research accordingly and directly validate its potential with real users, exploiters, etc.

Respondents have also emphasized the need for more resources (16%). Suggestions fall into two categories: a) the necessity for more and improved funding instruments for spin-offs and applied research with exploitation potential, and b) the need for additional resources to seek external support in areas where researchers lack expertise, such as intellectual property, financing, and general business knowledge.

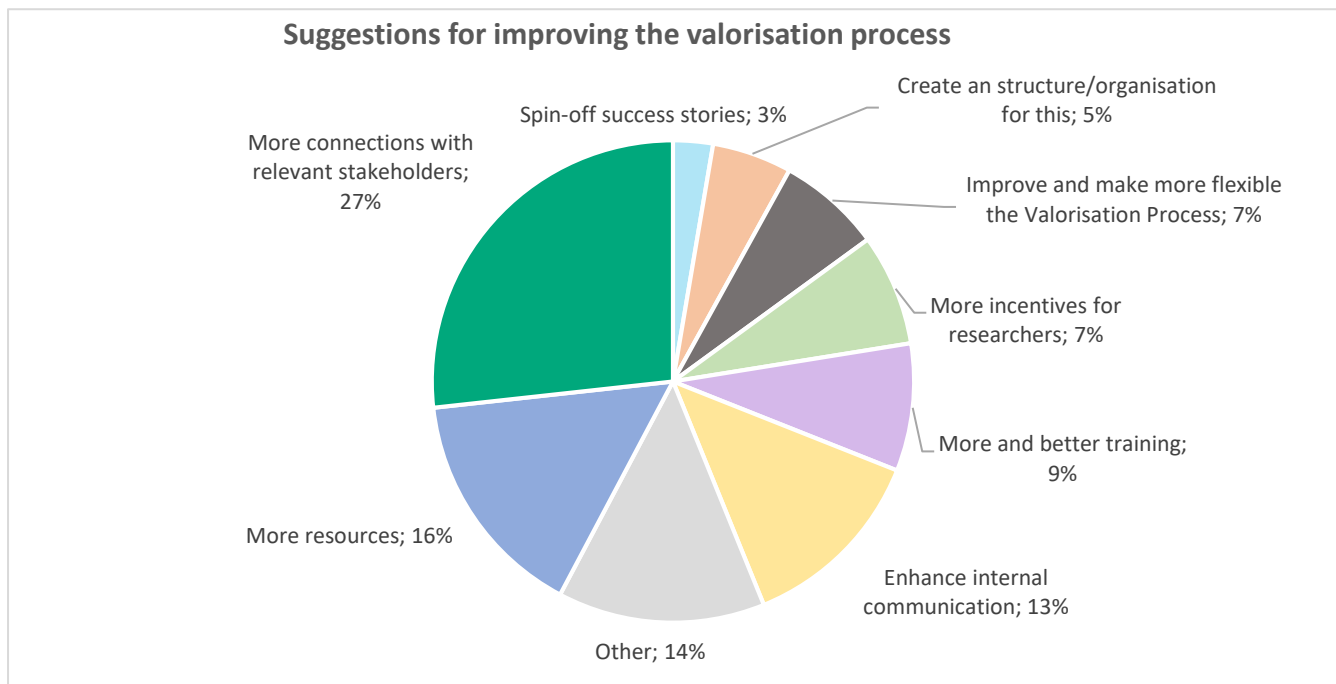


Figure 12. Percentage of suggestions by category.

It is worth noting that many respondents recognize the existence of the valorisation process, but there is a significant lack of internal communication (13%) within research organizations. This lack of communication results in researchers being unaware of the process, causing them to miss valorisation opportunities. Others suggest that the valorisation process should be more flexible and adaptable to different cases, considering the diverse nature of high-tech ventures. Increased training, incentives for researchers, and improved technology transfer structures have also been highlighted in many suggestions. Finally, some participants propose that having and promoting success stories from spin-offs would help raise awareness among researchers and enhance the valorisation process by following the best practices demonstrated by these examples.

Conclusions and interregional comparative for this section

In general, it appears that most participants in the survey are aware of the individuals responsible for valorisation activities within their organizations. This knowledge is especially important for researchers, since they are the ones who are developing the new technologies and knowledge that could have potential to be valorised. Despite this generally positive perception, it is concerning that 35% of researchers responding to the survey do not know whom to approach when identifying

relevant results. This poses a problem as these researchers might fail to communicate their developments, resulting in missed valorisation opportunities.

It is important to ensure that researchers are aware of the valorisation process and that there are structures and professionals within their organizations responsible for the valorisation process and providing support to them. In fact, improving internal communication and awareness about the valorisation process is among the most cited suggestions for enhancing the valorisation process made by the survey participants.

Additionally, it becomes evident that the most significant gap in fostering research valorisation is the lack of connection between researchers and the market. This gap not only includes a lack of connection with private companies that can benefit from and exploit research results but also a disconnection from real-world problems that should guide researchers in their developments. For research results to be effectively exploited, they should provide solutions to real problems. Hence, it would be beneficial for researchers intending to start their ventures to engage with the industry from the early stages of their careers. Otherwise, they may invest significant resources and years of work in developing technologies that lack practical application or benefit.

While all the suggestions presented in the previous section are relevant, creating an environment that encourages and fosters communication between academia and industry can serve as a catalyst for improving valorisation processes. Real-world inputs will be considered throughout the research process, leading to a more market-oriented approach rather than a technology-driven one. However, this shift should be implemented carefully, as an exclusive market-driven approach might hinder the development of radical innovations in research.

3.1.3 Business management skills of researchers

- **Do you think it is easy for public researchers to create a multidisciplinary team to launch a business project?**

In this question, participants were asked to rate how easy is for public researchers to create a multidisciplinary team to launch a business project, using a scale of 1 (very difficult) to 4 (very easy). On average, stakeholders across all participating regions in the study express a pessimistic view, indicating that it is rather difficult for public researchers to form a multidisciplinary team to launch a business project, with an average score of 1,83.

It is important to note that Entrepreneurs' opinion is among the worst on this aspect, as illustrated in Figure 13. These are the professionals that have faced this challenge firsthand as they have had to create the teams for their ventures. Entrepreneurs, having firsthand experience in facing this challenge while creating teams for their ventures, provide a perspective that should be given significant consideration. It highlights the need for substantial efforts to offer better tools and connections for facilitating researchers' access to potential team members.

On the other hand, while researchers also find forming multidisciplinary teams difficult, they hold a relatively more optimistic view. This might be attributed to the fact that researchers responding to the survey have not yet initiated a company and may have a more positive perception than the reality. Nevertheless, it is evident that all regions need to address this aspect to foster the spin-off ecosystem.

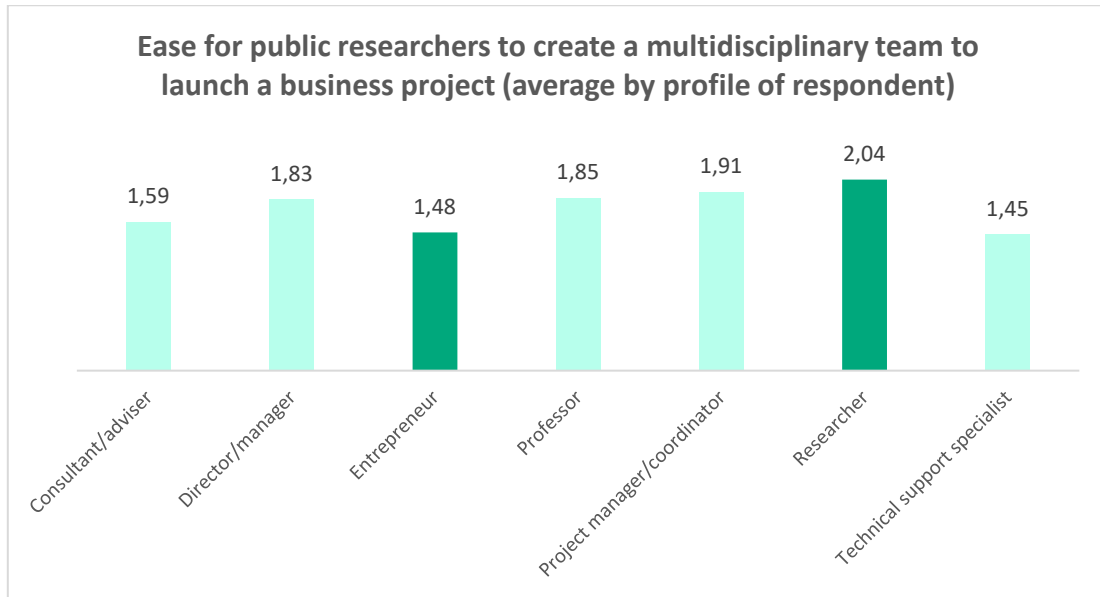


Figure 13. Average score by profile of respondent.

Concerning regional differences, as illustrated in Figure 14, even though the consensus in all regions is that forming multidisciplinary teams is challenging, the Western Region from Ireland, Greater East Region from France, and Aragón from Spain express the most pessimistic opinions on the topic. It would be valuable for these regions to delve into understanding how regions with higher scores, despite still low, navigate this challenge. There might be insights and best practices from regions with better scores that could be implemented to improve the situation.

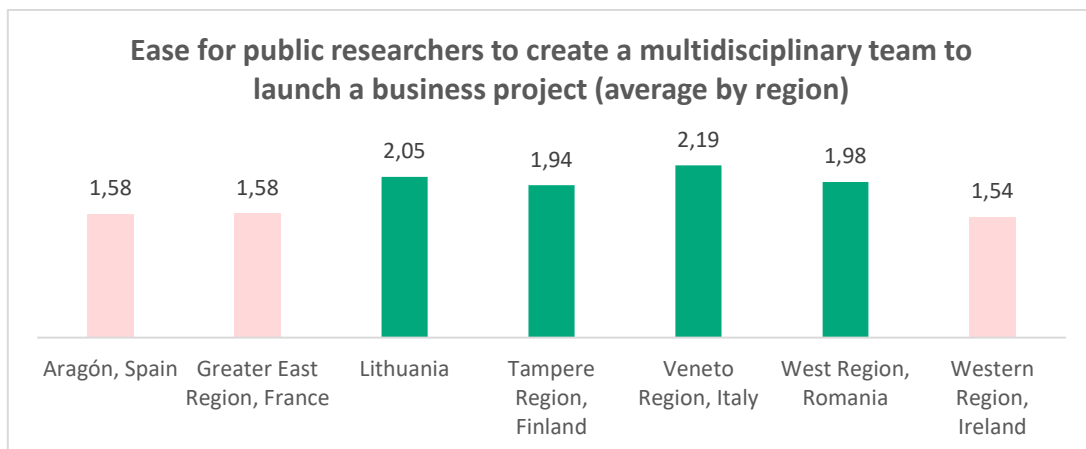


Figure 14. Average score by region.

Do you think public researchers have sufficient knowledge to create and manage their own spin-off?

This question follows a similar structure to the previous one, utilizing a ranking system from 1 (definitely not) to 4 (yes, absolutely). Also, in this case the general feeling is mostly negative, with an average score of 1,88.

These results align with previous findings highlighting the lack of training for researchers in the field of entrepreneurship and venture creation. Like in the previous question, and shown in Figure 15, entrepreneurs are who have a most pessimistic view on this topic, probably due to the same reasons than explained above.

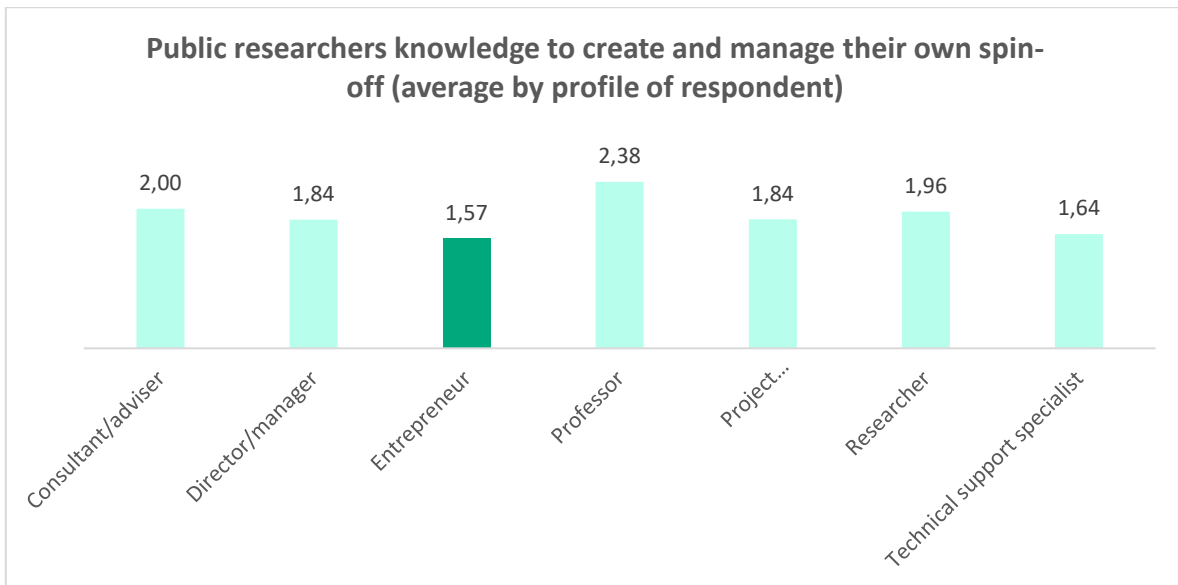


Figure 15. Average score by profile of respondent.

Regional differences are shown in Figure 16. The regions can be categorized into three groups, even though all regions express a rather pessimistic opinion on this topic. Veneto Region from Italy and West Region from Romania are the regions with higher scores, exceeding 2. They are followed by Tampere Region from Finland and Aragón from Spain, with scores over 1.8. Lastly, Lithuania, Greater East Region from France, and West Region from Ireland, report scores between 1.5 and 1.7.

Despite the overall low scores and the suggestion from participants for more and better training programs to improve entrepreneurship among researchers, the reason for this disparity might be that regions with higher scores have more effective training programs for researchers interested in becoming entrepreneurs. Regions with lower scores could benefit from understanding and adopting the initiatives implemented by regions with better scores.

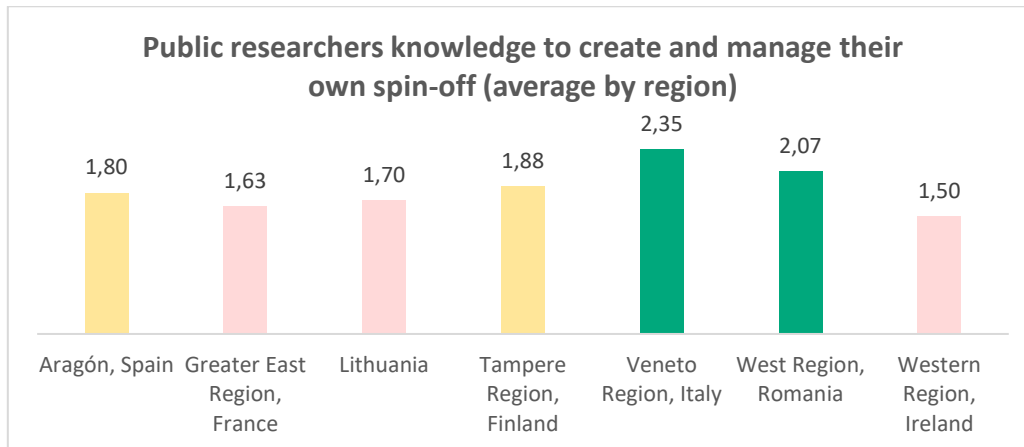


Figure 16. Average score by region.

- **In which business areas do you think there is a need for training? (Please select the four most important ones)**

In this question, participants had to choose four options out of a specific list of items, as presented in Figure 17, along with the number of replies for each option (blank replies have been excluded). Strategy, followed by Sales and Negotiations, Leadership and Team Management, and Finance are the areas where participants express the greatest need for training. This information is crucial to consider when creating and organizing new training courses and initiatives for researchers, as it appears that these are the topics where the lack of knowledge is most significant. While this provides important insights, gaining more details about the specifics is crucial, as all these topics are broad, and the content must be tailored to the specific situations of spin-offs.

It is important to highlight that no significant differences have been found when analysing the replies from the different profiles of respondents, organizations they work for, even regions. It seems that the feeling is rather general, and therefore it should be highly considered when prioritising new training content.



Figure 17. Number of replies by option.

- **What measures do you think would be useful to improve the entrepreneurial skills of public researchers?**

This open-ended question garnered responses from nearly all participants, with each providing at least one suggestion. The suggested measures have been categorized, as shown in Figure 18, and the specific recommendations are detailed below.

- **Specific training (52%):** More than half of the suggested measures fall into this category. Many participants recommend offering specific courses on various business-related topics. Noteworthy suggestions include making entrepreneurship courses mandatory for Ph.D. programs and incorporating them into basic education. Participants emphasize the value of having experienced entrepreneurs as professors, as they can provide tailored education based on their own entrepreneurial journeys. The importance of developing soft skills alongside formal education is also highlighted, as these skills are crucial for entrepreneurs.
- **Business connections and practical experience (20%):** Participants stress the need for researchers to establish connections with the business world and gain practical experience. Suggestions include promoting hands-on experiences in private companies or entrepreneurial projects. Measures such as allowing researchers to undertake placements in private companies or participate part-time in

entrepreneurial initiatives are recommended. Additionally, fostering mentorship from business leaders or experienced entrepreneurs is seen as valuable for researchers to gain insights into the field.

- **External support (7%):** Measures in this category go in line of providing researchers with external assistance in topics where they do not have knowledge and are important for starting business, like legal or financial. Seeking help from external experts can equip researchers with formal knowledge crucial for their future entrepreneurial endeavours. These measures underscore the importance of incubation and acceleration programs in supporting researchers.
- **Incentive Mechanisms and Recognition (3%):** There is a call for the implementation of more incentive mechanisms and recognition. This encompasses not only financial incentives but also academic incentives and support from their organizations to combine their entrepreneurial and research career.
- **Access to Success Stories (2%):** Participants emphasize the importance of having access to success stories from researchers who have transitioned into entrepreneurs. These stories serve as inspiration and a source of firsthand knowledge, offering valuable insights into overcoming challenges that future entrepreneurs are likely to encounter. Having role models to whom researchers can look up is considered crucial for increasing motivation and fostering interest in acquiring new skills.

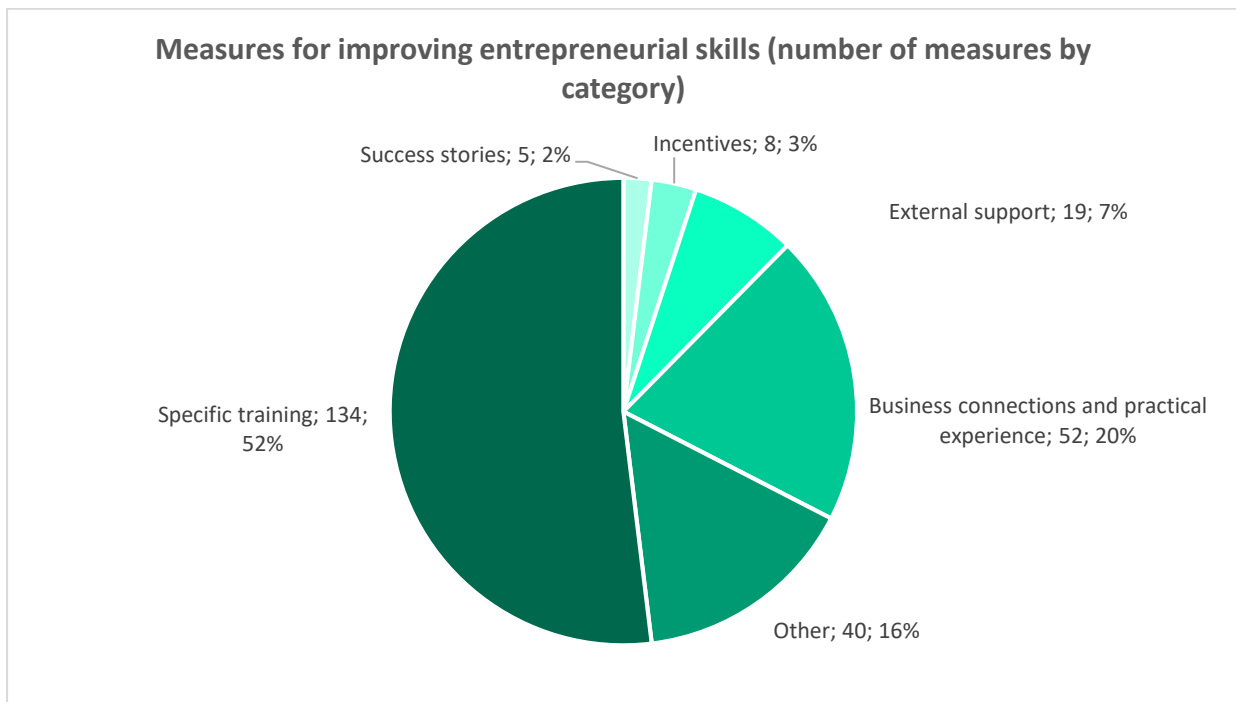


Figure 18. Percentage of responses by category of measure.

When examining the suggestions provided by participants from different regions, there is a general alignment in the proposed measures, as depicted in Figure 19. However, certain noteworthy differences among regions can be observed, shedding light on underlying disparities.

For instance, in the region of Aragón, Spain, there is a distinctive emphasis on creating additional incentives for researchers to venture into entrepreneurship compared to other regions. This emphasis may be attributed to the evaluation and promotion criteria of researchers in Spain, where entrepreneurial activities are given less weight than academic publications. Additionally, the legislative framework in Spain poses challenges for researchers aiming to balance entrepreneurial and research careers.

In contrast, in Finland, approximately 33% of the suggested measures are related to promoting business connections and practical experience. This regional trend could be linked to the Finnish model, which is more receptive to the integration of academia and industry. Consequently, a higher number of suggestions align with fostering practical experiences and connections between researchers and the business sector.

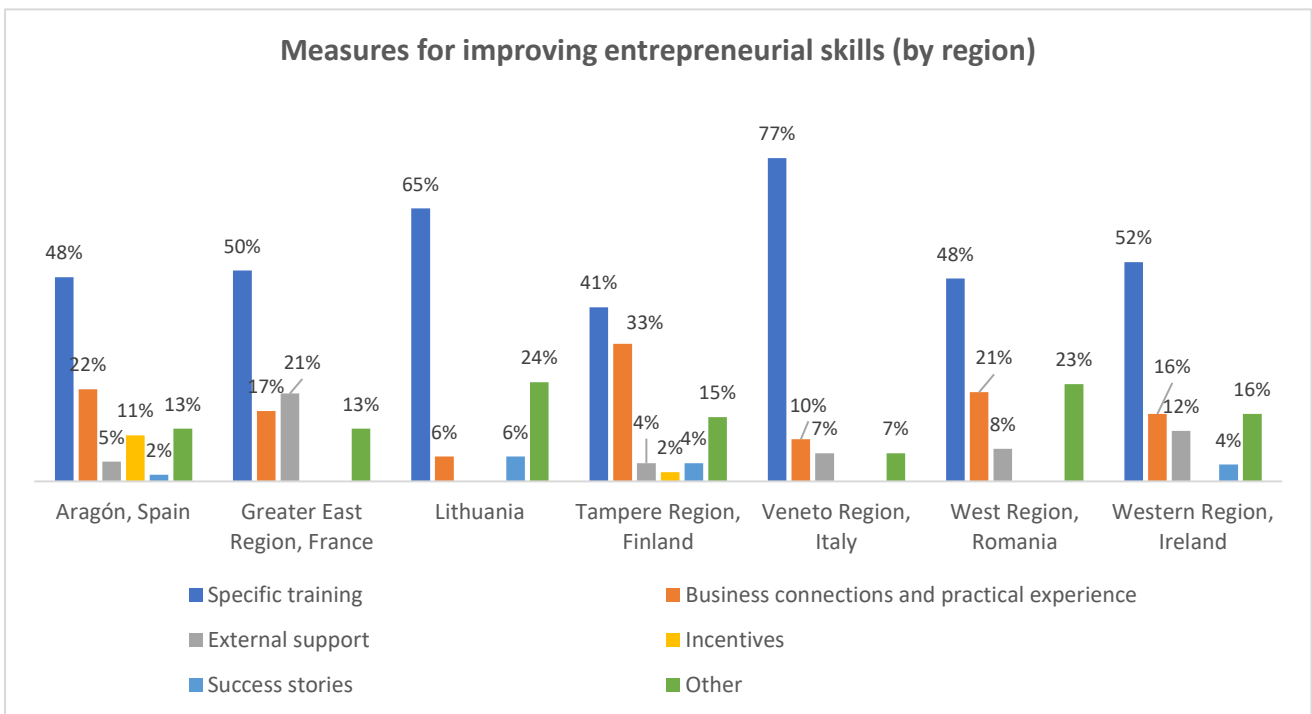


Figure 19. Percentage of responses by category of measure and region.

Conclusions and interregional comparative for this section

From the survey results it is evident that researchers face important challenges for creating multidisciplinary teams for launching their ventures and they lack business knowledge and skills required for managing a new venture.

It is important to highlight that entrepreneurs are the profile of respondent that have the most pessimistic view on these two topics. These are professionals that have gone through the process of creating their venture and have had to look for talent to join the team. This is important as it seems that researchers might overlook underestimate how difficult it can be. For this, it would be important that experienced entrepreneurs could share their experiences with researchers that are willing to start their business as this first-hand knowledge can help them to better understand the skills and what really is required to succeed in creating a business.

Veneto region in Italy stands out as a region with the highest scores in terms of the ease for public researchers to create multidisciplinary teams and their business knowledge. It is recommended that experts from this region share the effective measures they are implementing to help other regions enhance their strategies in these aspects.

Furthermore, the survey participants emphasize that skills such as strategy, sales, and leadership, which are challenging to acquire through formal education alone, are crucial for researchers aspiring to become entrepreneurs. To effectively impart this knowledge, it is suggested that researchers engage in specific programs focused on experiential learning rather than traditional formal courses. Many of the recommendations provided by participants align with this approach. Promoting placements of researchers in private companies or encouraging them to work part-time in entrepreneurial projects is seen as more beneficial than relying solely on traditional educational programs. These experiential opportunities allow researchers to gain practical insights and hands-on experience, better preparing them for the challenges of entrepreneurship. Therefore, fostering real-world experiences through tailored initiatives becomes essential for researchers to develop the practical skills needed for entrepreneurial success.

By analysing the information provided in this section, it seems evident that real world experience is the key for improving entrepreneurial skills among researchers. The different regions would have to adapt their specific programmes and context for fostering this. For example, in Aragón, from Spain, it is necessary to create incentives that encourage researchers to become entrepreneurs rather than publish articles and the legislation should be more flexible in order to allow them to balance their entrepreneurial and research career. In Finland, for instance, it seems that the relations between academia and industry are more fluent, and the models they implement could be transferred to other regions, but only if the legal context is adapted to encourage researchers to start their ventures and work on more applied and exploitable research.

3.1.4 Regulatory and legal framework

- **How familiar are you with the legal framework that applies to spin-offs?**

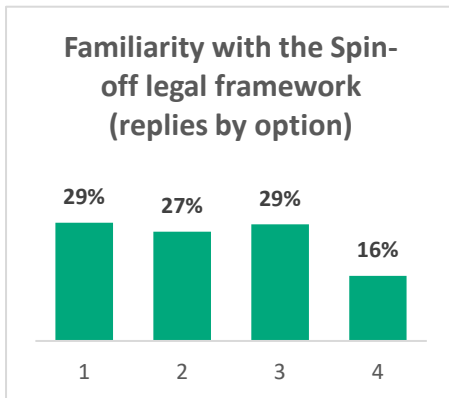


Figure 20. Percentage of replies by option.

In this survey question, respondents were asked to assess their familiarity with the legal framework governing spin-offs, using a scale from 1 (very unfamiliar) to 4 (very familiar). As illustrated in Figure 20, the distribution of replies is relatively even, but the general sentiment suggests that respondents are somewhat unfamiliar with the legal framework for spin-offs, with an average score of 2.31.

The level of knowledge about specific legislation varies among participants working in different organizations, as shown in Figure 21. Professionals from Spin-off companies, Technology Transfer Centers, and Business Support organizations exhibit the highest familiarity with this legislation. This result is expected, as spin-off

professionals may have gone through the process of creating such institutions and are well-versed in the specific legislation. Technology Transfer Centers also play an active role in the spin-off creation process and often provide advice to researchers, explaining their high familiarity. Notably, Business Support organizations, which assist entrepreneurs in the initial stages of venture creation, also show high levels of familiarity, as they commonly support researchers aspiring to become entrepreneurs.

Surprisingly, Business Incubators or Accelerators and Entrepreneurship Associations appear less familiar with the legislation governing spin-offs. This highlights a disconnection between these types of organizations and research-based ventures, suggesting a focus on more traditional entrepreneurs. This disconnect poses a systematic problem concerning the support that spin-offs receive from these institutions, which may not be fully aware of the specific challenges faced by these ventures. Measures should be taken to ensure that incubators and accelerators incorporate knowledge about the unique aspects of spin-offs, enabling them to provide effective support for their creation, growth, and consolidation. Improving the support ecosystem should have a beneficial impact in fostering the creation of Spin-offs.

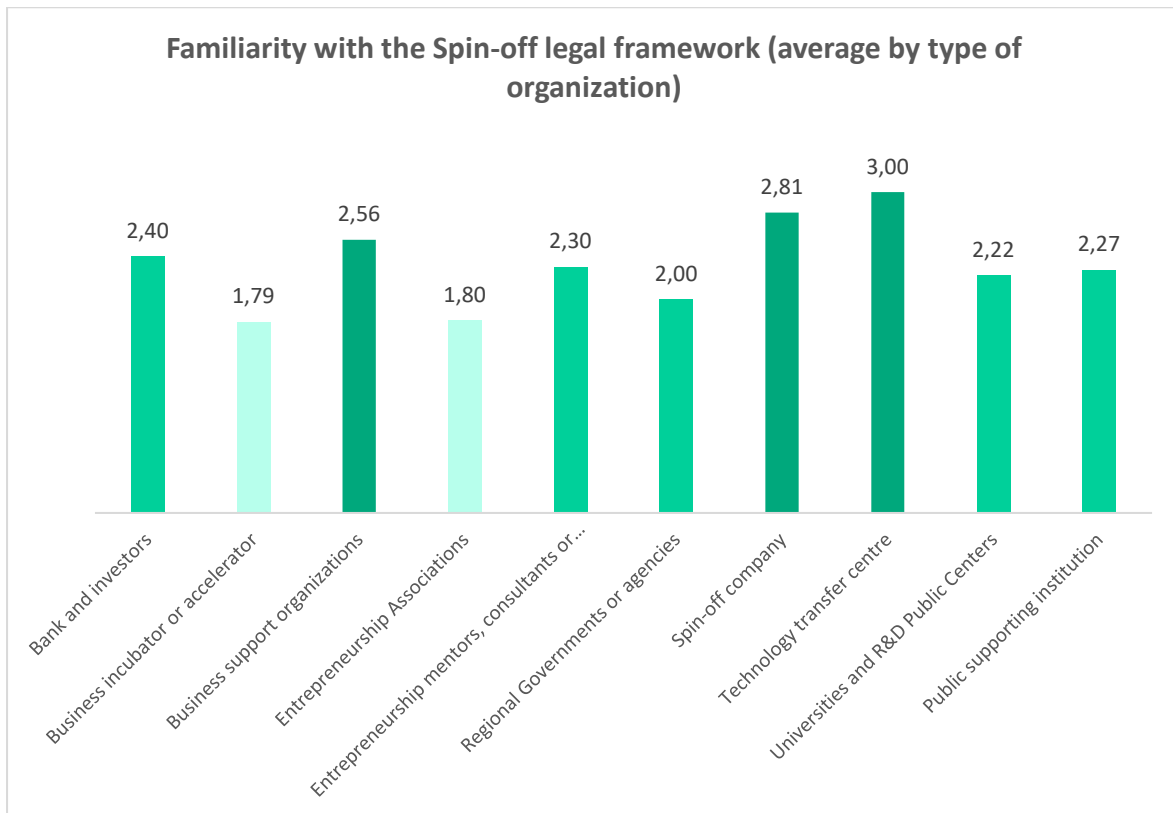


Figure 21. Average by type of organization.

Comparing responses across regions reveals significant differences, as shown Figure 22. Professionals from the Greater East Region in France, Aragón in Spain, and Veneto Region in Italy demonstrate higher familiarity with the specific legislation governing spin-offs. This suggests effective diffusion and training efforts in these regions, although there is still room for improvement. On the contrary, knowledge about this topic among professionals from Lithuania and the West Region in Romania is relatively limited, posing a potential barrier for researchers in these regions who aspire to become entrepreneurs. Addressing this lack of legislative knowledge is crucial for facilitating and encouraging researchers to venture into entrepreneurship.

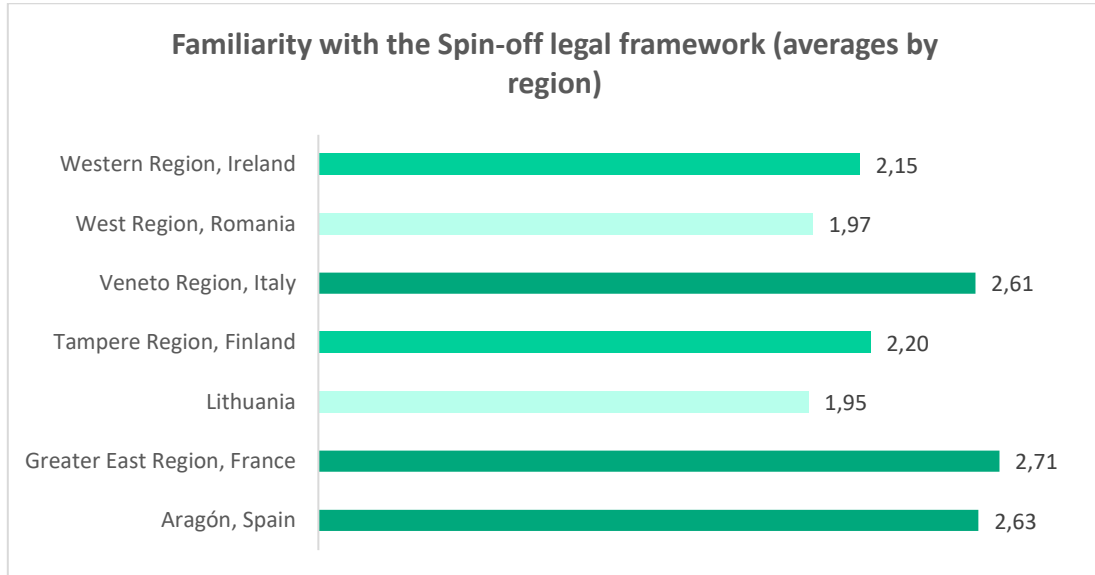


Figure 22. Average by region.

- Do you think it is easy for public researchers to set up a spin-off from an administrative and legal point of view?

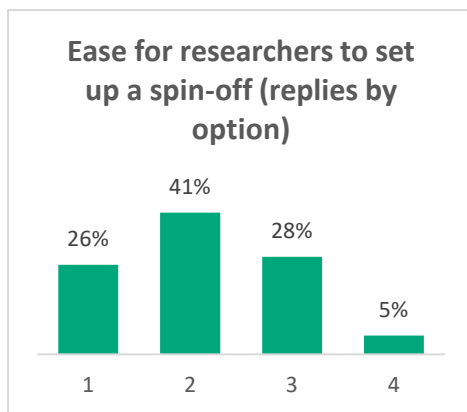


Figure 23. Percentage of replies by option.

In this question participants were asked to assess the ease of setting up a spin-off from an administrative and legal standpoint, using a scale ranging from 1 (very difficult) to 4 (very easy). The majority of respondents perceive this process as difficult, as shown in Figure 23, with an average score of 2.13.

It is noteworthy that professionals with the most optimistic view in this regard are those working at Public Support Organizations, with an average score of 2.70, followed by Banks and Investors (2.56), and Entrepreneurship Associations (2.40), as depicted in Figure 24. This data raises a crucial point, indicating a potential disconnect between

Public Support Organizations and the real challenges faced by researchers aspiring to become entrepreneurs. Bridging this gap is essential because these organizations play a key role in influencing the political space, where administrative processes can be changed. Without a clear understanding of the actual problems, effective solutions cannot be implemented. Addressing this discrepancy is vital to ensure that administrative processes are streamlined and supportive of researchers venturing into entrepreneurship.

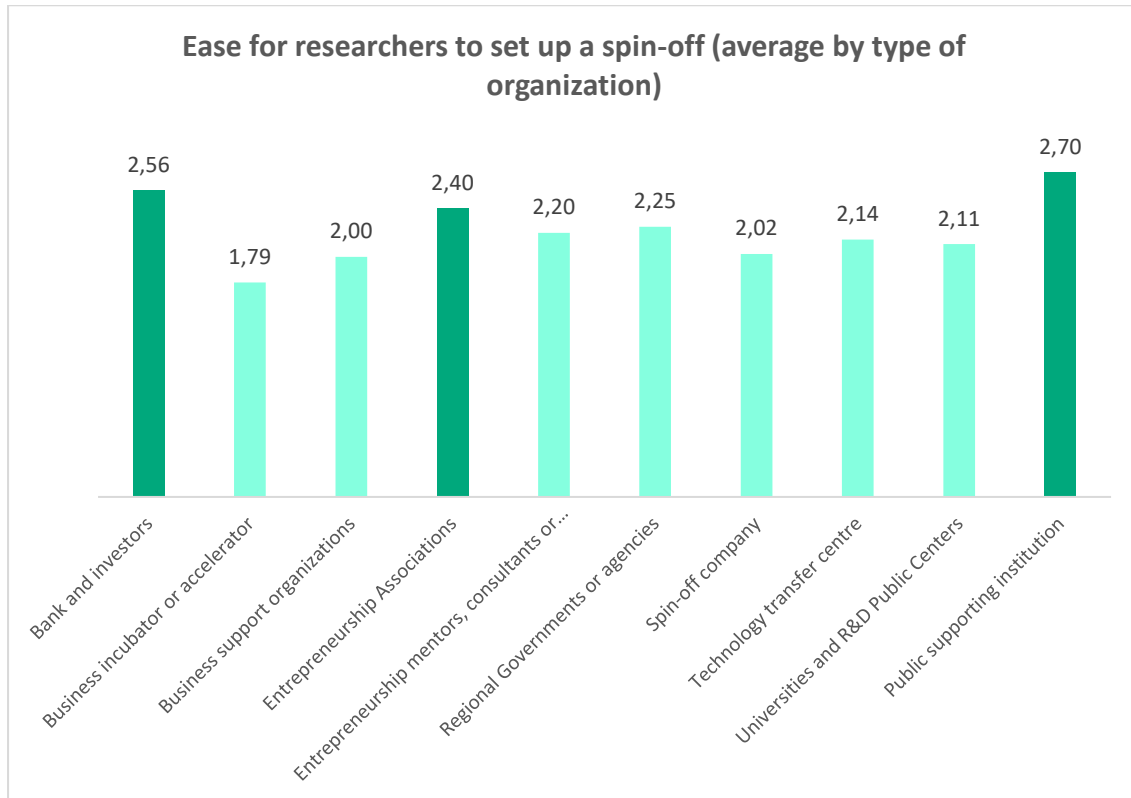


Figure 24. Average by type of organization.

Significant differences also emerge among different regions, as illustrated in Figure 25. While most regions have an average score around 2.00, it is important to highlight Lithuania and, to some extent, Veneto Region in Italy. In these regions, it appears that setting up spin-offs might be relatively easier

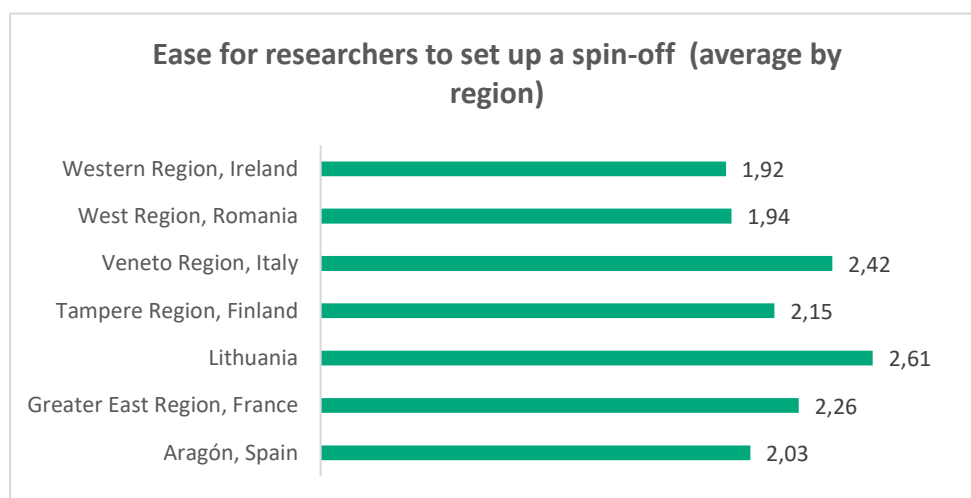


Figure 25. Average by region.

from an administrative standpoint. There is still work to be done as it is considered somewhat difficult, but at least in these regions, the administrative processes might pose less of a limitation compared to others. Nevertheless, all regions should focus on streamlining processes to facilitate the creation of spin-offs. Establishing a spin-off already comes with numerous challenges, and administrative barriers should not be an additional deterrent for researchers aspiring to become entrepreneurs.

- **How could the regulatory and legal framework for the creation of spin-offs be facilitated?**

This is an open question to which 189 survey participants have responded. There is a widespread sentiment that the regulatory process for creating spin-offs is overly complex and challenging to understand as indicated by the majority of respondents.

There is too much bureaucracy for setting up these types of companies and the processes can get complicated and take too much time. The governmental agencies should work to establish clearer and simpler processes and disseminate them among the research communities.

Several key points were highlighted by the respondents for simplification:

- **Streamlining Administrative Processes:** Participants emphasized the need for a simpler and quicker administrative process, reducing friction for researchers seeking to establish spin-off companies.
- **Simplifying Intellectual Property (IP) Transfer:** The transfer of intellectual property from research institutions to new ventures was identified as an area that requires simplification. This is a very important step for spin-offs as the know-how and transferred IP is the core of the business. This process usually involves the valorisation of the assets, ownership structure, etc.
- **Flexibility for Researchers:** Participants suggested that researchers should have more freedom to allocate time to work on the spin-off while maintaining their research careers. The legal framework should allow researchers to have this balance.

Some respondents proposed the introduction of a specific Spin-off Law tailored to the unique characteristics of these ventures. Spin-off companies often involve complex factors such as intellectual property ownership, the involvement of multiple stakeholders, or the fact that the venture launchers usually have a commitment as researchers and need mechanisms to combine both careers. A specific law that takes into account all these unique aspects would help to foster the creation of spin-offs.

Notably, respondents from the Greater East Region in France highlighted the valuable support provided by their SATT system, an alliance of technology-transfer offices centralizing technology-transfer operations across multiple institutions. They also underscored the importance of support from incubation programs, emphasizing the role of specialized experts in guiding researchers through the spin-off creation process. This is something that all regions should try to implement; having a support system with professionals specialised in setting-up spin-offs would facilitate the amount of work required to create these companies.

Conclusions and interregional comparative for this section

The survey reveals a significant lack of dissemination about the legal framework regulating spin-off creation, with over half of the respondents indicating that they are not familiar with it. Moreover, the perceived complexity and restrictiveness of this legislation emerged as a notable barrier for researchers interested in launching their ventures.

A particularly concerning finding is that business incubators and accelerators, which play a crucial role in supporting entrepreneurs in the early stages, demonstrated the lowest knowledge about the regulatory framework. This knowledge gap could hinder their ability to provide comprehensive support to entrepreneurs, emphasizing the importance of addressing this issue within support organizations.

Participants overwhelmingly suggested that the regulatory and legal framework for spin-off creation needs simplification, with a streamlined administrative process. The unique nature of spin-offs calls for a tailored legislation that can address the specific challenges and risks associated with these ventures.

The role of support organizations seems to be important as well, and the case of France in which centralised technology-transfer offices provide regulatory and administrative support seems to be appreciated by the survey participants. In the rest of the regions similar structures may exist, but maybe, by joining forces and creating specific spin-offs units this support could be of better quality as dedicated experts would be available.

3.1.5 Funding and financing mechanisms

- **Are you aware of the existing funding support mechanisms for spin-offs in your region?**

In this question, participants had to rank their awareness of funding support mechanisms for spin-offs from 1 (Definitely not) to 4 (Yes, absolutely). The average score for awareness among participants in the survey is 2.61, indicating a general level of awareness of these mechanisms.

In this question, there are no significant differences among the positions or types of organizations that participants work for. However, when comparing the results from different regions, as shown in Figure 26, variations can be found. The majority of participants from the West Region in Romania, with an average score of 2.20, and to some extent Veneto Region in Italy, with an average of 2.42, state that they are not aware of funding support mechanisms for spin-offs. It is crucial that these regions take actions to increase awareness among relevant stakeholders. Funding has been highlighted in the survey as one of the most significant challenges for researchers. Stakeholders in the spin-off ecosystem must possess knowledge of all the funding mechanisms available for spin-offs in their regions to ensure that these mechanisms are optimally utilized, and help in the creation and growth of spin-offs.

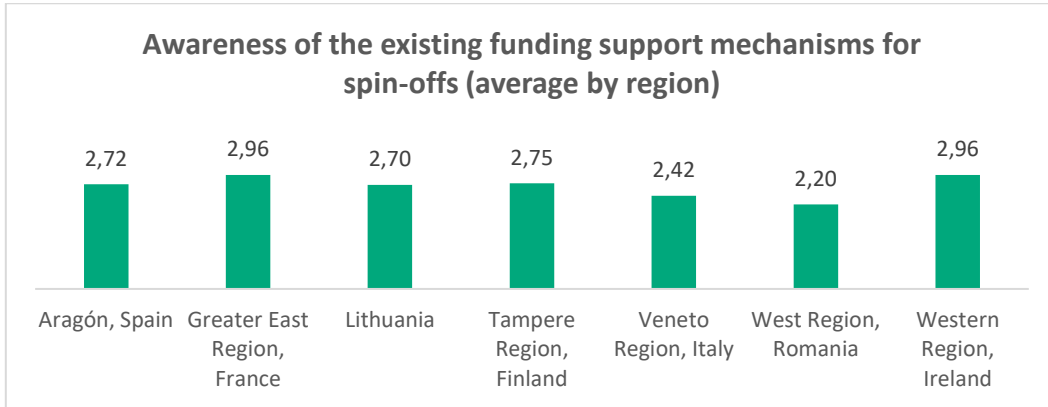


Figure 26. Average by region.

- **In your experience, do you think that public researchers know where to go to obtain this funding?**

In this question, participants had three options to choose from (Yes, No, Not applicable to me). Out of the 277 participants, 153 (55%) believe that researchers do not know where to obtain funding, as seen in Figure 27. This illustrates a problem regarding the diffusion and communication of these types of funding mechanisms. The issue may not necessarily lie in the lack of funding mechanisms but in how these opportunities are communicated to researchers.

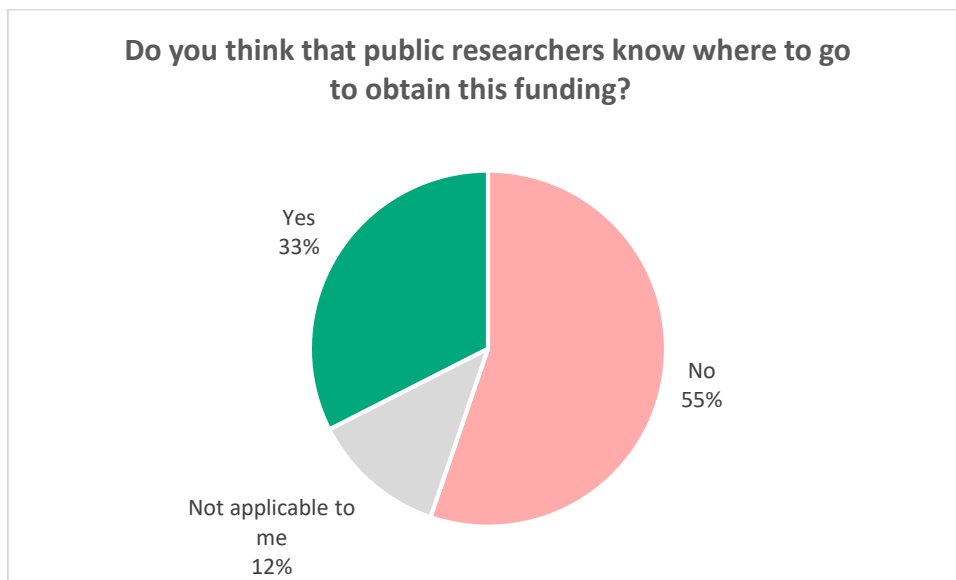


Figure 27. Percentage of replies by option.

As illustrated in Figure 28, most researchers, professors, and entrepreneurs believe that researchers do not know where to obtain funding for setting up businesses. These individuals are key stakeholders who should have knowledge in this area, as there are specific funding mechanisms created for the creation and growth of spin-offs. If researchers and entrepreneurs who have already started their

ventures are not aware of where to find funding, they are likely to miss opportunities, and their motivation to embark on entrepreneurial endeavours may diminish.

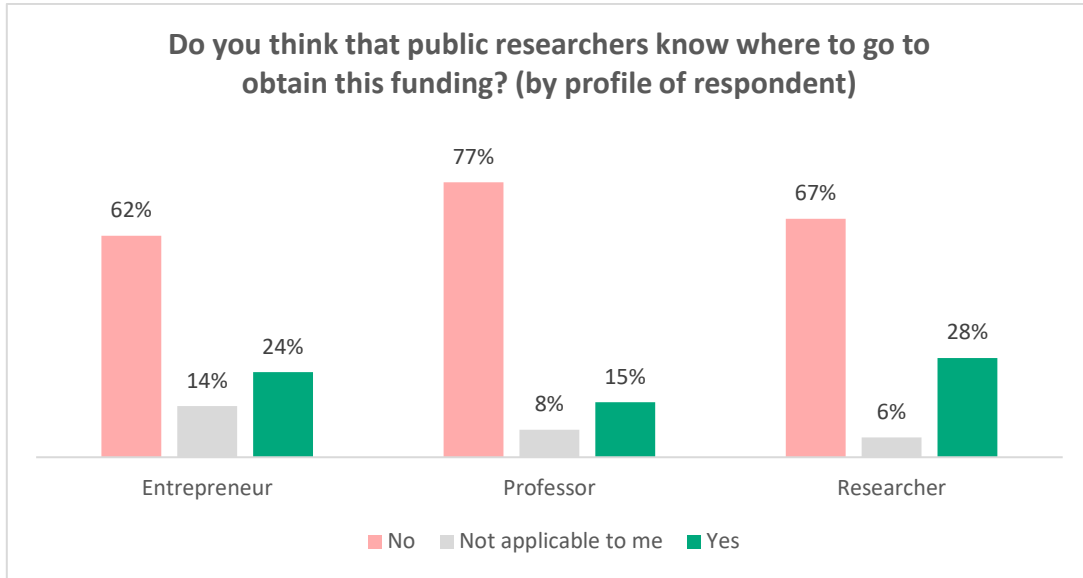


Figure 28. Percentage of replies by option and profile of respondent, including only Entrepreneur, Researcher and Professor.

Comparing responses from participants across different regions reveals significant differences that should be highlighted. As shown in Figure 29, the West Region in Romania and Tampere Region in Finland are the most pessimistic on this topic, with 67% and 65% of the respondents replying "No", respectively. In contrast, Veneto Region in Italy and Lithuania have a higher number of positive replies, with 45% of participants from both regions stating that researchers know where to obtain funding. It is important to note that this question addresses the perception that respondents have, and better perceptions might not necessarily mean more knowledge. Nevertheless, this indicates that there may be more effective diffusion campaigns or initiatives to increase awareness in certain regions. Regions with less favourable perceptions should consider learning from others' strategies and implementing measures to address this issue.

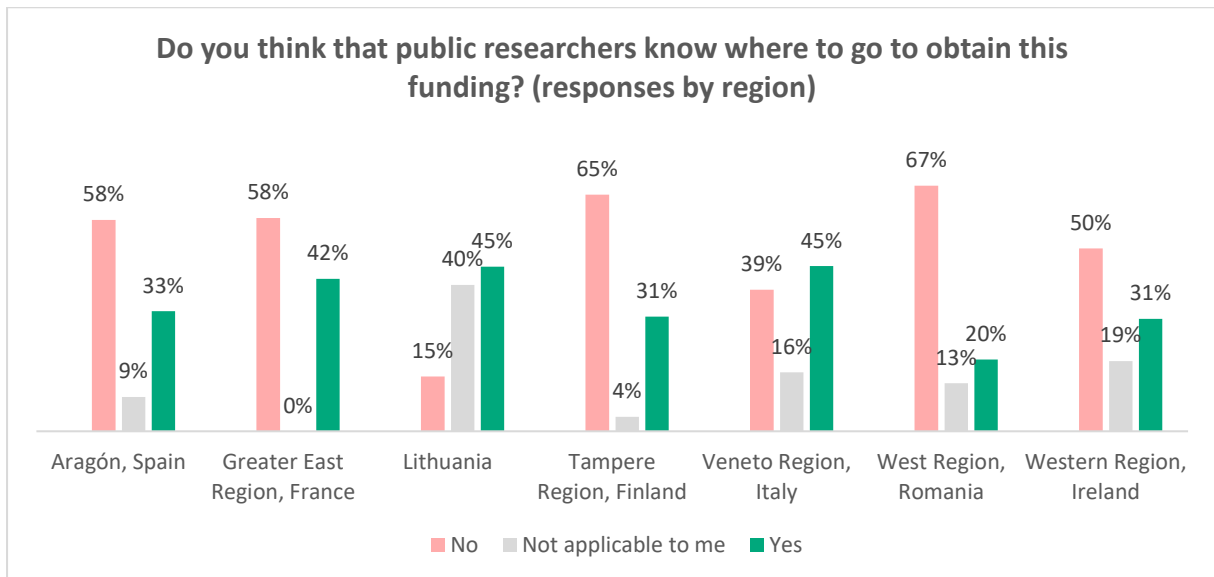


Figure 29. Percentage of replies by option and region.

- **How would you improve the existing financial support for the creation of spin-offs (new methods of support, more funding, better conditions, facilitating the process...)?**

Out of the 277 survey participants, 193 have replied to this open-ended question. Regardless of the region the participant is from, the suggestions go in the same line. First, it is important to highlight that most of the participants state that the problem is not the amount of funding, as there are enough funding mechanisms. The main challenges relate to the complexity of the funding ecosystem, the need for more flexible public funding mechanisms, encouragement of diverse funding sources, and the promotion of private investments.

- **Complex ecosystem:** there is recognition that while there is a variety of funding available, navigating and identifying the most suitable options can be challenging. Participants suggest the creation of guidelines and specific support to help entrepreneurs understand and select the most appropriate funding opportunities for their specific cases.
- **Flexible and Simplified Public Funding:** participants express concerns about the rigidity of some public funding mechanisms, which may not align with the iterative nature of entrepreneurial endeavours. In many cases, entrepreneurs have to iterate and make changes in the plans they had. Public funding usually is tied to specific activities, and it could be hard for entrepreneurs to change the budgets or how resources were allocated. This can drive to a misuse of funding. Also, and despite there must be transparency and accountability, sometimes the high administrative burden is a barrier for entrepreneurs to use these funds.

- **Encouraging Variety of Funding:** there is a need for more education on different funding mechanisms beyond public funding. Researchers often rely heavily on public funds and may overlook alternative sources such as grants, loans, equity investment, and corporate sponsorship. There should be more education on presenting the different funding mechanisms and the advantages and disadvantages they can provide.
- **Encouraging private investments:** participants emphasize the lack of private investment in early-stage ventures, particularly in spin-offs, which are capital-intensive and high-risk. Governments are encouraged to incentivize private investments through fiscal policies and taxation measures to attract more private capital into these ventures.
- **Sector and market-oriented funds:** The importance of designing market-oriented funds and funds that adapt to the specific sectors have been also highlighted. For instance, entrepreneurs in the healthcare sector, developing a new drug for example, require much more capital than others developing an algorithm for improving logistics. There should be mechanisms in place that allow to understand the needs of each type of projects and allocate resources accordingly.

Overall, the suggestions emphasize the need for a more accessible and adaptable funding landscape that supports the diverse needs of spin-off ventures. Additionally, there is a consensus on the importance of educating entrepreneurs about the various funding options available to them.

Conclusions and interregional comparative for this section

Despite there is a general awareness on the existing funding support mechanisms for spin-offs, a high percentage of the respondents, especially researchers themselves, indicate that public researchers do not know where to obtain this funding. This is concerning as it is essential for the first steps of spin-offs and indicates a need for increased dissemination of information within this group.

Regarding the knowledge researchers have in terms on where to obtain funding, there are significant differences among regions. The percentage of participants from Lithuania, and to some extent Veneto Region, from Italy, affirming that researchers know where to obtain this funding is significantly higher than in other regions, which could indicate that in this region the dissemination campaigns are more effective. This should be further assessed in order to know if this is the reason or there is a misperception among the survey participants.

To address these challenges and enhance financial support for spin-offs, the respondents offered valuable suggestions. As explained, the amount of funding is not the problem, but the funding ecosystem is too complex. There should be mechanisms in place that help researchers on identifying the right mechanisms for their projects. Also, encouraging private investors to enter this type of ventures has been advised, which would help researchers to use different mechanisms, not only public funding. Funding instruments should be designed considering the specific situation of spin-offs and the industry they are working on. Also, the funding should have market-oriented goals and should allow certain flexibility, while keeping accountability, in order to ensure it is used for covering the real needs of fast-iterating projects such as spin-offs.

3.1.6 Business creation and consolidation

- **What kind of support do you consider essential for setting up a spin-off business?**

In this question, participants were required to select four options from a specific list of items, as depicted in Figure 30, along with the number of responses for each option (excluding blank replies). There are no significant differences among respondents from different regions.

While funding opportunities are deemed highly important, they constitute only a part of the puzzle. As revealed in the analysis of other questions, the issue appears to be more related to access rather than availability.

It is also noteworthy that respondents assign high importance to assistance in areas beyond the core business of the spin-offs, such as legal and fiscal matters, and to some extent, financial aspects. These issues can be relatively easily resolved, as companies typically have the option to outsource these activities to professionals specialized in providing such services.

Furthermore, the emphasis on incubation, consultancy, and training, which accounts for 63% of the responses, underscores the need for robust entrepreneurial ecosystems and support networks. Researchers benefit significantly from external partners and institutions that can offer guidance throughout the spin-off creation and development journey. Establishing such hubs and ecosystems is crucial for cultivating a more favourable environment for researchers seeking to launch their own companies.

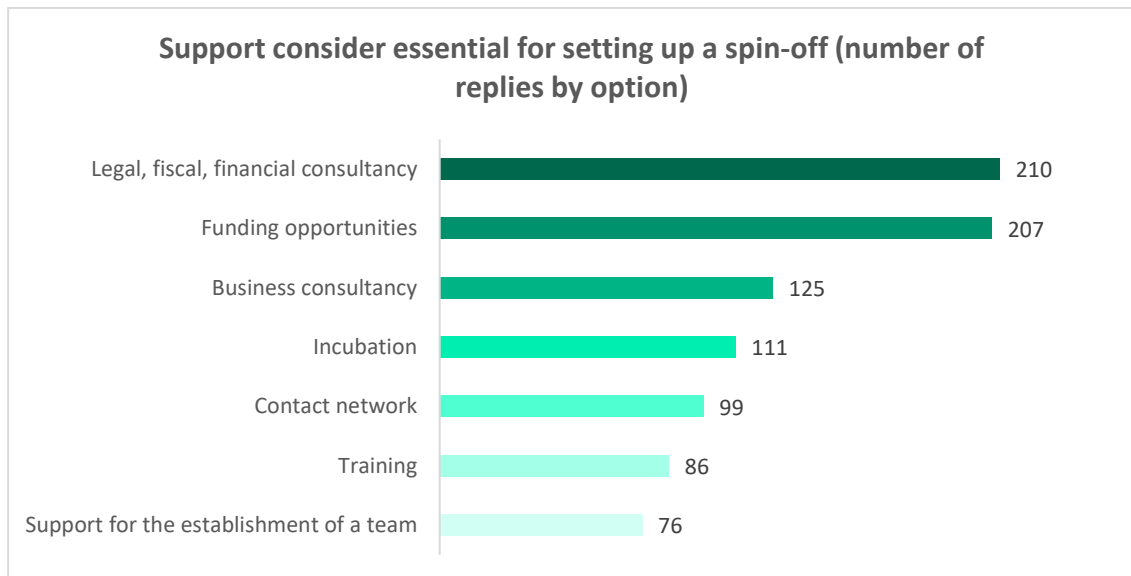


Figure 30. Number of replies by option.

- **At what stages in the consolidation of a spin-off are there specific support programmes / initiatives in your region?**

In this question the participants could chose as many options as they wish from a pre-set list of items. The stages, presented in the survey, in a consolidation of a spin-off in sequential order are (Figure 31):



Figure 31. Stages of the consolidation of a spin-off.

Respondents state that most of the support programmes are designed to help spin-off in the incubation stage, as illustrated in Figure 32. This is the stage in which spin-off face higher risks, when they are defining their value proposition and business model as well as finding the product-market fit. These are important challenges for unexperienced entrepreneurs and usually when they need more support, therefore it is not surprising that most of the support programmes target this stage.

It is also interesting to see that there are way less initiatives targeting venture building stages. In other sections of the survey the challenges researchers face for creating a spin-off have been emphasized. This is the venture building stage, in which they need support in the finding the right team members and navigate the legal and administrative complexity of creating a business. The lack of support in this early stage may represent a bottleneck and might discourage researchers willing to start a business to do so.

During the scale-up and internationalisation stages, in general companies have already validated the business model and should focus on growth and generating revenues. These two phases can be parallel and here companies require less support than the earlier stages. This is aligned with the results of the survey.

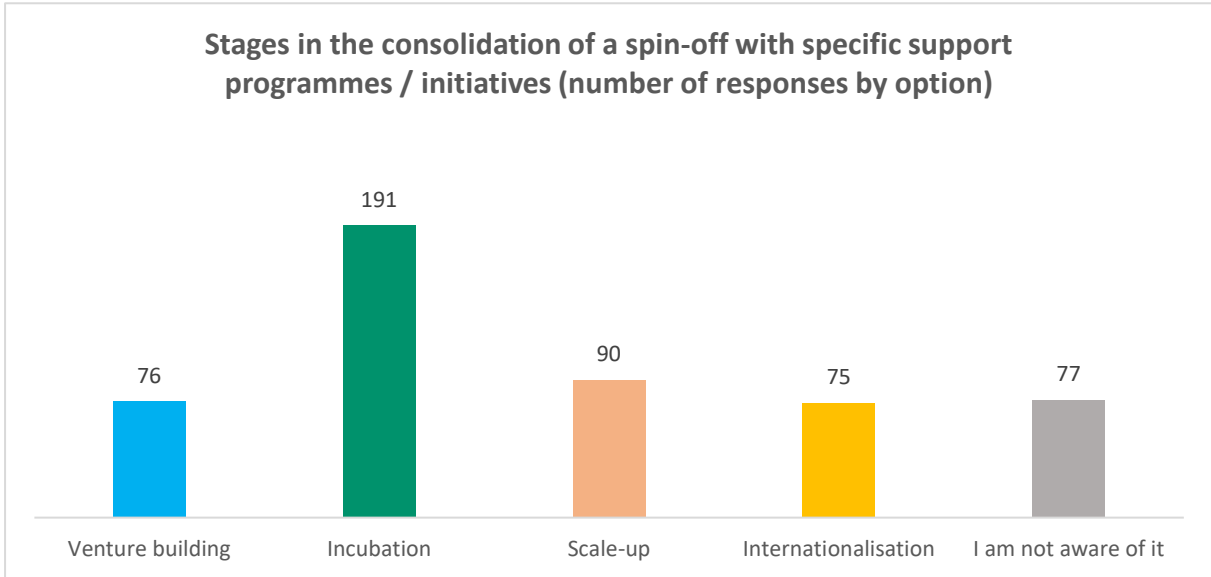


Figure 32. Number of replies by option.

As illustrated in Figure 33, the replies among the regions are rather similar. Incubation stands out as the stage where spin-offs receive the most support, regardless of the region. There are some minor differences worth highlighting. For example, the Greater East region in France demonstrates the highest level of support for venture building. It would be interesting to evaluate the effectiveness of these initiatives, especially to determine whether increased support during these stages correlates with a higher number of spin-offs created.

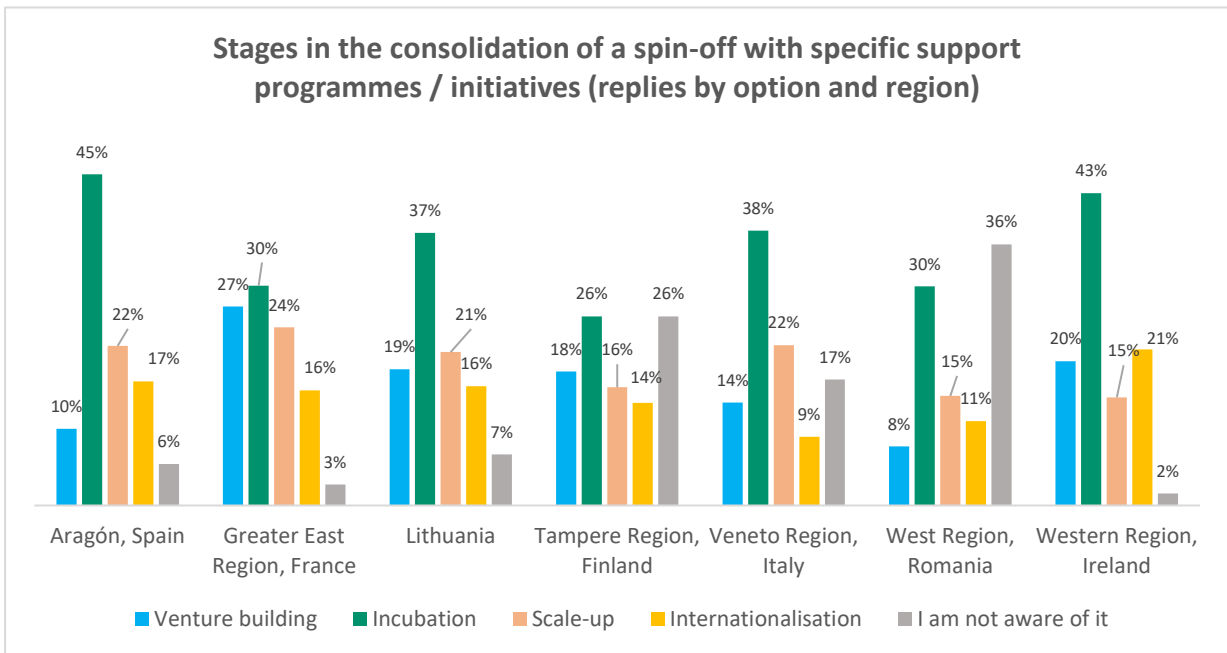


Figure 33. Percentage of replies by option and region.

Additionally, it is concerning to note that a significant percentage of respondents in the West Region of Romania and the Tampere Region in Finland indicated, "I am not aware of it." This might indicate a lack of diffusion of these programs among relevant stakeholders in these regions.

- **What do you miss in your regional policy to consolidate and/or scale spin-off businesses?**

Out of the 277 participants, 178 responded to this question. Despite its specific focus on regional policies, most of the measures proposed are rather general. There is a unanimous consensus that there is a need for specialized incubators and support programs tailored specifically to research-based ventures. This aligns with other suggested measures in different questions and stems from the absence of support programs designed to address the unique challenges faced by spin-offs.

The importance of creating an environment that facilitates connections between researchers and relevant stakeholders, such as early-stage investors, has also been emphasized. There is a call for events specifically dedicated to promoting research results for more proactive commercialization. These events should serve as a nexus for researchers, private companies, and investors interested in investing in high-tech early-stage ventures. Alongside this, policies encouraging investors to invest in these types of companies and fostering collaborations between established private companies and recently created spin-offs would contribute to establishing a more favourable ecosystem for spin-offs.

Other measures are related to the incentives for researchers, a topic explored in other questions as well. One of the primary barriers to spin-off creation is the lack of incentives for researchers to pursue this path, and policies should address this issue. Recognizing that regions may have limited authority in this regard, as it is often regulated at the national level, regions can still play an active role in advocating for changes at the national level and designing incentives within their control to promote research-based entrepreneurship in their regions.

Conclusions and interregional comparative for this section

There is a consensus on the type of support required by spin-offs, emphasizing a holistic approach that provides guidance across various areas such as business, legal, and financial aspects. This comprehensive support is deemed essential for fostering the creation of spin-offs.

Regarding support programs, there is a unanimous focus on the Incubation stage across all regions. This emphasis is crucial, given that the incubation stage is where entrepreneurs face the majority of risks. However, it appears that, with the exception of the Greater East region in France, there is a deficiency in support during the venture building stage in all other regions. This gap in support during this critical stage may be impeding the creation of spin-offs in different regions.

Participants have underscored the importance of tailored support programs for the unique situation of spin-offs. Creating an ecosystem where researchers aspiring to become entrepreneurs can interact and access investors and private companies for collaboration is deemed vital. Additionally, the implementation of incentives for researchers to initiate their ventures and for private companies and

investors to collaborate and invest in these types of companies is highlighted. The challenge lies in the often-limited regional authority to implement such incentives, as they are typically regulated at the national level.

3.1.7 Smart Specialisation Strategy (S3)

- **Do you think that a higher percentage of the spin-offs created in your region are framed within the priority/specialisation areas defined by the region, or on the contrary, do you think that there are no significant differences?**

This open-ended question received responses from only 137 participants. Among them, 46 participants indicated that they are either not aware of the Smart Specialization Strategy (S3) for their region or lack sufficient knowledge about the spin-off ecosystem to determine alignment. Assuming the same lack of awareness among those who did not reply, it appears that 66% of all participants lack information on either the S3 or the spin-off ecosystem, or both.

Among the 91 participants who had sufficient information to respond, 66% asserted that a higher percentage of spin-offs in their region are aligned with the S3, while 44% believe there is no alignment.

Figure 34 illustrates the percentage of responses per region from participants who affirm they have enough information to reply regarding alignment of spin-offs with the S3. Notably, all respondents from the Veneto Region in Italy and nearly all from Lithuania indicate alignment. In contrast, in the West Region of Romania, only 34% of the respondents believe there is alignment.

Many of the respondents who indicated alignment explained that there are more resources available for initiatives aligned with the S3 strategy, which serves as an incentive for starting ventures in these areas. For example, many respondents from the Western Region in Ireland affirm alignment, particularly in Life Sciences and MedTech, which are key areas of the Smart Specialization Strategy for the region.

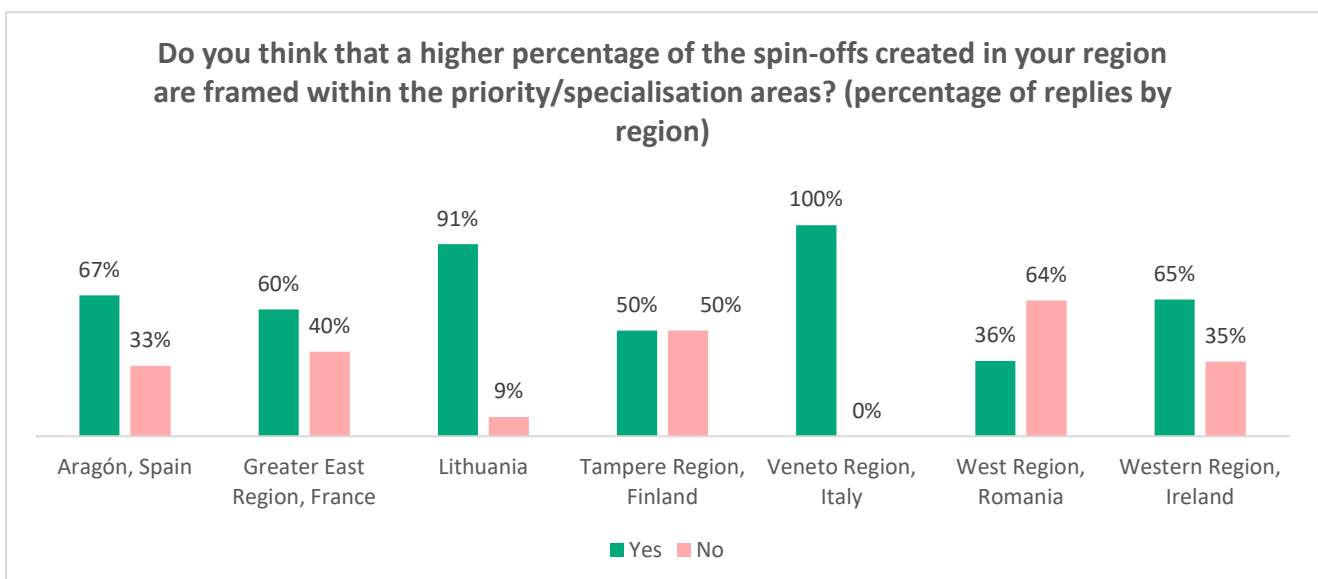


Figure 34. Percentage of replies by region (only those who have responded if there is alignment or not).

Conclusions and interregional comparative for this section

The majority of respondents either lack awareness of their region's Smart Specialization Strategy (S3) or are unfamiliar with the spin-off ecosystem in their region. This is a concerning finding, given that the survey targets relevant stakeholders in the spin-off ecosystem who should ideally be well-informed about these aspects. Despite this lack of awareness, it appears that, in general, the S3 strategies are effective in promoting specific areas of specialization, as many respondents who perceive alignment attribute it to the availability of more resources for starting ventures in these areas. Also, S3 strategies should be tailored to align with the strengths of each region from academic, industrial, and social perspectives. Consequently, it is expected that most initiatives would be framed within these domains.

Upon analysing different regions, it is noteworthy that there is a high percentage of participants, who have provided responses, from the Veneto Region in Italy and Lithuania, agreeing that the majority of spin-offs in their region align with the S3. This could be attributed to the presence of policies and initiatives accompanying the S3 strategy aimed at fostering innovation in these areas. However, it is important to note that even in regions with high alignment, such as Veneto, some responses suggest that the S3 should be revised to better align with market needs.

4 Conclusions and final remarks

4.1 General conclusions

The analysis of all the information reveals significant differences among the regions as well as common challenges and opportunities. In this section, common facts are presented in form of Strengths, Weaknesses, Opportunities, and Threats. In the next section the particularities of each region are highlighted.

Strengths:

- Research results valorisation is prioritized at various research institutions, supported by specific methodologies, and dedicated personnel.
- Adequate funding is available for spin-offs, particularly during the incubation stage.
- The specific legislation governing spin-off creation is well-understood by relevant stakeholders.
- There is a proactive attitude among stakeholders to enhance and refine the support provided to spin-offs.

Weaknesses:

- A notable deficiency exists in the entrepreneurial culture, which may hinder the effectiveness of other measures implemented for improving valorisation through spin-off creation.

- Researchers often lack business knowledge in areas such as intellectual property, finance, legal matters, and strategy.
- The funding ecosystem is complex and challenging to navigate.
- Support for spin-off consolidation and scale-up stages is limited, as well as for venture-building.
- Difficulty arises in forming multidisciplinary founding teams due to a shortage of suitable team members.
- Collaboration between academia, industry, and investors is lacking, alongside a dearth of entrepreneurial spirit among public researchers.

Opportunities:

- The S3 strategy can serve as a blueprint for promoting entrepreneurship among researchers.
- Establishing regional networks to facilitate connections between researchers and experienced entrepreneurs, peers, and industry experts
- Improving communication channels and implementing awareness programs to bridge knowledge gaps.
- Introducing more flexible working contracts and university shareholding options.

Threats:

- Insufficient incentives for researchers may hinder the effectiveness of measures aimed at promoting entrepreneurship within this group.
- Regions may have limited authority to implement measures with lasting impacts.
- Researchers leaving sustainable scientific work in public laboratories for risky spin-offs.
- Challenges related to financing and financing mechanisms pose significant threats.
- Inadequate support and cooperation mechanisms for business creation and consolidation exacerbate the risk.

4.2 Comparative summary

This study reveals that each region has unique characteristics, enabling the identification of areas for improvement, strengths, and examples that could be emulated by others. While certain regions may serve as exemplary models, there are also structural issues that require attention at the national or even European level. Regional stakeholders should endeavour to learn from each other's strengths and recognize their weaknesses. Below, specific characteristics of each region are outlined.

- **Lithuania:** this region stands out as the only region where there is a slightly positive view on the entrepreneurial culture among researchers. This, coupled with Lithuania's seemingly flexible and friendly legislation for establishing spin-offs aligned with the S3 strategy, may suggest a high-level strategy for promoting entrepreneurship in this region. Additionally, Lithuania excels in researcher's knowledge regarding funding opportunities for their ventures, which aligns with the region's entrepreneurship promotion strategy. It is advisable for representatives from this region to share how they are implementing their entrepreneurship strategy and coordinating efforts and specific measures.

- **Aragón (Spain):** there has been a significant number of replies from this region highlighting the importance of introducing incentives for researchers to encourage them to become entrepreneurs, as well as claiming for a more flexible legislation that allows researchers to balance their entrepreneurial and research career. Participants from other regions have also elaborated on these topics, but a great minority if compared to Aragón. It would be interesting for representatives from this region to assess the legal framework for spin-offs in the rest of the regions in order to capture ideas that can be brought to the governmental level in order to make changes that foster entrepreneurship among researchers.
- **Western Region (Ireland):** it seems that the region has a specific strategy for fostering life-sciences and MedTech initiatives. There has been a broad consensus among the participants from the region replying to the last question (Smart Specialisation Strategy (S3)) affirming that this is the most relevant sector and that this aligns with the S3 strategy. This region could be a good example on how to align the design and implementation of the measures and initiatives towards strategic regional goals.
- **Tampere (Finland):** when reviewing the replies from the participants of this region along the whole survey, it can be noted that in this region there are significant more suggestions related to enhancing the connection between researchers and private companies. It seems that the permeability from academy to industry is believed as more relevant in this region. The lack of connection of researchers with the real world has been highlighted, therefore, it would be interesting to investigate how these relations are created and managed in this region.
- **Veneto Region (Italy):** representatives from this region exhibit the most positive view on the ease of creating multidisciplinary teams for launching spin-offs. This challenge is shared among all regions, but studying the particularities of the Veneto Region in this regard could provide valuable insights. Their model could serve as a pioneering step towards implementing effective measures to improve this aspect.
- **West Region (Romania):** it appears that formal valorisation procedures are lacking in this region, with a significant number of researchers uncertain about whom to approach when identifying research results with market potential. This region stands to benefit greatly from studying different models implemented by other regions. The diversity of solutions presents an opportunity to assess and create a model tailored to the region's specific needs.
- **Greater East Region (France):** this region appears to be the sole one with robust support for venture building, a critical factor in assisting researchers in forming teams and navigating bureaucratic and administrative procedures necessary for establishing such businesses. Additionally, this region has a distinct approach to organizing technology-transfer and valorisation activities, differing from the rest. According to responses from representatives of this region, these activities are integrated into a regional organization responsible for

valorising research results from various institutions. This model may present both strengths and weaknesses, and there may be some elements that can be adapted for other regions.

As a final remark, it is crucial to acknowledge the commitment of representatives from all regions in implementing measures to overcome the various challenges encountered in the spin-off creation space. Despite the ongoing work needed in this domain, it is important to recognize that all regions are actively striving to improve valorisation processes and enhance support structures for spin-off creation.

Being open to learn from each other and sharing best practices is key to accelerating progress and ensuring that the implemented measures are more efficient and effective. Collaboration and knowledge exchange among regions will not only strengthen the spin-off ecosystem but also contribute to overall innovation and economic development across Europe. Together, with continued dedication and collaboration, we can create a more vibrant and supportive environment for spin-off creation and consolidation.