

WP3: Capitalization

Action 4: Capitalization of private sector for the Blue Economy stakeholders

Output results: 1 Case study of the establishment of a Business Angel Network for the marine economy, through the cooperation and relation with the identified BAs in the AA regions.

EMPORIA4KT

Empower academia for knowledge transfer for value creation in the Atlantic Area

Deliverable 3.4: Capitalization of private sector Blue economy stakeholders

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1 Summary

Objective

This action will identify potential Business Angel (BA) associations in the AA regions as a key set of stakeholders in the process of technology transfer. A pilot exercise will be led by STRANE, together with AOB and TQC, in France aiming at cooperation. The results of this process will be captured as a case study to assist the creation of similar networks in the future. This exercise will include the establishment of linkages with other BA associations existing in other regions.

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Deliverables

Outputs title

Atlantic Business Angel network for Blue Economy

Outputs results

1 Case study of the establishment of a Business Angel Network for the marine economy, through the cooperation and relation with the identified BAs in the AA regions.

Indicators

- Number of enterprises participating in cross-border, transnational or interregional research projects: 10 (currently 14)
- Number of case studies and pilot actions implemented: 1 (2 BA networks interviewed)

Expected results title

Foster interregional and transnational synergies between private investors for Blue Economy

Expected results description

Enable cross border, transnational and interregional share of experience in investment approaches in Blue economy, including a case study on establishment of Business Angel Network

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1. Introduction

The rationality behind the existence of this intermediation (linking entrepreneurs and BA) is essentially the result of a twofold phenomenon: the BA's taste for secrecy and their recurrent complaint of not being able to easily identify promising projects. Indeed, while some BAs are very proactive in their search for projects, most of them only invest following fortuitous contacts and solicitations. As a result, for young entrepreneurs seeking funds, the BAs are not easy to identify. Finding them often requires access to personal networks, which is not always possible. Moreover, the BAs generally complain about the difficulty of identifying good projects that correspond to their investment criteria (sector, amounts, location, quality of management, etc.). This difficulty is accentuated by the fact that the BAs are not always actively looking for projects. BAs would invest more if they were confronted with more good projects. This suggests that the market for BA funding is a notable example of an imperfect market where information about the supply and demand for funding is very poorly circulated. As awareness of the potential importance of the BA to stimulate economic development has grown, this difficulty in matching supply and demand for financing more effectively has emerged as a strategic barrier to overcome. To meet this need resulting from the inefficiency of the informal capital market, networks of Business Angels (BANs) were gradually organized. Their main mission is to facilitate the meeting of supply and demand for financing for start-up projects and/or very young companies.

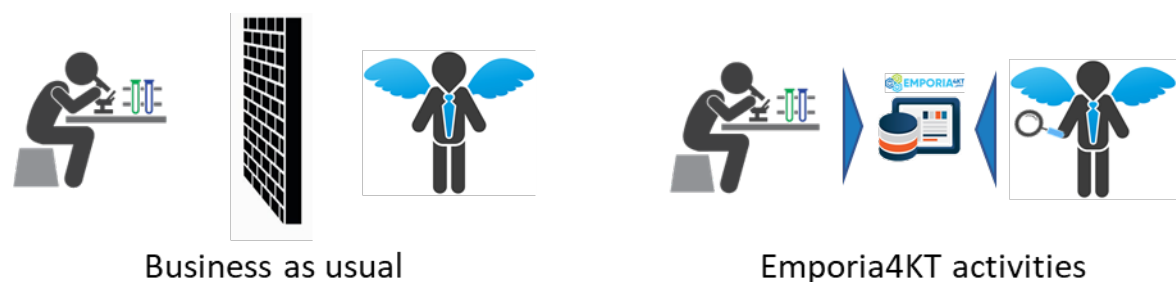


Figure 1 - How to get access to BA funding (Source: Strane)

It should be noted that, regardless of the private or public nature of the network, virtually all networks use private sponsorship as well as membership fees, as long as the country's legislation allows it. Generally, public BANs only offer an introductory service or contact through computerized introductions or via publications or investment forums.

Commercial or non-commercial character: The commercial or non-commercial orientation of a network has several implications for the strategic choices of the BAN, including its attitude to risk and target sectors. This criterion leads to two main classes of BANs: the first - the majority - is made up of not-for-profit and generally public BANs, and the second is made up of commercial BANs. Generally, the latter are also private and offer various paid services beyond simple contact.

Analysis of the conditions of success of a BA network: the point of view of the BAs Insofar as the development of a BA network depends in particular on its capacity to convince the BAs of the interest of the services it offers, it seems to us essential to take their opinions into account. In this respect, our research has highlighted different criteria influencing a BA's investment decision or its decision to join an existing network. The most relevant ones concern:

- (i) The "feeling" towards the project team: the quality of the contact and the chemistry between the project leader(s) and the BA are essential qualitative elements in the decision to invest or not in a project.
- (ii) Early information: the BAs attach great importance to this and are reluctant to analyse "second-hand" projects, suspected of not having been able to find financing in other frameworks.
- (iii) Efficiency: Often very busy and accustomed to professional and efficient behaviour, the BA is keen on concise and accurate information on investment opportunities.
- (iv) Screening and selectivity: BA's want the projects presented to them to have been analysed, qualified, endorsed and meet their investment criteria.
- (v) Credibility: The quality of the projects submitted by a network will be crucial to its credibility.
- (vi) Confidentiality: The BAs are overly concerned about maintaining control over their anonymity.
- (vii) Mistrust of public operators: for the reasons mentioned above, the BA are generally reluctant to collaborate with networks managed by public operators.

Difficulty in making "BA network" type activities profitable: All analyses of the operation of BANs have highlighted the difficulty of making their activities profitable, at least in the first years of their existence.

The nature of the activities: The main areas of activity of the networks are: (1) the detection of BAs and project leaders, (2) bringing protagonists into contact, and (3) the provision of support services. In these areas, the range of activities, and therefore the added value that the network aims to provide, varies greatly. In the public/private sector, it appears that the more value networks add, the more they can monetize their services to both investors and project leaders and thus approach a break-even point.

The balance to be struck between project holders and BA: A crucial question for BA networks is to determine who is the "main" client. Most of them claim to address both project owners and BAs. However, as the services that the network claims to provide to its clients increase, it becomes more difficult for the network to maintain its objectivity and, in doing so, to respond adequately to the needs and aspirations of both the BA and the project owner. Indeed, the more the network becomes involved in the task of finding funding for project sponsors, the more likely it is to become suspicious of the BAs that only want to consider "handpicked" projects. Conversely, the more selective it is in its choices managed on behalf of the BA, the more frustration it will generate among project sponsors. This paradox illustrates the need to strike a balance between the commitment made to achieve the respective objectives of the BAs and the project leaders: finding good projects and finding funding. It also illustrates the difficulty of maintaining this balance as services are expanded. In fact, it raises a problem of ethics and deontology of the network.

Generating a deal flow of quality projects. This requires acting on both the quantity and quality of projects, through specific actions on the BAN issue but also through the development of policies that promote an entrepreneurial culture.

Disseminate information on existing networks and initiatives. Networks should be helped to make themselves known to both improve their notoriety and reduce the time it takes to reach critical mass, to better inform project leaders of existing funding opportunities, and to foster competition between networks. Information efforts should also focus on project sources. Indeed, many BA interviewees deplored the fact that they were insufficiently informed about the activities

of universities and colleges in the field of research and technology transfer and the creation of spin-offs.

In order to have a better view on the capitalization of private sector Blue economy stakeholders, Strane Innovation (STRANE) and the Technopole de Quimper Cornouaille (TQC) have interviewed two French Business Angels (BA) Networks: Mer Angels and Finistère Angels. Those interviews will serve as a basis of the analysis on the case study of the establishment of a Business Angel Network for the marine economy, through the cooperation and relation with the identified BAs in the AA regions. Those interviews will be confronted in this report with the result of an online questionnaire sent to several European Early-Stage Technologies (E.S.T).

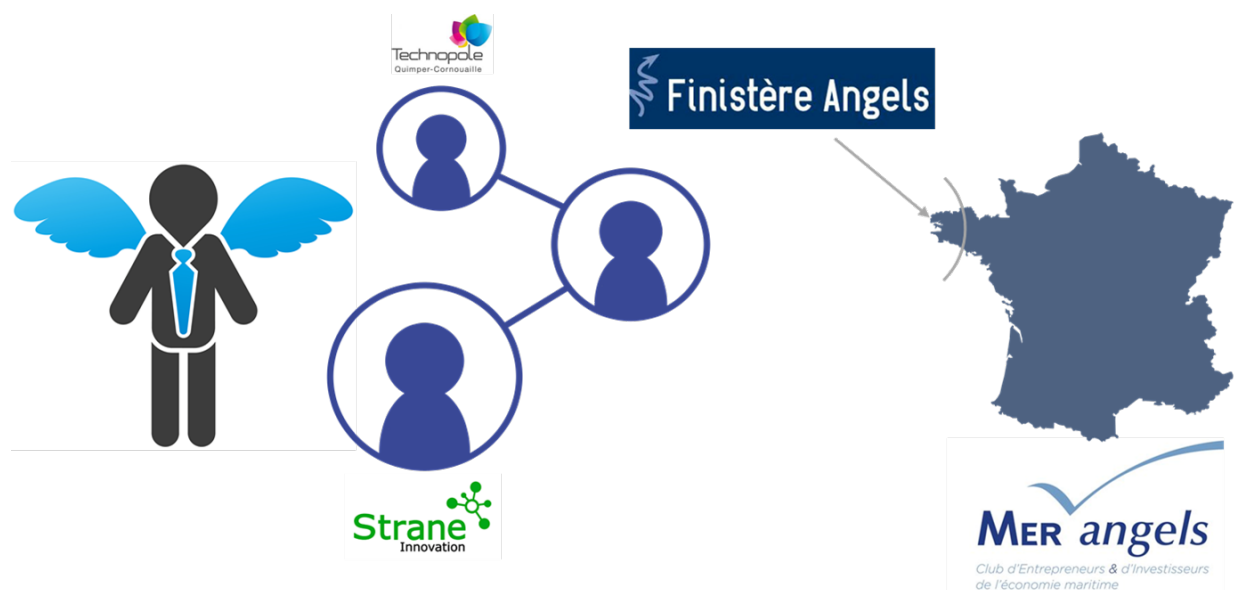


Figure 2 - Two Business Angels Networks interviewed (Source: Strane)

This deliverable is then structured in five sections: a quick description of the methodology used for interviews and survey (i), the analysis of the two French BAs interviewed (ii), the analysis of several European E.S.T companies that responded to the survey (iii), a synthesis of the cases studies cross-checking the French BAs interviews and results from the survey (iv), conclusions and recommendations (v).

2. Methodology

2.1 Timeline

The study started in February 2020 with the interviews of the French BAs. Surveys were sent and taken by a few selected (mostly French) E.S.T companies identified from September 2020. Gathering information and respondents was more difficult than expected, either because the survey in itself (length, confidentiality of information etc.); or because the COVID crisis had a strong impact on SME activities and as such, they had no time to spare for the survey. The following analysis was then extended to European companies having answered the survey, and not only French E.S.T respondents. Overall, the expected timeline was followed to produce this deliverable.

| <i>Dates</i> | <i>Tasks</i> |
|--------------------------|--|
| February – March 2020 | 2 BA interviews |
| September – October 2020 | Companies identification and selection |
| November – December 2020 | Companies questionnaire editing |
| January – February 2021 | Questionnaires analysis |
| February 2021 | Deliverable of WP3.4 |

Figure 3 - Timeline for D3.4 activities

2.2 Interviews with BA

Following solicitations starting February 2020, two semi-directed qualitative interviews were conducted with two French BAs networks: Mer Angels (<http://www.mer-angels.org/>) and Finistère Angels (<http://www.finistereangels.fr/>). The guidance survey (in French) is available in Appendix 1. Conducting interviews with networks allowed for an overview of the French BAs framework. Mer Angels is a maritime economy BAs network at the national scale, founded in 2017, and was interviewed with one of the BA of the network. Finistère Angels interview was conducted with the founder of the network (creation in 2007), it gathers BAs in the Finistère region (Atlantic coast in the west part of France).

2.3 Questionnaire

The survey was built to fit the needs of both WP3 and WP5. It will be further exploited in the attrition models and decision trees. The questions collect data covering the following topics: 1) Company overview, 2) Technology, 3) Maturity of marketing, 4) Regulatory policy environment, 5) Team profile and job creation, 4) Financing resources (equity, private and public funding), 5) Barriers to success, and 6) Sustainable development.

Companies were identified through informal networking and connection shared by both TQC and Strane Innovation. To gather more data on French E.S.T companies, the survey was translated in French. Mail and phone solicitations were the main resource to share the survey and gather respondents.

Difficulties to gather ten French E.S.T companies respondents emerged at the end of 2020, the length of the survey, questions on sensitive data and the impact of the COVID-19 crisis are possible causes of this issue. As such, the analysis has been opened to European E.S.T companies that has already answered the survey (in English) thanks to the work conducted by WP5.

3 BAs Networks

3.1 Identified BAs in AA regions

A first quick research allowed to identify a few relevant BANs in other AA regions and are detailed further down. Contribution from partners within the project has been asked to better understand the specificities of each regions, it has been complemented with an internet research. The list of BANs available in Figure 4 is non-exhaustive and aims to provide a quick overlook of existing BAN relevant in EMPORIA4KT context. The focus has been made on blue economy, green economy, and early-stage funding relevant compared to survey respondents.

The French context will be described in detail further down as it is used as the main source of information for case studies analysis. It should be noted that we could identify strong Business Angels networks especially in Portugal and United Kingdom. The identified BANs in Portugal have been selected mainly because they focus on blue economy. Most of them fund projects at a national scale with support from national institutions, especially the Ministry of Sea. In the UK, strong regional networks support local initiative and projects, especially in Scotland. Most of those funds target green economy or early-stage projects. However, from the data gathered, public institutions do not play the same role of intermediary and supporter than in Portugal. As such, the blue economy sector is underrepresented within all identified BANs (the complete list is available in appendix 2).

| Countries | Angel Network | Date of creation | location | Main sector of activities | Scale |
|----------------|---|------------------|----------------------|-------------------------------|--------------------|
| France | France Angels | 2001 | Paris | General | National |
| | Mer Angels | 2017 | Paris | Blue Economy | National |
| | Breizh Angels | 2014 | Brittany | General and Blue Economy | Regional |
| | Finistère Angels | 2008 | N/A | General and Blue Economy | Local |
| Portugal | Ocean Invest | N/A | N/A | Blue Economy | National |
| | Portugal Blue | 2020 | N/A | Blue Economy | National |
| | Portugal Ventures | 2012 | Porto | General and Blue Economy | National |
| | APBA (Associação Portuguesa de Business Angels) | 2006 | N/A | General | National |
| Spain | European Angels Fund (EAF) – Fondo Isabel La Católica (Spain) | 2013 | N/A | General | National, European |
| | AEBAN (Spanish Association of Business Angel Networks) | 2008 | N/A | General | National |
| Ireland | Sky Ocean Venture | 2018 | N/A | Blue and Green Economy | European |
| | European Angels Fund (EAF) – Ireland | 2015 | N/A | General | National, European |
| United Kingdom | Ocean14 Capital | N/A | London | Blue Economy | N/A |
| | Investors | 2004 | London | General and E.S.T Investments | N/A |
| | Equity Gap | 2010 | Edinburgh (Scotland) | General and E.S.T Investments | Regional |
| | Highland Venture Capital | 2006 | Inverness (Scotland) | Green Economy | Local and Regional |
| | Green Angel Syndicate | 2013 | London | Green Economy | N/A |

Figure 4 - Potential BANs for Blue Economy in other AA regions (Source: Strane)

Portugal, France, and the UK have developed BAs activities throughout all their territories, including regional capitals. France and UK especially might rest on strong regional identities and culture (Brittany, Scotland) to promote local initiatives.

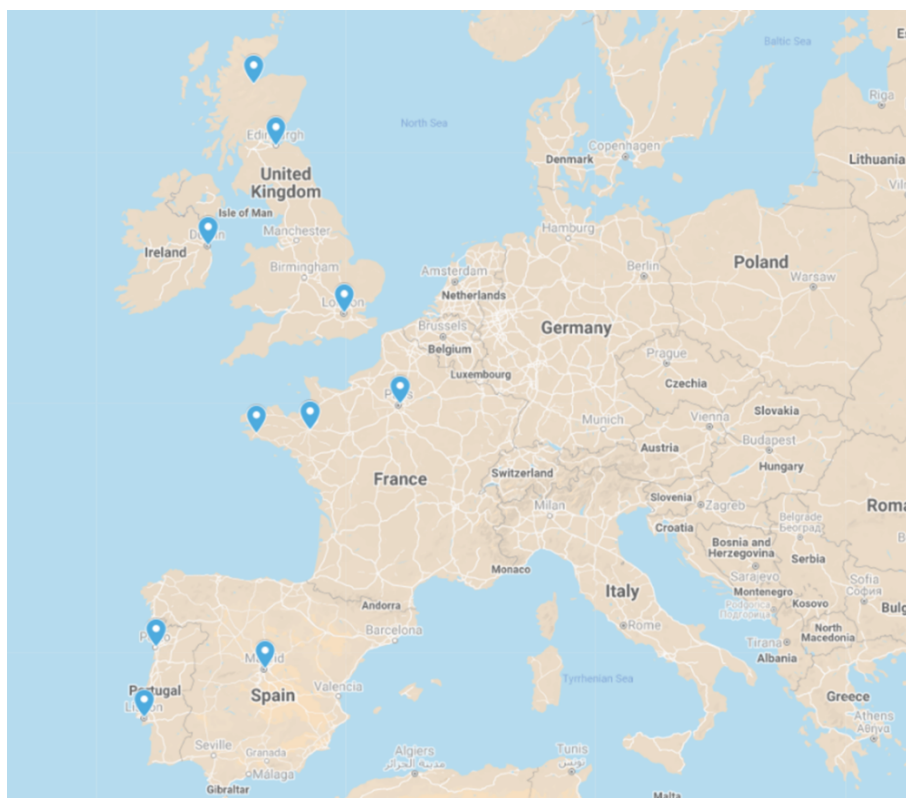


Figure 5 - Mapping of BANs in AA regions (source: Strane)

Several BANs outside of AA regions have also been identified, especially through the initiative Blue Invest Day (<https://ec.europa.eu/easme/en/blue-invest-day>), an annual event bringing together innovators, entrepreneurs, investors and enablers in the Blue Economy under the EASME (Executive Agency for SMEs) and the EMFF (European Maritime and Fisheries Fund). The list if available in the following table and could be useful for future business development.

| Countries / regions | Angel Network | Date of creation | location | Main sector of activities | Scale |
|---------------------|------------------------|------------------|-------------|------------------------------|-----------------|
| Netherlands | PortXL | 2015 | Rotterdam | Port activities | International |
| Germany | Alimentos Ventures | N/A | N/A | Blue Economy and Aquaculture | N/A |
| France | MELIES Business Angels | 2006 | Montpellier | General and Blue Economy | Local, Regional |
| United States | Sea Ahead | N/A | Boston | Blue Economy | International |

Figure 6 - Other relevant international BANs on Blue Economy

The active support of public institutions such as ministries, Europeans institutions or territorial government seems to be a strong enabler for the development of Business Angels Networks, especially on blue economy.

3.2 French Cases Studies

3.2.1 French context

In France, most BAs belong to a network mostly thematic and/or geographical. All those networks are federated in the France Angels framework. Mer Angels is one of the six thematic BAs networks belonging to the France Angels federation, while Finistère Angels is one of the four networks belonging to the regional network Breizh Angels. Breizh Angels gathers networks from Brittany and is one of the 16 regional networks in France.

BAs mostly gather in network because it facilitates the connection between potential investors and entrepreneurs. Every BA network in France Angels is committed to supporting and promoting the development of Business Angels activity in its region and to connecting entrepreneurs seeking financing with Business Angels members of its own network. The network's services are accessible to all those with innovative projects with high growth potential.

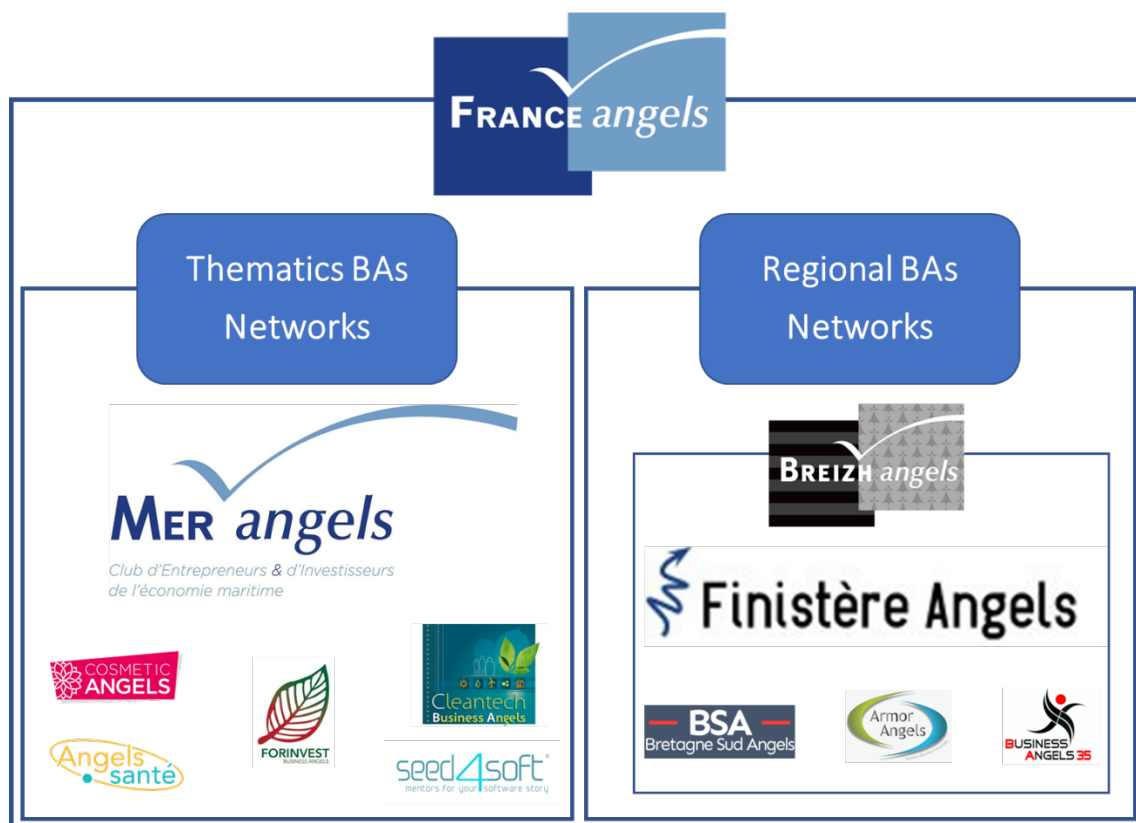


Figure 7 - France Angels framework (Source: Strane)

BAs networks activities are intricately linked with the “Pôles Mer” activities. Those economic development clusters have been created in France in 2005 among other high potential activity sectors to develop synergies and cooperation. More than 60 clusters exist in France and they include on average 200 members per cluster (<https://www.economie.gouv.fr/entreprises/tout-savoir-sur-poles->

competitivite). The “Pôle Mer” Bretagne Atlantique et Mer Méditerranée are marine science and technology clusters located in Brittany and Provence to promote global economic competitiveness. Major companies, SMEs, public and private laboratories, universities and HE institutions involved in the maritime field are member of those clusters. They support companies to develop synergies and cooperation, including funding research and commercialisation process. They play a role of intermediary and are key structures to link Business Angels networks with high potential projects.

“Economic development clusters were created in France in 2005 as a new way of responding to the increasing pressures of globalised competition. Their primary mission is to advance an alternative industrial policy. Clusters aim to enhance the capacity of companies to innovate and are intended to stimulate growth and employment in promising markets. Economic development clusters facilitate the emergence of collaborative research and development projects and support the growth of their member companies, particularly by bringing to market new products, services and processes resulting from research.

The primary criterion for the emergence of a cluster is its ability to bring together large and small companies, research centres and laboratories and training and education establishments within a specific region and around a common theme. Pôle Mer Bretagne Atlantique is a classic example of such a cluster in practice. Its clearly identified region is the maritime area covered by Brittany and Pays de la Loire.

Strong regional roots are key to a cluster’s success. But it must also draw on genuine synergy between research, education and business. An additional remit is to source funding networks and take a proactive approach to calls for projects. Clusters drive growth and employment by enabling their members to secure prominent positions in domestic and international markets.” (Source: Pôle Mer Bretagne Atlantique)¹

In the South Provence-Alpes-Côte d'Azur, Occitania and Corsica regions, the Pôle Mer Méditerranée² has the same goal to bring together scientific and economic actors around maritime and coastal themes with high security and sustainable stakes. As such, those regional organisations are key lever for investors to get in touch with innovation and funding.

3.2.2 Mer Angels Interview

3.2.2.1 Overview

¹ <https://www.pole-mer-bretagne-atlantique.com/en/pole/fonctionnement/the-cluster>, accessed the 27/01/2021.

² <https://en.polemermediterranee.com/Pole-Mer-Mediterranee/Mission-statement-challenges>, accessed the 27/01/2021.



Mer Angels created in 2017 by France Angels is a new thematic club for Business Angels and entrepreneurs. The maritime economy accounts for 14% of French national wealth³. Faced with this fact, France Angels is committed to make the best use of the maritime space, to protect and enrich it. Mer Angels therefore aims to bring together entrepreneurs and investors who are passionate about and want to bring new dynamism to the maritime economy. By bringing together investors interested in the maritime economy and entrepreneurs who are reinventing the sea, Mer Angels wants to bring the necessary support and expertise to the development of these innovative start-ups.

The network is of national scale and the only one specialized in Maritime Economy. France represents 20,000 km of coastline, and is the second largest maritime space in the world (Source: Observatoire du littoral⁴). In the metropolitan area, maritime economy is mostly located in the Mediterranean, Atlantic, and the English Channel areas. One of the BA of the network has been interviewed in March 2020.

| Mer Angels network data sheet | |
|--|--|
| Name of the network | Mer Angels |
| Name of the person in charge / founder | Pierre-Emmanuel Aubert |
| Position of the interviewee | BA of the network |
| Date of creation of the network | December 2017 |
| Investment sectors | Maritime economy |
| Geographical coverage | National |
| Number of projects funded (since inception / per year) | Less than 10 since the creation of the network |
| Amounts invested (in total and on average per company) | less than 100K euros. In total, less than 1M euros |

Figure 8 - Mer Angels Data Sheet (Source: Strane)

The network is relatively new and as such, it has only funded a few projects since its creation. Furthermore, regional networks are active for a longer time and might represent more familiar structures for entrepreneurs.

3.2.2.2 BA operation process

Mer Angels has been created by the national network France Angels, after having identified a lack, a potential and an interest (a lot of passionate people) in the blue economy with a top-down approach. Project owners usually submit their project to the generic platform www.gust.com. Through Gust, Mer Angels receive a high quantity of submissions and struggle to filter all the projects as they

³ <http://www.mer-angels.org/>, accessed the 14/01/2021.

⁴ <http://observatoires-littoral.developpement-durable.gouv.fr/chiffres-cles-r9.html>, accessed the 14/01/2021.

do not have internal staff employed to carry out this selection (BA networks being associative structures). The platform is an accelerator for startup projects, as part of its goal is to connect investors with entrepreneurs. The platform carries on the technical and economic analysis for candidate projects and realise a benchmark of projects that can relate to maritime economy for Mer Angels. Furthermore, France Angels and the “Pôles Mer” relay information toward researchers/entrepreneurs and investors and clearly identify Mer Angels as a funding source when the project is relevant for maritime economy.

According to the interviewee, Mer Angels do not have the human resources and the time to search and to identify existing projects that are not yet being submitted for funding request on the Gust platform. The selected projects submitted on this platform will be invited to pitch in front of BAs from the network during regular pitches sessions. Projects selected after the pitch will be instructed and their Business Plan will be submitted to all the B.A. of the network that might be interested about the subject of the project. The last phase will consist in the closing deal (agreement on the deal and the amount of funding).

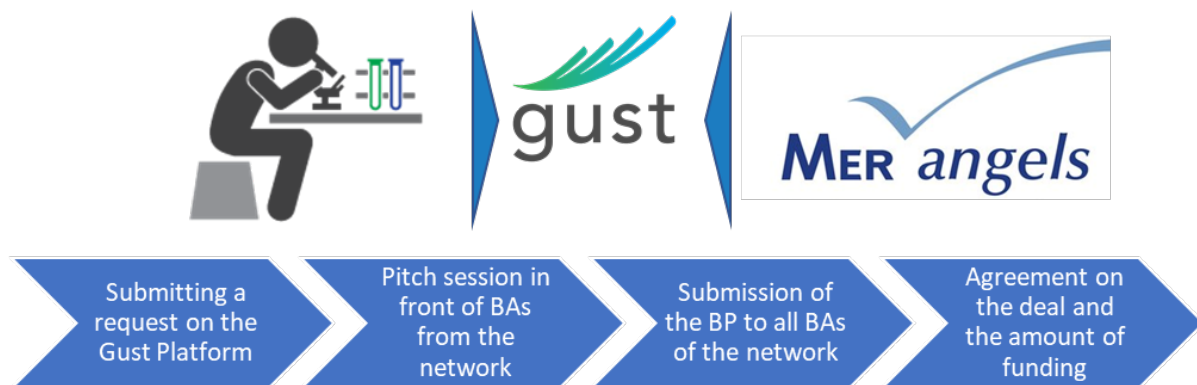


Figure 9 - Selection process of Mer Angels (Source: Strane)

Mer Angels and generally all the BA networks are not at all active in the academic world. They do not screen for Early-Stage Projects in R&D phase. Furthermore, they usually do not interact much with public bodies for grants and loans possibilities, except sometimes with the BPI for co-financing certain funded projects. Mer Angels does not interact neither with national, European nor international networks.

3.2.2.3 Analysis

From the interview, Mer Angels is lacking human resources and time to themselves screen Early Stage projects in R&D or activities in academic world. There exists a gap in information between the network and research. This gap could be filled using the Gust platform as it already serves as an intermediary between entrepreneurs and BAs. However, it seems unlikely for the network to use another source of information as it already has little resources to process existing data from the online platform. Furthermore, relationships with other potential sources of funding could be expanded and improved to relay information and promote risk sharing between investors.

3.2.3 Finistère Angels Interview

3.2.3.1 Overview



<http://www.finistereangels.fr>

Finistère Angels participates in the structuring of the regional economic fabric. Its main objective is to promote high potential investment without sector preference or size. Concretely, the association brings talented entrepreneurs, high-potential project carriers together. Most of them are currently in the start-up, growth and takeover phase, and are in search of financial partner from private investors "business angels" to minority shareholders. The idea is to bring their experience, their competence, their network to commit together, in the medium term, to a forward-looking, profitable and job-creating business venture in Finistère and to share the results loyally in accordance with the pacts they have made.

In Brittany in France, there are 4 sub-regional BA networks (Finistère Angels, Armor Angels, Bretagne Sud Angels, Business Angels 35) that are federated by the regional network Breizh Angels. Among them, Finistère Angels was created in 2007 and funded 40 projects from its creation to early 2020.

"From 2005 to the end of 2019, nearly 300 investors financed the creation or development of 133 innovative companies to the tune of €28.5 million and generated the creation of nearly 1,500 jobs." (Source: Breizh Angels⁵)

The interview took place in February 2020 with the founder of the network.

| Finistère Angels network data sheet | |
|---|---|
| Name of the network: | Finistère Angel |
| Name of the person in charge / founder: | Philippe Decaesteke. |
| Position of the interviewee | President of Finistère Angel |
| Date of creation of the network | December 2007 |
| Investment sectors | Generalist but several projects in the maritime economy |
| Geographical coverage | local (departmental) |
| Number of projects funded (since creation / per year) | 40 |

Figure 10 - Finistère Angels Data Sheet (Source: Strane)

⁵ <http://www.breizhbusinessangels.fr/>, accessed the 27/01/2021.

The network is mostly generalist but maritime economy is strong in Brittany, as the region represents 18% of national maritime employment (source: INSEE⁶) including traditional maritime sectors (marine products, shipbuilding and maintenance, French navy), coastal tourism, and blue economy research programs⁷.

3.2.3.2 BA operation process

According to the interviewee, Finistère Angel was created under the impetus of France Angel at the end of the 2000s. This network brings together people from Finistère who want to invest in business start-up projects. Very often, members are former business leaders (85%) who can put their skills at the service of new entrepreneurs. In addition to financing projects, Finistère Angel's objective is to provide a network and the experience of a business leader to help a company develop. Finistère Angel is mainly involved in business start-up, it is the riskiest phase of business development where few investors are present, which is why the Business Angels were created.

3.2.3.2.1 Selection process

Entrepreneurs identify Finistère Angel through the networks with which Finistère Angel works (technopoles, business development aid structures, communication on social networks, links with other business angels, etc.). When an entrepreneur submits a project to Finistère Angel for financing, an economic and strategic study (economic-technical analysis) is carried out to assess the project's soundness, potential and profitability. The entrepreneur is asked to prepare an application file and a business plan for the first three years of the project clearly defining how the company intends to achieve its objectives.

If the project is viable, then the entrepreneur is asked to pitch his or her project to the Finistère Angel's plenary assembly. An accounting and legal firm will then be asked to certify the viability of the project. If some members are seduced by the project, then they invest and follow the project.

In this sense, projects are selected according to their viability, maturity, potential (profitability). Finistère Angel prefers to invest in projects that offer a return on investment in the short or medium term (8-10 years maximum). This can be problematic for research projects that are profitable in generally more than 10 years.

⁶ <https://www.insee.fr/fr/statistiques/3627571>, accessed the 27/01/2021.

⁷ <https://www.bretagne.bzh/actions/mer/#:~:text=L'environnement%20maritime%20et%20littoral,potenti%20comme%20les%20biotechnologies%20marines>, accessed the 27/01/2021.

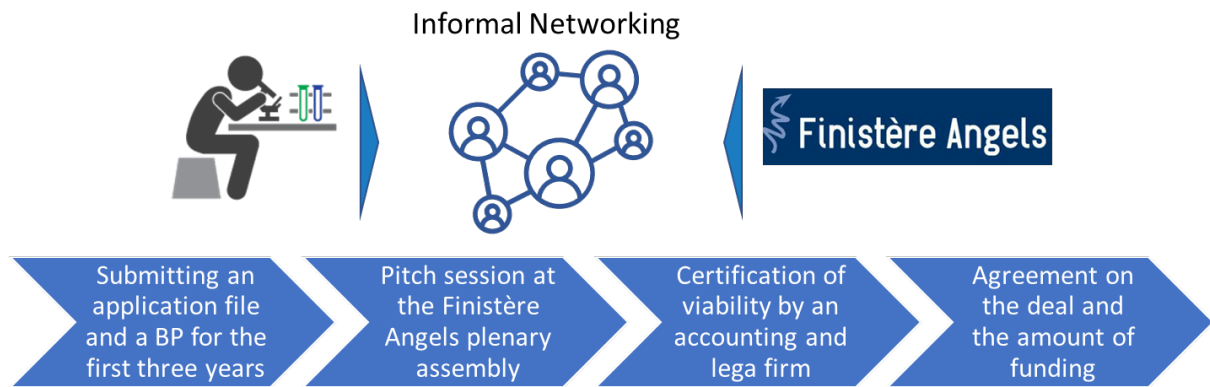


Figure 11 - Selection process of Finistère Angels (Source: Strane)

3.2.3.2.2 Interactions with public agencies and international networks

Finistère Angels follows the possibilities of grants and loans from public organizations, however public agencies often refuse to invest in business start-up projects because they are too risky. However, they have good local relations with Breizh Angel and the Business Angels of the other Breton departments, as well as Mer Angels at a national scale. They have few relations at the European and international level as well.

3.2.3.3 Analysis

Good relationships and connections with other funding or economy structures is key in the Finistère Angels projects selection process. Potential successful projects are identified through mutual inter-connections at the departmental scale. However, the interviewee specified that there was a lack of solid project proposals to finance compared to the investment offer available in the Business Angel. It seems unlikely that the funding offer is higher than the funding need, as such, either communication on funding opportunities is lacking and/or the business proposal are not structured enough for potential BAs to be convinced by the project. An intermediary providing business consultancy to support entrepreneurs in structuring their business offer; and a database of innovative projects for BAs, might be a solution to fill those gaps.

Furthermore, Finistère Angels has neither links with universities and research centers, nor upstream identification process of technologies from laboratories. That information could use an intermediary to improve information sharing.

Finistère Angel advertises to recruit investor members not so much for projects. Until 2018, investing in a Business Angel allowed members of the association to have a reduction in the ISF, this has greatly helped in recruiting members. This type of incentive has then a positive impact on stakeholders in supporting investments.

3.3 Synthesis

The comparison of both networks is difficult, mainly due to the lack of hindsight on Mer Angels that started its activities quite recently. Furthermore, the scale of their activities is different, as well as their thematic. Both BAs networks are providing complementary support to innovative activities.

The difference in the project's identification processes is the most obvious point of comparison. While Finsitère Angels rely on informal networking with similar or complementary structures, Mer Angels funding activities are mostly relying on an intermediary platform. However, both networks are quite distant from research and Early Stage Innovation. A clear gap can be identified in this aspect. Most BAs are ignorant of innovative projects before a clear business plan has been provided by the project leader.

Knowledge transfer is key to fill this gap, but one of the interviewees rose the issue of the difference between researchers and entrepreneurs. As researcher does not usually have time to pursue business development activities, as such, it is necessary for company creation to gather a team with different profiles skilled in business management (strategy, finance, accounting, law, human resources...). There is a difference in culture among (public) researchers who are evaluated on the number of class A publications they make. There are relatively few links with the private sector and the valorisation of research activities is limited. Public research is not very focused on commercialization even though some progress has been made recently (valorisation units in universities, engineering schools...).

"In very few cases, some researchers at the end of their work contact the B.A. networks, once they have a POC, MVP or prototype and are ready to go spin-off or launch their solution into the market (examples: ManRos Theapeutics and Hermania, contacts below). For technology transfer, they usually go through the research valorisation unit of their university or research centre (such as INSERM or Initiative Transfert) that can fund them with public funding before seeking for additional private B.A. financing. As B.A. usually get out of the financed companies after 5 years, it is not easy for them to invest in the R&D&I upstream phase. Public financing program at a national (ANR) or European level (Interreg, H2020...) are considered to upstream for them." (Extract from a BA interview, Source: Strane)

The key finding here is the identification of the moment from when researchers are needing private funding after they are upstreamed by public financing programs. An improved relationship between public financing structures and BAs network might allow to identify high potential projects that are almost out of public funds and needs the support of private investment to scale up their activities.

To better understand how the gap between E.S.T. companies and BAs could be filled, it is then necessary to identify the moment where entrepreneurs need private investment and what issues they are facing to gather such fundings.

4 Blue Economy E.S.T. companies analysis

4.1 Questionnaire and respondents

The questionnaire has been designed to create a snapshot of companies and projects within the Blue Economy. The main objective is to understand the main challenges faced by the different sectors of the Blue economy and, in turn, to provide results of "guided" tools for start-up projects. The response time was estimated at 20-25 minutes.

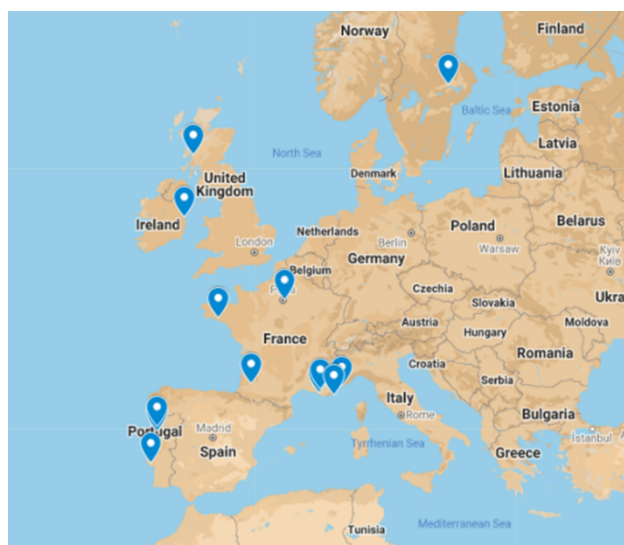
8 French companies answered the questionnaire translated in French and 6 European companies answered the English survey. Responses are gathered and analysed in the following sub-sections.

The questionnaire (see Figure 12) was prepared in collaboration with WP5, for an exploitation of the results mainly for attrition models and decision trees. The French version of the questionnaire is available here: https://docs.google.com/forms/d/e/1FAIpQLSfR5f5HeUIU_ctHFFer-Uly_xpN4Ino6OkAAI26p0JY5kbtOWg/viewform.



Figure 12 - Questionnaire developed in association with TQC and FrontierIP (Source: Strane)

The companies which have answered the survey and are analysed further in this deliverable are listed in the following figure, along with their location and activity sectors.



| Company Names | Location | Activities | Sectors |
|-----------------------------------|--------------------------|---|---|
| VirtualDive | Paris (France) | Coastal development and maritime tourism | Coastal development and tourism |
| Subsea Tech | Marseille (France) | Renewable energies (e.g. maritime energy) | Maritime renewable energies |
| SEACLONES | Marseille (France) | Waste disposal management and environment | Environment |
| Visit Seabed France | Nice (France) | Scuba Diving | Coastal development and tourism |
| SEANEO | Mont de Marsan (France) | Environment (e.g. protection of species; protection and restoration of coasts and habitats) | Environment |
| Serenity Concept | Aix en Provence (France) | Recreational diving instruments | Coastal development and tourism |
| Abyss Ingredients | Caudan (France) | Marine Biotechnology | Marine biotechnology |
| Platypus Craft SAS | Ramatuelle (France) | Ocean monitoring and surveillance (e.g. safety and security) | Ocean monitoring and surveillance |
| RIASEARCH Unipessoal, Lda | Ovar (Portugal) | Aquaculture | Aquaculture and innovative seafood industry |
| Test-Empty-Lines | Dublin (Ireland) | Coastal planning & development and maritime tourism | Coastal development and tourism |
| SAMS Research Services Ltd (SRSL) | Oban (UK) | Marine biotechnology | Marine biotechnology |
| Novige AB, NoviOcean | Västerås (Sweden) | Renewables (maritime energy) | Maritime renewable energies |
| Foodintech | Porto (Portugal) | Software for Seafood Industries | Aquaculture and innovative seafood industry |
| Services4EO | Lisboa (Portugal) | Earth Observation | Ocean monitoring and surveillance |

Figure 13 - List of respondents to the online survey (Source: Strane)

Figure 14 - Mapping of survey respondents (Source: Strane)

As most french survey respondents were located in the Mediterranean area, we included survey respondents from other AA regions. Most issues should remain similar as all companies are targeting blue economy.

The following sectors have been identified:

- Coastal development and tourism, including recreational diving instruments.
- Environment: waste management, protection and restation of coasts
- Ocean monitoring and surveillance
- Marine Biotechnology
- Aquaculture and innovative seafood industry
- Maritime renewable energies

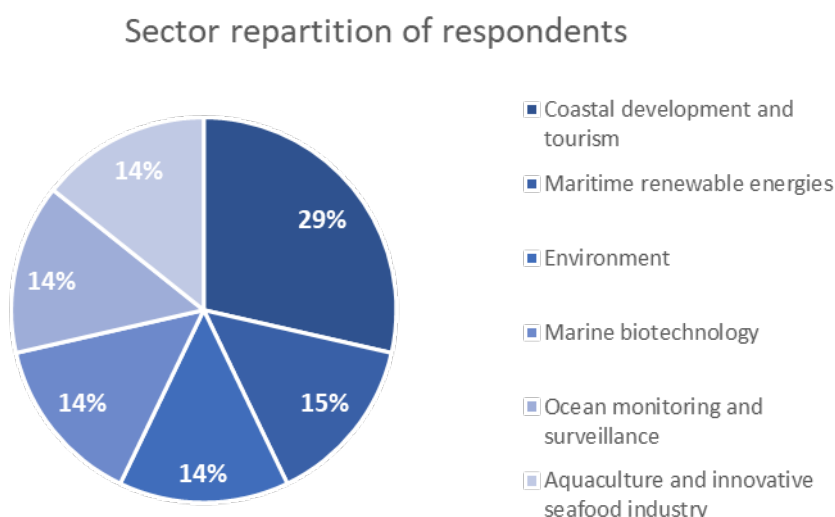


Figure 15 - Sector repartition of respondents (Source: Strane)

Coastal development and tourism are activities that are the most represented in the sample of respondents.

4.2 Results

This sub-section analyses the results of 14 E.S.T companies having answered the survey until December 2020. More results are expected along with WP5 activities and will be exploited further in the project.

4.2.1 Companies overview

Most companies have been identified as startup projects from individual entrepreneurs developing their technology. However, two projects are spinout from academic institutions and two others are spinout from a corporation. It will be interesting to compare those three starting points further in the analysis, for example to know if having the backing of structured institutions solves some issues, especially in terms of funds availability.

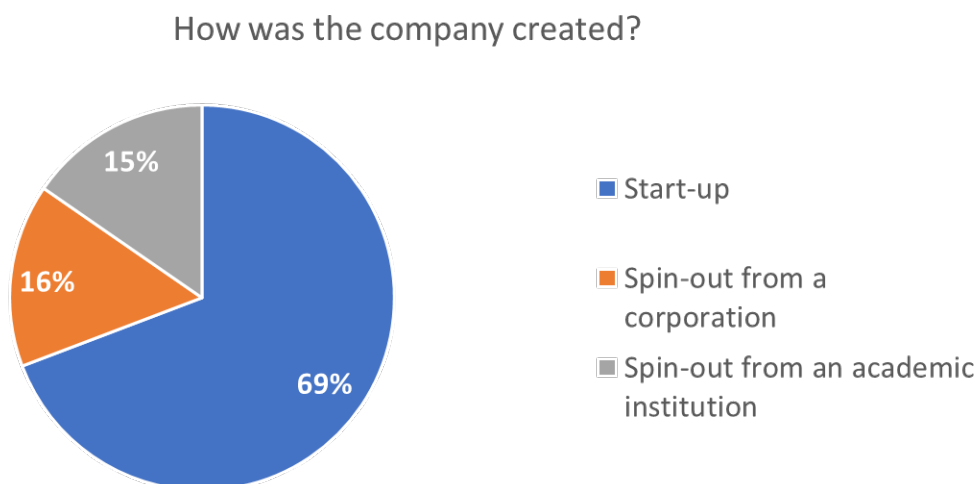


Figure 16 - Creation path from respondent companies (Source: Strane)

The respondent companies have diversified profiles and maturity that allows for a comparison of their issues at different steps of development.

| What is the maturity of the company? | Creation (pre-registration) | Emerging/pre-revenue | Growing/revenue generating | Mature | Dormant |
|--------------------------------------|-----------------------------|----------------------|----------------------------|--------|---------|
| VirtualDive | | x | | | |
| Subsea Tech | | | | x | |
| SEACLONES | x | | | | |
| Visit Seabed France | | x | | | |
| SEANEO | | | x | | |
| Serenity Concept | | | | | x |
| Abyss Ingredients | | | x | | |
| Platypus Craft SAS | | x | | | |
| RIASEARCH Unipessoal, Lda. | | | x | | |
| Test-Empty-Lines | | | | | x |
| SAMS Research Services Ltd (SRSL) | | | | x | |
| Novige AB, NoviOcean | | x | | | |
| Foodintech | | | | x | |
| services4EO | | x | | | |

Figure 17 - Maturity of respondent companies (Source: Strane)

Most companies imagine several business models channels (See Figure 18). The most common one is the business to business (B2B) channel, that has been identified by 12 out of 14 respondents as the prime channel for future business models. Targeting government and public institutions has never been cited as the prime channel to develop for any company but has been identified as a secondary channel for many of them. Public sector is perceived less flexible but safer than interacting directly with customers. It is followed by the business to business to customer (B2b2C) channel, the prime channel for two respondents. The business to customer (B2C) is the less popular channel imagined by respondent for present or future business models. One possibility to explain this fact might be that B2C channels are be identified as riskier than B2B channels.

What are the present or future business model channels ?

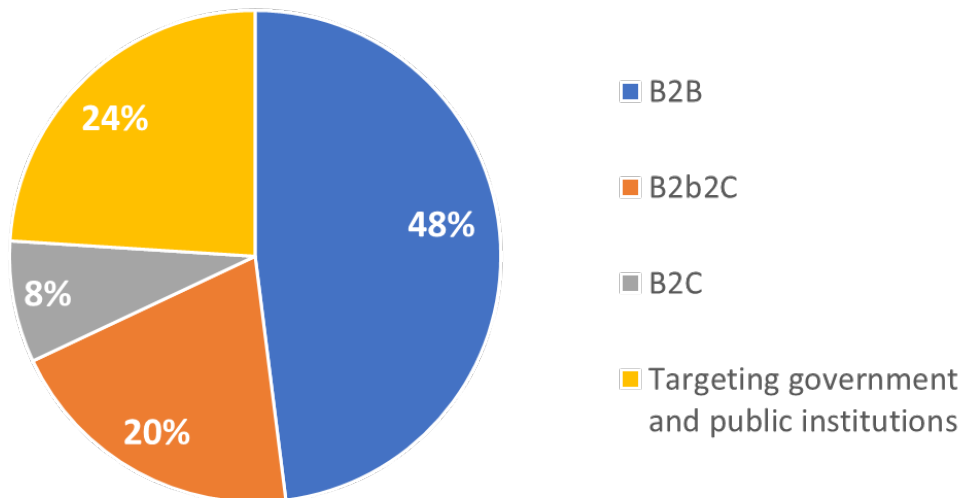


Figure 18 - Business model channels identified by respondent for their project (Source: Strane)

Most of respondent companies either sell a product or a service. Software and License technology are relatively uncommon among them (Figure 19). Only 6 companies out of 14 have declared only one type of activities.

| | What are the company activities? | | | |
|--------------------------------------|----------------------------------|---------------|----------------|--------------------|
| Name of the company | Sell a product | Sell software | Sell a service | License technology |
| VirtualDive | x | x | x | x |
| Subsea Tech | x | | x | |
| SEACLONEs | x | | x | x |
| Visit Seabed France | x | | | |
| SEANEO | | | x | |
| Serenity Concept | x | x | x | |
| Abyss Ingredients | x | | | |
| Platypus Craft SAS | x | | x | |
| RIASEARCH Unipessoal, Lda. | | | x | |
| Test-Empty-Lines | | | x | |
| SAMS Research Services Ltd (SRSL) | x | x | x | x |
| Novige AB, NoviOcean | x | | | x |
| Foodintech | | x | x | x |
| services4EO | | | x | |

Figure 19 - Respondent companies activities (Source: Strane)

More than a third of respondent companies follow a sustaining innovation model, aiming to improve their product or service and gain in competitiveness in an already existing market (Figure 20). It is followed by the incremental innovation model that progressively improve service or product with 26% of respondents. Disruptive and radical innovation models are the less identified innovation models by respondents. Most companies sell either a product or a service (see Figure 19), cross-checking with innovation models, we could assume that disruptive and radical innovation models are riskier perspective than relying on existent technology or market.

What kind of innovation fits your proposal best?

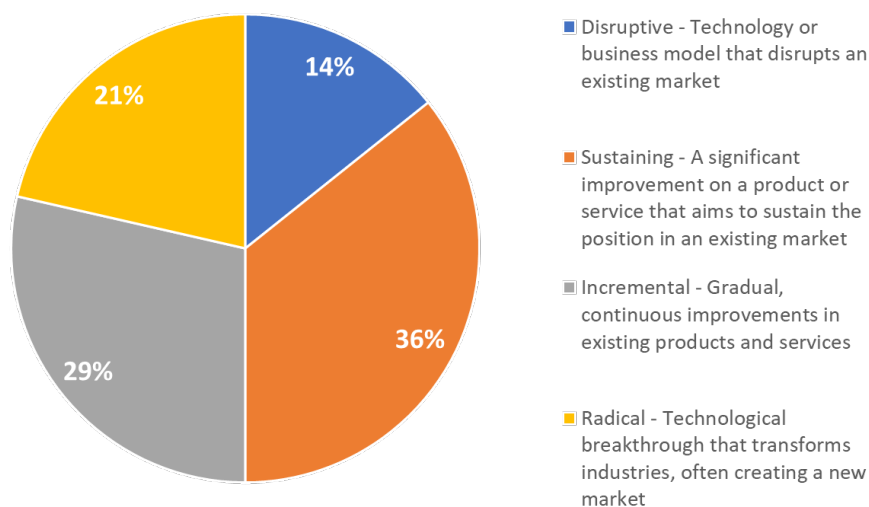


Figure 20 - Type of innovation developed by respondent companies (Source: Strane)

Most of respondent identified their value proposition to be value driven or both value driven, and cost driven (Figure 21). Performance and quality are not assessed as relevant criteria to describe the value proposition for most of respondents. As such, respondents focus mainly on new value creation to gain in competitiveness to sustain a position in an existing market and improve existing products and services. Only few respondents identified (lowering) cost and price as an added value to gain in competitiveness.

| What describes best the value proposition? | Cost driven (leanest cost structure, low price value proposition) | Value driven (focused on value creation, premium value proposition) | Performance and quality | Not Sure |
|--|---|---|-------------------------|----------|
| VirtualDive | x | x | | |
| Subsea Tech | x | x | | |
| SEACLONES | | | | x |
| Visit Seabed France | | x | | |
| SEANEO | | | x | |
| Serenity Concept | | x | | |
| Abyss Ingredients | | x | | |
| Platypus Craft SAS | | x | | |
| RIARESEARCH | | x | | |
| Unipessoal, Lda. | | x | | |
| Test-Empty-Lines | | | | x |
| SAMS Research Services Ltd (SRSL) | | x | | |
| Novige AB, NoviOcean | x | x | | |
| Foodintech | | x | | |
| services4EO | x | x | | |

Figure 21 - Value proposition of respondent companies (Source: Strane)

From the following figure, proprietary technology appears to be a major driver of differentiation and/or value in the company. One can hypothesize that proprietary technology is a confidence indicator for entrepreneurs in the safety of their innovation. There is no conclusive link between the creation model (startup or spinout from an institution) and this factor, however, it could be a decisive factor for BAs in their selection process.

Is proprietary technology an important driver of differentiation and/or value in the company?

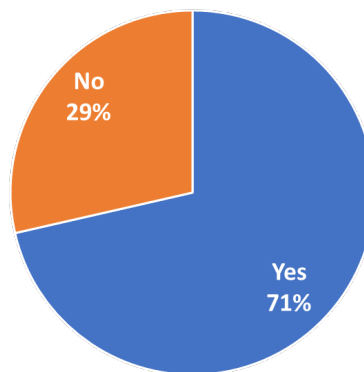
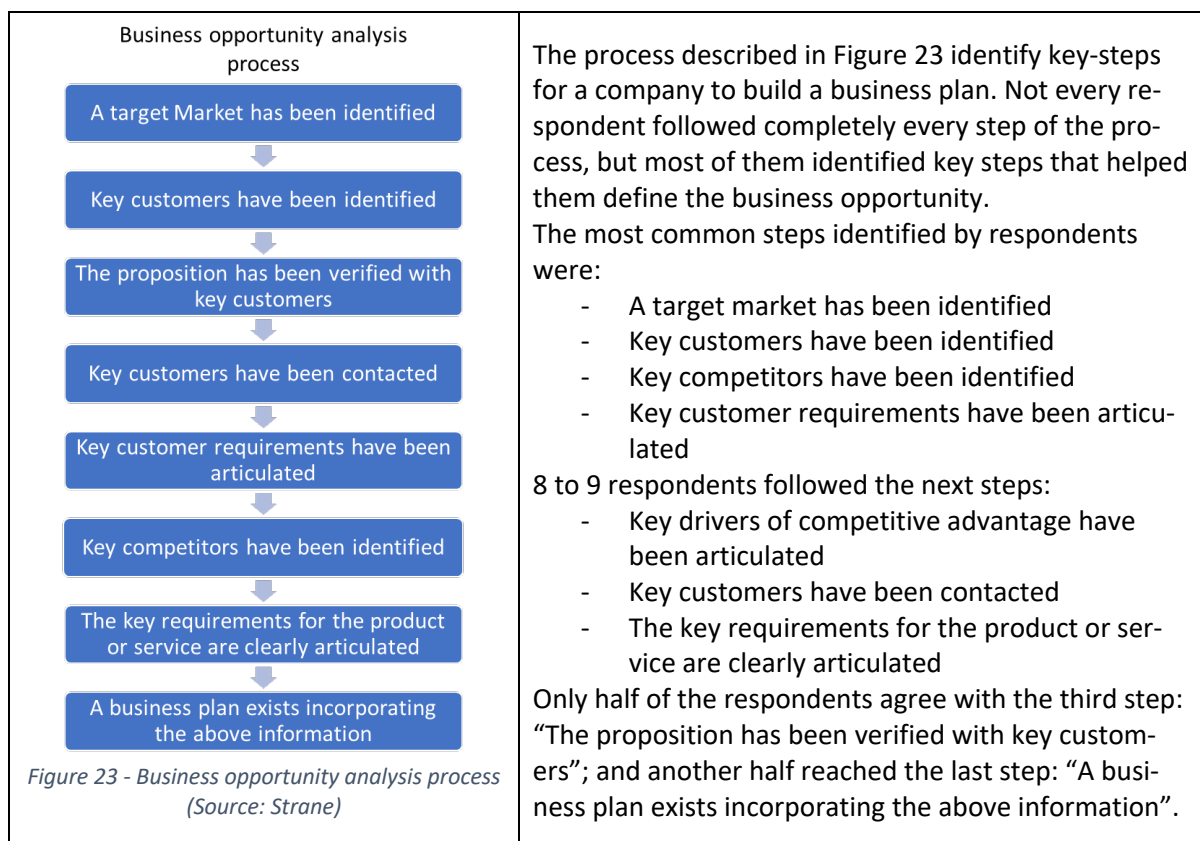


Figure 22 - Proprietary technology as a driver for most respondent companies (Source: Strane)

The respondent E.S.T companies have diversified profiles and the overview allowed to identify several leads for further analysis concerning the Blue Economy sector:

- It will be interesting to pay attention to the potential impact of supporting structures in the funding process to launch new activities.
- Most respondent rely on existing structure (markets, services, and products), rather than try to create new market or disrupt the existing one.
- Innovation relies essentially on value creation as a differentiation factor rather than price competitiveness: that can explain why proprietary technology is identified as a driver by most respondents.
- Most respondents aim to develop their activities under B2B channels. Cross-checking with other data from the companies' overview, we can assume that because most companies aim to rely on existing market, or products or services, B2B is seen as safer than B2C.

4.2.2 Business opportunity and regulation



According to most of the respondents, regulatory policy, support, or incentives encourage or support significant growth of the business. As such, it could be a good tool for public structures to set up a supporting framework for innovation and facilitate access to funding for startup projects.

Impact of regulation on the company

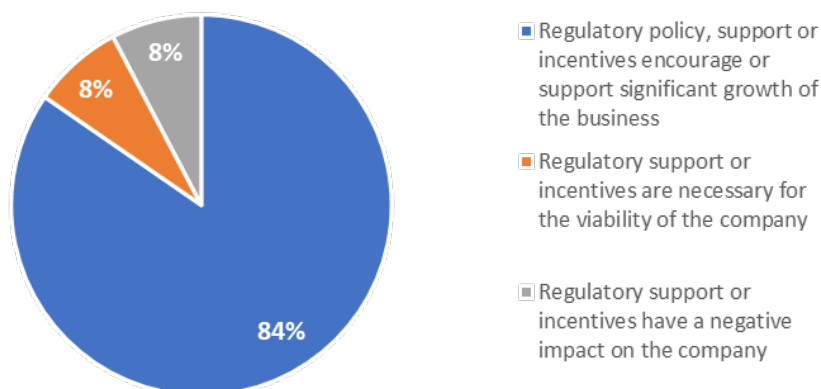


Figure 24 - Impact of regulation on respondent companies (Source: Strane)

4.2.3 Funding

The following figure describes the present funding needs of respondents depending on the step they reached in the developing process. Almost a third of funding needs rests on the concept ideation step and another third on the scaling step. The R&D phase is supported mainly by founders themselves individually, while the scaling is needed to reach a significant turnover in a market. Furthermore, the Expansion phase does not seem to need more funding as it rests on growth and contracts from the Scaling phase.

Cross-checking with data from the creation process, it seems that both spinouts from academic institution do not need additional funding in the early stage of the project. The same could be expected from spinouts from a corporation, however it is not the case: one is needing funding for scaling and the other for concept ideation.

In terms of present funding needs, what option fits better your project?

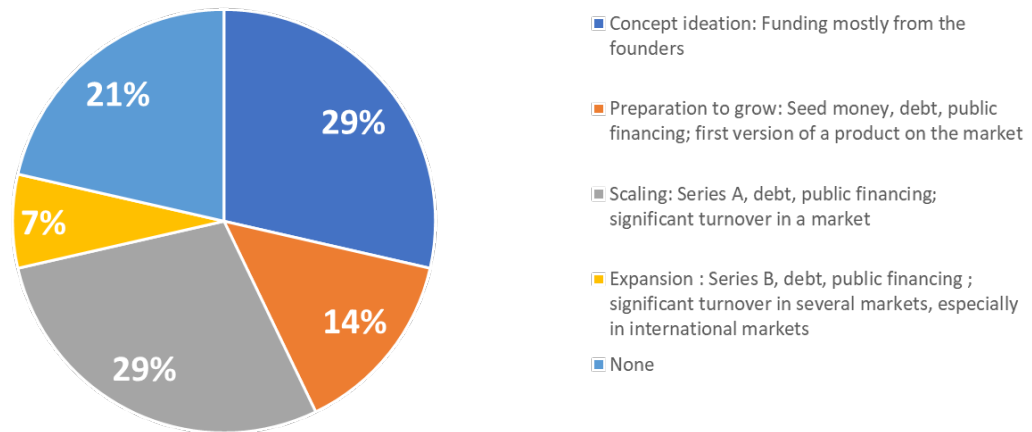


Figure 25 - Funding needs identified by respondent companies (Source: Strane)

Cross-checking with capital investment sources (see Figure 26), it seems that most of funding sources still rest on the founder's shoulders. Shareholders and Friends and family are the seconds source of capital followed closely by Venture capital. BAs represent only 3% of the capital investment sources, probably because they usually intervene later in the process. However, supporting companies at an early stage could be a good opportunity for BAs to gather more data on high potential projects.

What are the capital investment sources of the company?

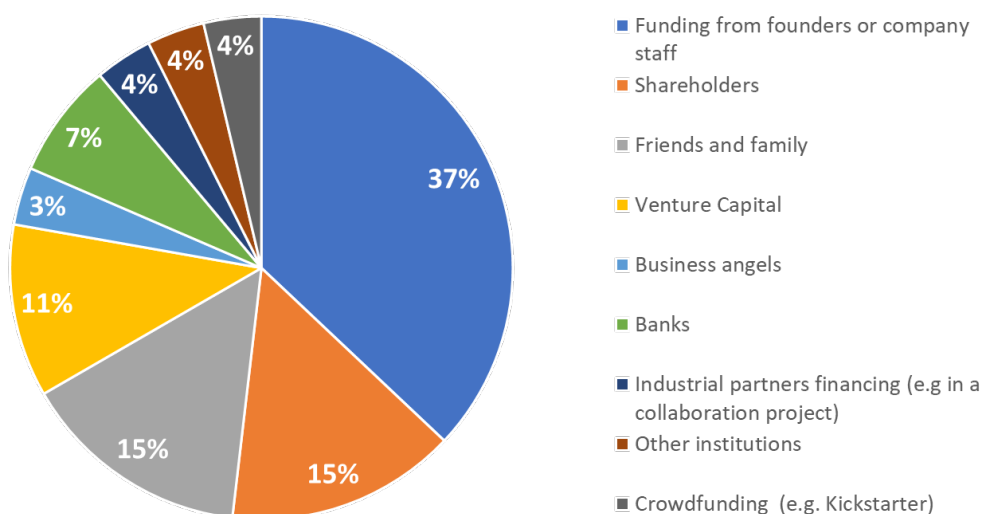


Figure 26 - Capital Investment sources of respondent companies (Source: Strane)

Most respondent companies had yet to mobilize public funding at the stage of their project, grants from public entities has been identified as a strong source of funding for most respondents. It is followed by crowdfunding, business angels, banks, and shareholders funding. A few other possibilities have been mentioned. Public structures have been identified as key partners for E.S.T companies probably due to their low level of maturity: private funding is less likely to invest in early-stage projects because of their uncertainty, while public funding usually promotes innovation rather than a profitable business model.

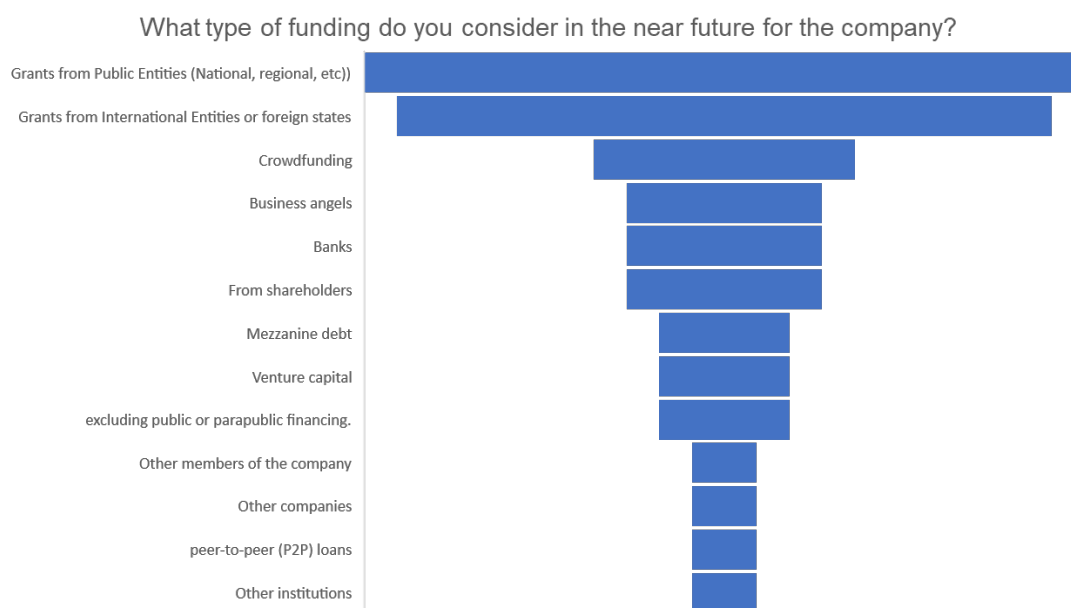


Figure 27 - Type of funding considered by respondent companies from the most to the less stated (Source: Strane)

International and regional funding schemes have been identified by respondents in the last five years, it seems that the information is circulating well between public entities and entrepreneurs. However, 15% of respondents did not find any public funding programs related to the blue economy sector to which they belong most, as such, it might be relevant to check whether there is a funding disparity between sectors of blue economy at the different scales.

Existing public funding programs launched in the last five years directly linked to blue economy sector

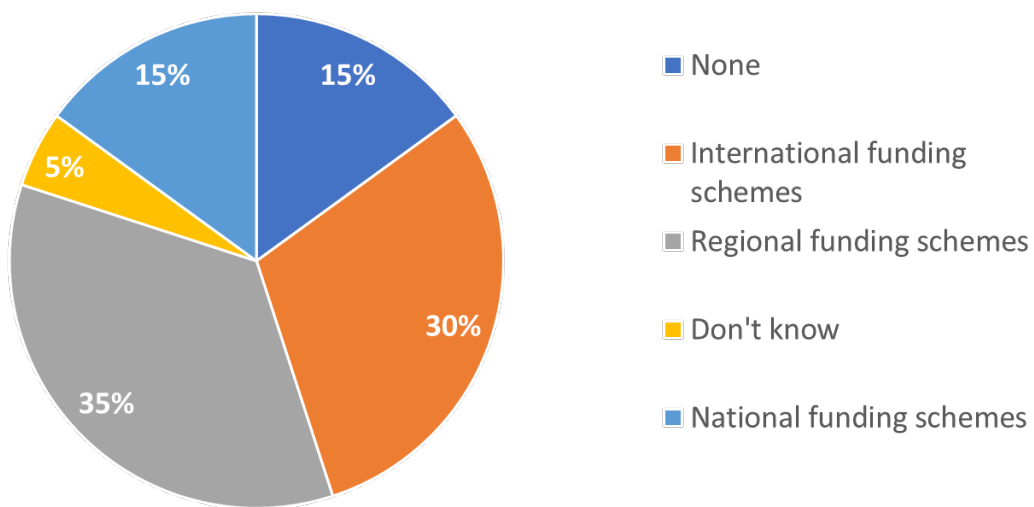


Figure 28 - Public funding programs knowledge on Blue Economy from respondent companies (Source: Strane)

The amount of funding necessary for commercial launch has been assessed to be mostly under 500K€ and concerns more particularly operation costs. Technological/Product development and Trials and regulatory approval are close seconds funding posts, they are followed by Capital Investment in production facilities. Trials and regulatory approval are the less costly funding post according to respondents. As public funding usually covers early-stage processes such as technological/product development, the gap in funding concerns particularly operations costs and capital investment in production facilities which are deeper in the commercialisation stage.

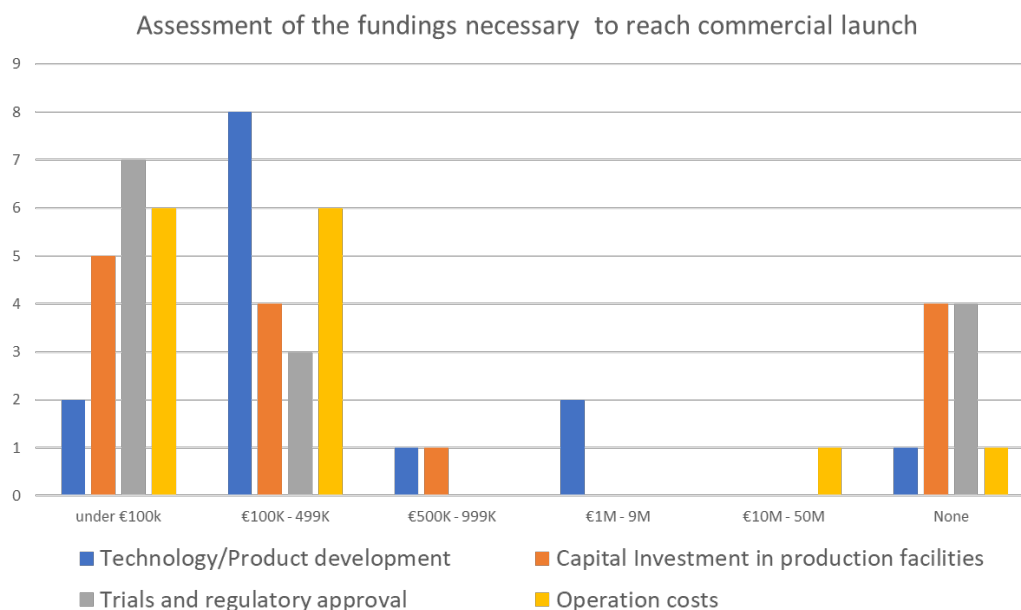


Figure 29 - Assessment of the amount of funding needed by respondent company to reach commercial launch depending on each of the development steps (Source: Strane)

According to the survey, the funding gap concerns mostly technology/product development and operation costs. Besides, funding need concerns most of E.S.T companies that still mobilize essentially individual capital. Public grants are considered as key-capital sources to fill this gap, in front of private capital. Public entities provide specific blue economy resources for companies at all scales, but it is still unsure if it covers all sectors.

4.2.4 Challenges and Barriers

14 challenges have been identified through the survey and classified by respondent companies on a scale from 1 to 10, 1 being the less challenging and 10 being the most. From the results, availability of financial resources is one of the most challenging obstacles faced by respondents: supporting incentive of sectoral framework, availability of private investment and public funding are key parameters to access financial resources. Marketing has also been identified as a barrier, especially for creation of market opportunities. Market identification and proposal validation represent less difficulties for respondents. Regulatory issues and Human resources parameters have been less quoted by respondent companies. Validation of technologies in laboratory have been identified as the less problematic issue, while validation of technologies in a relevant environment/demonstration is in the ranked as an average obstacle, and Validation of technologies in a real/business context is the hardest challenge faced by respondents ahead of financial issues. Validation of technologies in a real/business context is needed at the beginning of the commercialisation process and is a critical turning point for early-stage companies. It is the step where technology is going to face the market, usually with a case study, to validate the opportunity offered by the innovation. The business model, the business plan, the first offers will be critical to ensure the survival of the companies and the viability of the project. Sometimes it also requires an iterative process that can be taxing (financially, humanly etc.) with the test of several value proposition to understand the market and the existing competition. It is closely linked with

marketing issues where the entrepreneur needs to identify and communicate precisely on its gain of competitiveness compared to competitors. As most respondents improve existing products or services or aims to sustain a position in an existing market, it is also critical to raise awareness on their solution compared to already existing products or services.

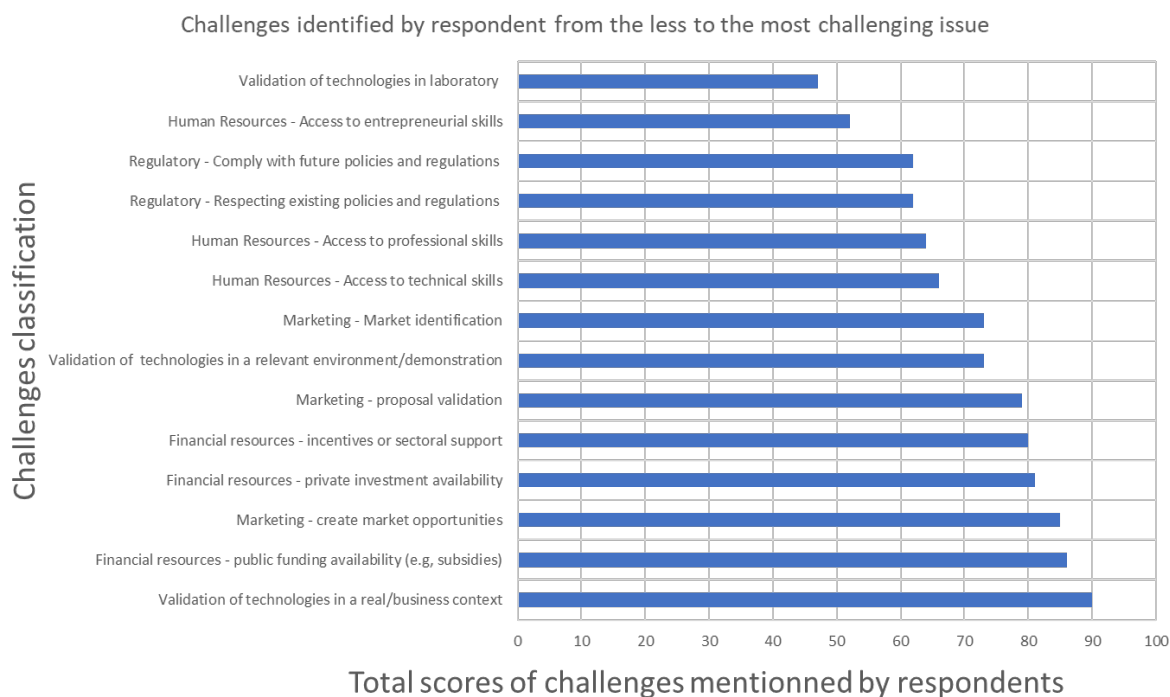


Figure 30 - Challenges identified by respondent companies from the less to the most challenging issue (Source: Strane)

Cross-checking challenges with the maturity level of respondent companies, at the creation step, access to financial resources, human resources and technology validation are the most pressing challenges while marketing and regulatory issues are secondary.

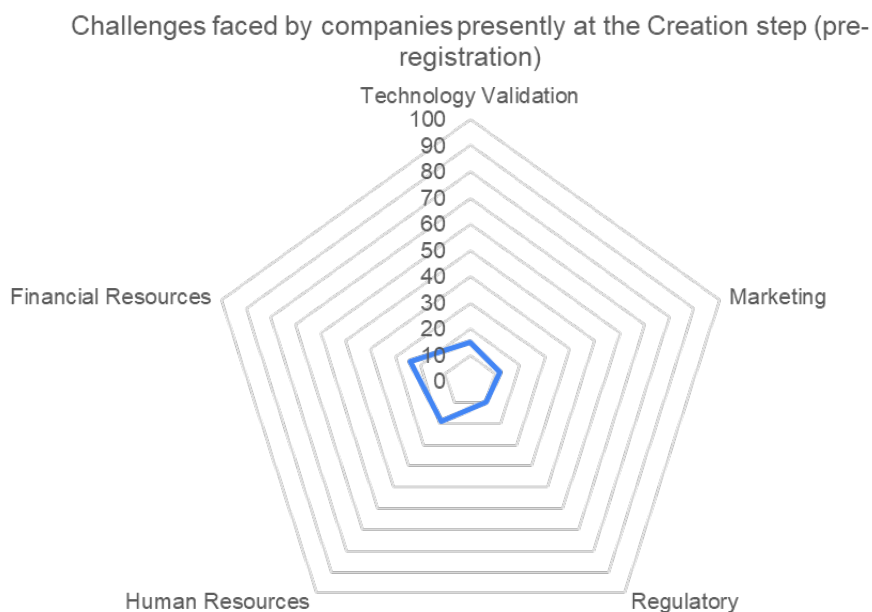


Figure 31 - Challenges faced by respondent companies presently at the creation step (Source: Strane)

At the emerging/pre-revenue step, human resources issues have been resolved, while financial resources and technology validation are still key issues. Marketing challenges become considerably more significant as companies are launching business development. Regulatory barriers are still minor at the phase.

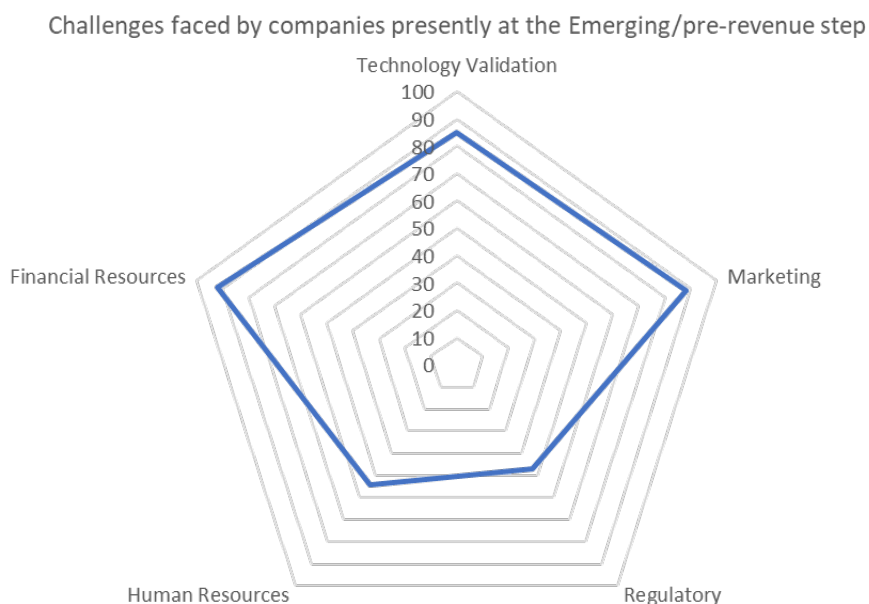


Figure 32 - Sum of challenges scores faced by respondent companies presently at the emerging/pre-revenue step (Source: Strane)

Challenges faced by respondent companies at the growing/revenue phase are similar to the previous phase. However, human resources are identified as a strong issue, probably because of the needs to recruit skilled profile to support business growth.

Challenges faced by companies presently at the Growing/revenue generating step

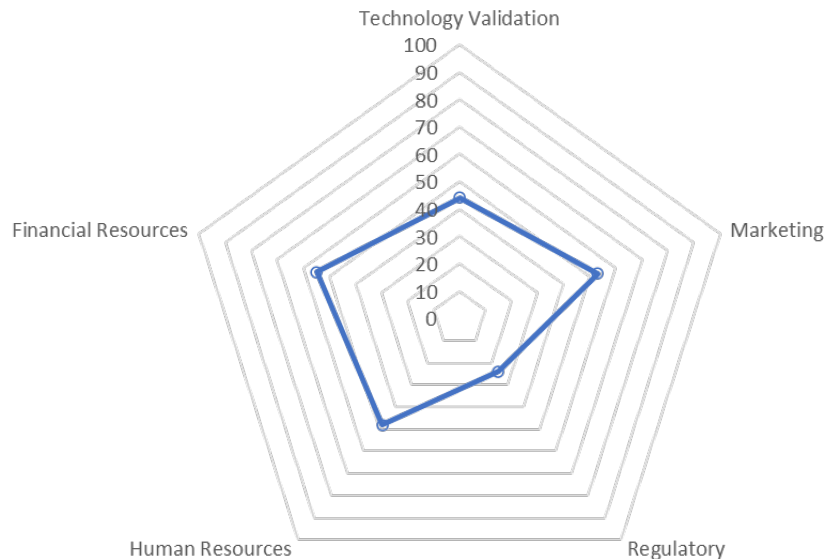


Figure 33 - Challenges faced by respondent companies presently at the growing/revenue generating step (Source: Strane)

Mature companies have reached most of their financial resources' goals, it is still a challenge but not as much as the increasing marketing needs. Technology validation is the second most pressing challenge, while human resources are not as critical as in the growing phase. Regulatory issues are still not identified as a major challenge.

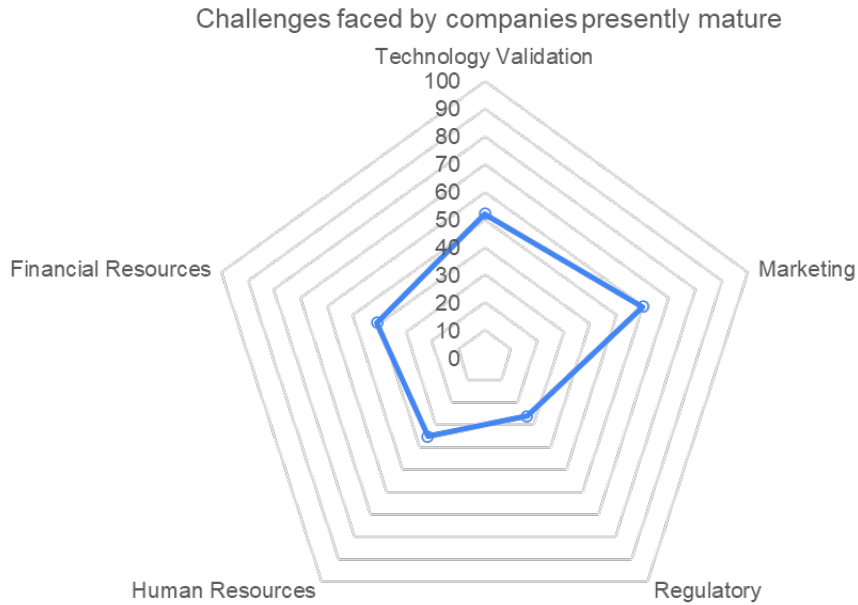


Figure 34 - Challenges faced by respondent companies presently mature (Source: Strane)

Technology validation and regulatory issues are not obstacles for dormant respondent companies. Human resources and marketing obstacle are still average issues. However, the availability of financial resources is critical.

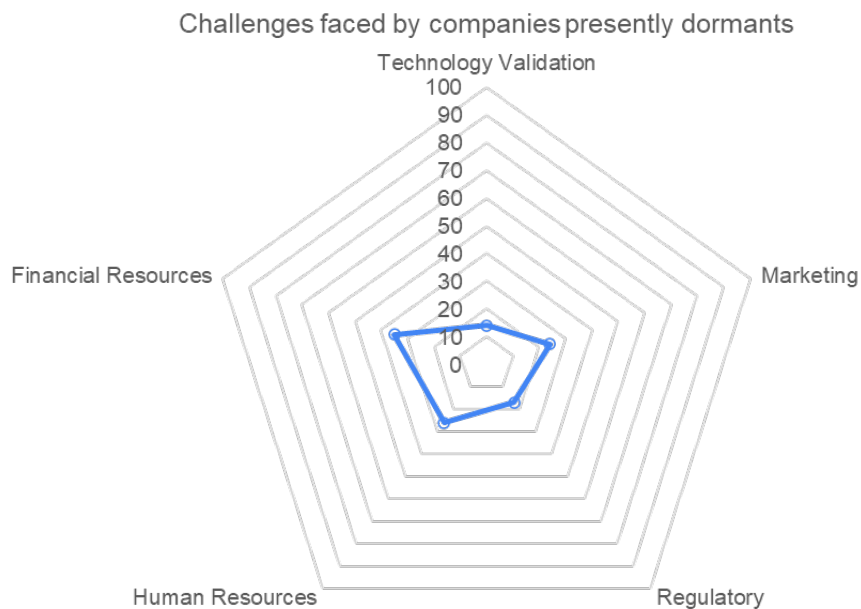


Figure 35 - Challenges faced by respondent companies presently dormant (Source: Strane)

The next figure suggests than the 2 spin-out from corporation face less challenges than the 2 spin-out from academic institution. A deeper analysis with a wider sample could be interesting to understand if there is a relation between institution support and level of challenges faced by respondent companies.

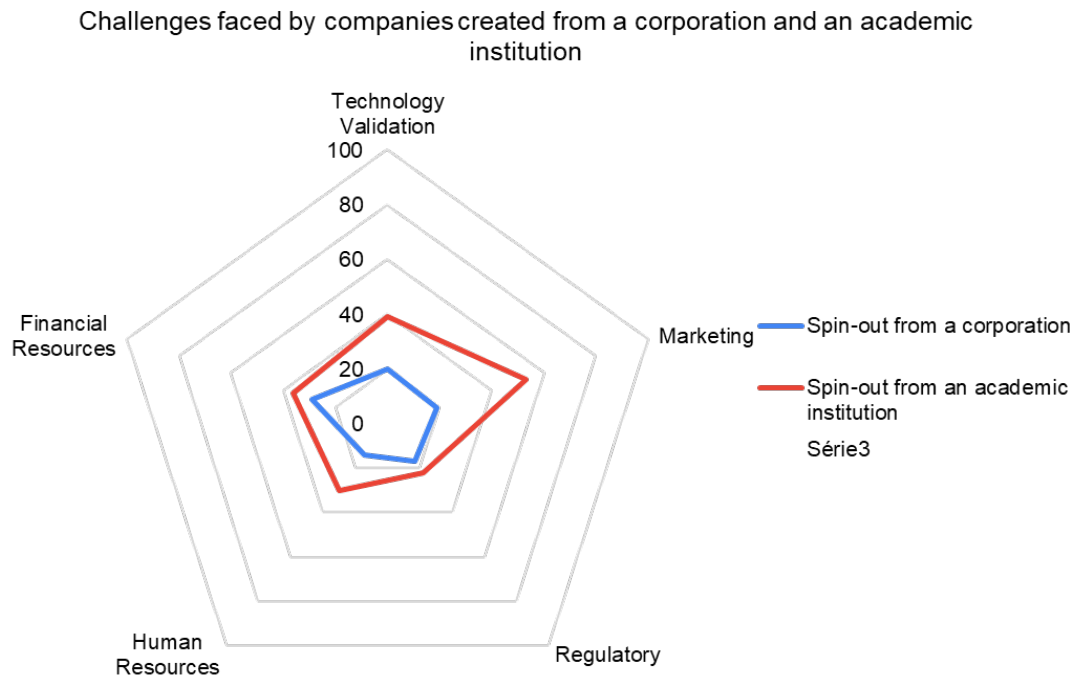


Figure 36 - Challenges faced by respondent companies created from a corporation or and academic institution (Source: Strane)

From the survey, availability of financial resources is the most critical challenge faced by respondent companies regardless of the level of maturity. Other challenges highly depend on the maturity level of the company. Regulatory issues are less identified as a strong obstacle as policies and public institutions usually provide a clear framework, making it issues that already have identified solutions. Most dormant companies have issues with availability of financial resources making it key in the viability of the project. The strong activity amongst innovative start-ups, which are generally well supported by personal investment and grants, gives way to a more complex financing ecosystem beyond start-up and early growth phases. Aalst and all. (2018) concluded that some businesses benefit from being part of larger groups, by being acquired, or (in one case) being a university spin-out business; however, it has not been verified in the respondent sample.

5 Closing the gap between BA and E.S.T companies

5.1 Crossing the Valley of Death

The “valley of death” is a common term in the startup world, referring to the difficulty of covering the negative cash flow in the early stages of a startup, before their new product or service is bringing in revenue from real customers. The phrase ‘Valley of Death’ refers to the gap between the development of scientific knowledge and the development of commercial products.

According to a Gompers and Lerner study (Murphy, Edwards, 2003), the challenge is very real, with 90% of new ventures that don't attract investors failing within the first three years. The problem is that professional investors (Angels and Venture Capital) want a proven business model before they invest, ready to scale, rather than the riskier research and development efforts (Aalst and all., 2018). Additionally, this stage is considered too risky for banks to commit, at least without some form of guarantee being offered to cover the high-risk profile and with potential capacity building to enable a better understanding of the risks.

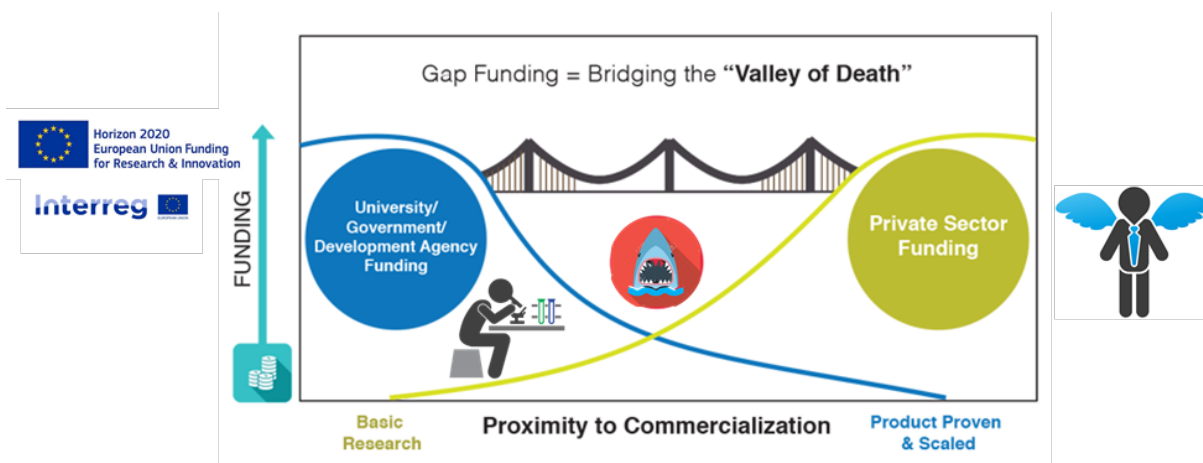


Figure 37 - Funding gap in innovation (Source: Strane)

In the survey, respondent companies were asked an open question about the “Valley of death”. The aim was to gather advice, good practices or specific issues that crossed their path and suggestions on how to solve issues to support a more effective access to the market for E.S.T companies. The main conclusions are gathered here:

- Administrative issues and unavailability of public funds and grants rose an issue for several companies: more national and international financial grants and non-financial supports specifically for the marine energy industry could help with a more effective route to market.
- Accessing private investment rapidly after public grants in the MVP (minimum viable product) finalisation phase and the pre-commercialisation has been a difficulty for a respondent.
- To counter the “Valley of death”, one respondent is working in new and developing market segments as well as well-established industry. Maturity of the potential market for research led products and services to set the tempo of growth for certain business areas. Other business areas are limited by staffing bandwidth. For another respondent, the main slowing factor

is the lack of connection to potential users allowing for an evolution of services to launch business development.

Activities are generally well supported by personal investments and grants at an early stage, however the scaling up phase is often confronted to the necessity of widening financing resources and gives way to a more complex financing ecosystem. Raising finance can be challenging, time and resource consuming and frustrating (Aalst and all., 2018). One entrepreneur stated that the technical inventions to realize his commercial opportunity were easier to realize than getting access to investment capital.

5.2 Best E.S.T. route to commercialisation

This sub-section describes the best E.S.T route to commercialisation incorporating information from the previous section.

5.2.1 Step1: Discovery

Discovery: In the Technology Transfer Process, discoveries may include research findings, inventions, designs for objects, products or packaging, and works of authorship such as software, databases, manuals, training materials and other creative expressions or collections of information. Indicators include:

- The discovery solves an important scientific, social or environmental problem
- The discovery has a potential market application or commercial value
- The research is related to technical innovation

5.2.2 Step 2: Disclosure

Disclosure: An inventor's first step in the commercialization process is to submit an invention disclosure. This is the beginning of a relationship between a researcher and the technology transfer office. By submitting an invention disclosure, the inventor enables a lab or university to assist and support throughout the commercialization process if the entity asserts its interest in the technology.

5.2.3 Step 3: Evaluation

Evaluation: During evaluation, the technology transfer professional will assess the market opportunity for the researcher's discovery, invention, software app or other work of authorship, and evaluate the mechanisms available to protect the intellectual property. Above all else, this process is a collaborative effort between the researcher and the technology transfer professional.

5.2.4 Step 4: Intellectual Property Right

IPR: Intellectual Property Right (IPR) protection is the step in the process when the researcher and the technology transfer office develop an IPR protection strategy for the innovation. This is often achieved through patents. However, the outcome of this step is highly variable, based on the type of discovery that is disclosed and the information available during the evaluation process.

Goal: The development of an intellectual property protection strategy that is implemented by the technology transfer office to ensure that the discovery is protected and secure.

5.2.5 Step 5: customer discovery

Customer Discovery: Customer Discover is conducting interviews, questionnaires, focus groups with industry experts, potential partners and customers to determine whether a viable business model and commercialization plan can be formulated for products or services based on the discovery. It covers

the steps on key-customers identification or customers contact in Figure 23, as well as the identification of their requirements. It is a key-step to define the business opportunity.

Goal: The identification of potential customers or end-users and the development of a value proposition and business model for a discovery can use tools such as the Lean Canvas.

5.2.6 Step 6: Marketing

Marketing: This step is where the technology transfer office focuses on promoting the researcher invention with the aim of developing relationships with partners to assist in further development or licensing of the technology.

Goal: The identification of commercialization and development partners that will translate the discovery into a commercial product or service.

5.2.7 Step 7: Partnering

Partnering: Partnering can take many forms, such as sponsored research or licensing. When the researcher first discloses his/her technology and pursue intellectual property protection, it is generally done at a very early stage and will require additional funding from outside partners to develop it to a higher level of technological maturity and bring it closer to a commercial ready product or service.

Goal: The establishment of long-term relationships with commercialization and development partners.

5.2.8 Step 8: Product development

Product development: Once a partner has joined the project, he will take on large scale development which generally occurs outside the university or the lab, often with some support from the inventors.

Goal: Collaborate with a partner to assist the researcher in further developing his/her discovery into a product or service that will be sold.

5.2.9 Step 9: Public use and ROI

Public use and ROI: The process comes full circle at this step, and products and services based on a discovery are now publicly available. At this moment, the university or the lab and the inventors are able to realize their long-term investment through sharing of revenues, generated by sales of products and services based on the discovery that researchers have made during the very first step of this process. This will allow the partners to initiate a Return on Investment.

Goal: The introduction of new and enhanced products and services to the market.



Figure 38 - Best E.S.T route to commercialisation (Source: Strane)

In this process, public grants and subsidies are expected to support the innovation team starting from the partnering process. However, to ensure the ROI, it often requires a long-term implementation on the market and additional funding from private investors to bridge the Valley of Death.

6 Conclusion

6.1 Synthesis

The COVID-19 crisis had little direct impact on the production of this deliverable, however it might have had an influence on the difficulty to gather survey respondents at the end of 2020. The interviews of the 2 BAs networks allowed for an overview of the French BA context and structuration.

Two different BAs networks were identified and interviewed. Finistère Angels activities at locally implanted with a generalist approach. It rests on local relationships and informal networking to identify high potential projects, and a long implication in the department. Mer Angels acts at a national scale, specifically on maritime economy. It can reach a wider audience and uses an intermediary platform to identify projects. However, they have little human resources to support direct networking.

From the interviews, both BAs networks identified a gap of information between BAs and E.S.T companies. Public grants and subsidies are usually the main source of funding for the first years of innovative companies, and there is little information exchange with private investment, especially BAs. The transition from public financing to private investment is then difficult. BAs identify high potential entrepreneurs with intermediaries, either informal networking or an online platform. Linking at an earlier stage BAs to E.S.T companies might be a way for companies to gather funding quicker, and for BAs to follow high potential project with a privileged relationship.

The E.S.T companies surveyed had diverse profiles, in terms of activities sector, geographical location and starting point. According to respondents, one of the drivers of business development is a supporting regulatory framework that incentivise investments and protects innovation property. The funding turnover has also been identified as a key-step in business development and a gap with BAs activities could be filled with better communication on high potential projects. Most companies encounter the Valley of death at the growing step of business development due partly to the lack of funding available at the time. Lack of funding resources is the main obstacle faced at any moment of business development.

Crossing the Valley of Death is a major challenge for E.S.T companies and BAs could be a solution to fill the funding gap earlier and support startups until they fully mature. However, the ROI has been an issue as its length does not usually fit BAs expectations and needs.

6.2 Recommendations

Policy makers have a role to play to support innovation and the meeting between funding needs and funding offer, especially in the private sector. Incentives for BAs to invest has been an efficient way to mobilize more funding resources. However, availability of public funding can also be an obstacle: promoting grants and subsidies dedicated to Blue Economy is also a way to promote the sector and provide knowledge to BAs about those activities. Creating structures that act as intermediaries between

public and private financial resources could also be a way to implicate BAs and private investment earlier in innovative project.

BAs and especially BAs networks could also benefit from building relationship with researcher at the R&D stage to identify high potential project early in the process. At this end, building links with technology transfer offices from universities could be a first step. To ease the transition for E.S.T companies from public funding to private investment, BAs could as well use their network to promote good practices and their criteria in assessing the potential of a project.

Researchers and entrepreneurs need to anticipate interactions with private sector early in the project to understand the expectations from potential investors. It requires skilled human resources to mobilise on funding selections processes for both private and public sources.

7 Document Information

| | | | |
|------------------------|---|----------------|------------|
| EU Project | EAPA_842/2018 | Acronym | EMPORIA4KT |
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9 Appendix / Glossary

EMPORIA4KT – Empower academia for knowledge transfer for value creation in the Atlantic Area

AA – Atlantic Area

BA – Business Angel(s)

BAN – Business Angels Network(s)

BM – Business Model

BP – Business Plan

EASME - Executive Agency for SMEs

EMFF - European Maritime and Fisheries Fund

EST – Early-Stage Technologies

MVP - minimum viable product

SME - Small and medium-sized enterprises

UK – United Kingdom

WP – Work Package

APPENDIX 1 – GUIDANCE SURVEY FOR THE SEMI-DIRECTED INTERVIEWS WITH FRENCH BAS NETWORK

| |
|---|
| EMPORIA4KT : PROCESSUS D'IDENTIFICATION ET DE TRANSFERT DES TECHNOLOGIES DES BUSINESS ANGELS |
| 1. Processus d'identification en amont des technologies issues des laboratoires |
| > Faites-vous cette veille auprès des projets ANR, ou Européens (Interreg, H2020, SME Instruments...) ? |
| > Facteurs pris en considération en matière de valorisation de la recherche et de transfert de technologies ? |
| > Démarche de primauté d'accès à l'information en particulier lors de projets de spin-offs ? |
| 2. Processus d'identification des startups |
| > Selon quels critères ? |
| > Suivez-vous les projets sélectionnés par les labs, incubateurs ou accélérateurs ? |
| > Avez-vous une base de données des startups identifiées ? |
| 3. Processus de sélection des projets |
| > Selon quels critères ? |
| > Faites-vous une analyse technico-économique pour chaque projet instruit ? |
| 4. Processus de recrutement de Business Angels |
| > Quelles sont vos modalités d'adhésion ? |
| > Quels sont les services proposés ? |
| 5. Processus d'intermédiation entre entrepreneurs et Business Angels |
| > Sollicitations fortuites d'entrepreneurs ou démarches proactives des BA ? |
| 6. Accès à l'information relative à l'offre et à la demande de financement |
| > Quelles sont les sources et/ou les relais d'informations ? |
| 7. Réseau de B.A. à but lucratif ou non-lucratif |
| > Si lucratif, sur quel business model et Deal Flow ? |
| > Quels types de prestation de service de support auprès des investisseurs et des porteurs de projet ? |
| > Quel est le client principal (investisseur ou entrepreneur ?) |
| 8. Relais de diffusion de l'information pour vous faire connaître |

| |
|--|
| > Auprès des porteurs de projet potentiels ? |
| > Auprès des investisseurs potentiels ? |
| > Faites-vous des recherches sectorielles, territoriales et/ou généralistes ? |
| |
| 9. Liens avec d'autres sources de financements |
| > Travaillez-vous avec des plateformes de financement participatifs (dons, equity...) ? |
| > Suivez-vous les possibilités de subventions et de prêts des organismes publics (BPI, ANR, Européens...) ? |
| |
| 10. Liens avec d'autres réseaux de Business Angels Européens |
| > Avez-vous des relations avec des réseaux nationaux de l'Arc Atlantique Européen (Portugal, Espagne, Irlande, Royaume-Uni) ? |
| > Avez-vous des relations avec des réseaux nationaux Européens et/ou internationaux ? |
| |
| 11. Liens avec le projet EMPORIA4KT |
| > Selon vous, la sensibilisation des chercheurs est elle un élément clef pour les pousser à lancer des initiatives de transfert de connaissances ? |
| > Seriez-vous intéressé à intervenir dans le projet EMPORIA4KT en tant que formateur de jeunes chercheurs pour les coacher sur le développement de projets innovants ? |
| |
| 12. Transfert de connaissances |
| > Pensez-vous qu'une sensibilisation accrue des chercheurs à l'innovation est nécessaire ? |
| > Pourriez-vous investir dans une projet collaboratif impliquant chercheurs et entreprises ? |

APPENDIX 2 – LIST OF BANS IN THE UK PROVIDED BY LJMU

| ANGEL NETWORK | DATE OF CREATION | LOCATION | MAIN SECTOR OF ACTIVITIES | WEBSITE |
|---|------------------|-----------|---|---|
| ENVESTORS | 2004 | LONDON | PARTNERING WITH ACCELERATORS, INCUBATORS AND ANGEL NETWORKS TO PROVIDE A WHITE-LABEL PLATFORM EMPOWERING THEM TO PROMOTE DEALS, ENGAGE INVESTORS AND CONNECT TO OTHER NETWORKS. | HTTPS://WWW.ENVESTORS.CO.UK/ |
| 24HAYMARKET | 2012 | LONDON | INVESTING IN COMPANIES THAT HAVE DEMONSTRATED INITIAL COMMERCIAL TRACTION. | HTTPS://24HAYMARKET.COM/ |
| EQUITY GAP | 2010 | EDINBURGH | HELPING MATCH PRIVATE INVESTORS WITH YOUNG ENTREPRENEURIAL COMPANIES LOOKING FOR EARLY STAGE BUSINESS FUNDING | HTTP://WWW.EQUITYGAP.CO.UK/ |
| ARCHANGELS | 1992 | EDINBURGH | IP-RICH TECHNOLOGY AND LIFE-SCIENCES, RANGING FROM SOFTWARE DEVELOPMENT TO BIOPHARMACEUTICALS AND BIONICS | HTTPS://ARCHANGELSONLINE.COM/ |
| CAMBRIDGE ANGELS | 1999 | CAMBRIDGE | TECHNOLOGY, INTERNET, SOFTWARE, HARDWARE, DIGITAL HEALTHCARE AND LIFE SCIENCES | HTTPS://CAMBRIDGEANGELS.COM/ |
| LONDON BUSINESS ANGELS (MANAGED BY NEWABLE) | 2012 | LONDON | ACTS AS THE VOICE OF THE ANGEL INVESTMENT COMMUNITY AND STRIVES TO BUILD AND CONNECT THE EARLY-STAGE INVESTMENT ECOSYSTEM, IN SUPPORT OF THE UK'S HIGH-POTENTIAL ENTREPRENEURS. | HTTPS://WWW.UKBAA.ORG.UK/ |
| TRICAPITAL | 2004 | MELROSE | INVEST IN HIGH GROWTH UK START-UPS AND COMPANIES ACROSS SCOTLAND AND THE NORTH OF ENGLAND | HTTP://WWW.TRICAPITAL.CO.UK/ |
| KELVIN CAPITAL | 2009 | GLASGOW | HEALTHCARE, ENVIRONMENTAL, LIFE SCIENCES, TECHNOLOGY/DIGITAL MEDIA, RENEWABLES, CLEAN TECHNOLOGY, AND RETAIL | HTTP://WWW.KELVINCAPITAL.COM |
| QVENTURES | 2013 | LONDON | LIES ON HIGH-GROWTH, REVENUE-GENERATING COMPANIES RAISING SEED TO SERIES B INVESTMENT ROUNDS. | HTTP://WWW.QVENTURES.CO |

| | | | | |
|---|------|-----------|--|---|
| DRAGONS' DEN (MANAGED BY THE BBC) | 2005 | LONDON | THE SHOW ALLOWS SEVERAL ENTREPRENEURS AN OPPORTUNITY TO PRESENT THEIR VARYING BUSINESS IDEAS TO A PANEL OF FIVE WEALTHY INVESTORS, THE "DRAGONS" OF THE SHOW'S TITLE, AND PITCH FOR FINANCIAL INVESTMENT WHILE OFFERING A STAKE OF THE COMPANY IN RETURN. | HTTPS://WWW.BBC.CO.UK/PROGRAMMES/B006VQ92 |
| OXFORDSHIRE INVESTMENT OPPORTUNITY NETWORK (MANAGED BY OXFORD INNOVATION) | 1994 | OXFORD | TECHNOLOGY COMPANIES FROM OXFORD AND ACROSS THE COUNTRY | HTTP://WWW.OION.CO.UK |
| ANGELS DEN | 2007 | LONDON | AN ONLINE INVESTMENT PLATFORM WHERE ANGEL INVESTORS AND EXPERIENCED BUSINESS PEOPLE INVEST IN PRE-VETTED SMES | HTTP://WWW.ANGELSDEN.COM |
| CAMBRIDGE CAPITAL GROUP | 2000 | CAMBRIDGE | INVESTING IN HI-TECH BUSINESSES | HTTP://WWW.CAMBRIDGECAPITAL-GROUP.CO.UK |
| ASCENSION VENTURES SYNDICATE CLUB | 2012 | LONDON | CREATIVE INDUSTRIES, INTELLECTUAL PROPERTY, ENTERTAINMENT, DIGITAL MEDIA AND MARKETING, TECHNOLOGY, E-COMMERCE, FASHION, SPORT, MEDIA, ENTREPRENEURSHIP, CORPORATE FINANCE, KIDS, ENTERPRISE INVESTMENT SCHEME, VENTURES, ENTREPRENEURSHIP, SEIS, EIS, ONLINE VIDEO, GAMES, AND MUSIC | HTTP://WWW.ASCENSIONVENTURES.COM |
| CLEARLY SOCIAL ANGELS (MANAGED BY CLEARLYSO) | 2008 | LONDON | IMPACT INVESTMENT, SOCIAL ENTERPRISE, ANGEL INVESTMENT, SOCIAL BUSINESS, CORPORATE FINANCE, INVESTMENT BANKING, SOCIAL INVESTMENT, INVESTMENT READINESS, INSTITUTIONAL INVESTMENT, CAPITAL RAISING, IMPACT ASSESSMENT, IMPACT INVESTING, SERIES A, IMPACT FUNDS, INVESTMENTS, FUNDS, AND FAMILY OFFICE | HTTP://WWW.CLEARLYSO.COM |
| HIGHLAND VENTURE CAPITAL | 2006 | INVERNESS | COMPANIES OPERATING IN SCOTLAND AND WHO ARE BASED AND OPERATE FROM THE HIGHLANDS | HTTP://HIGHVC.CO.UK |
| BRISTOL PRIVATE EQUITY CLUB | 2016 | BRISTOL | THE MEMBERS ARE ALL LIKE-MINDED INDIVIDUALS WHO HAVE BEEN CAREFULLY CHOSEN FOR THEIR BROAD RANGE OF SKILLS AND INDUSTRY BACKGROUNDS. WE ALL ARE (OR WERE) INVOLVED IN OUR OWN BUSINESSES AND | HTTP://WWW.BRISTOLPRIVATEEQUITYCLUB.COM/ |

| | | | | |
|--|------|-----------------|---|---|
| | | | THEREFORE UNDERSTAND THE TRIALS AND TRIBULATIONS OF STARTING AND GROWING A BUSINESS. | |
| GC ANGELS | 2015 | MAN- CHESTER | SUPPORT BUSINESSES WITHIN GREATER MANCHESTER, AND THE WIDER NORTH WEST, TO THRIVE AND PROSPER WHILST GENERATING HEALTHY RETURNS ON INVESTMENT. | HTTP://WWW.GROWTHCO.UK/WHAT-WE-DO/GC-ANGELS |
| GREEN ANGEL SYNDICATE | 2013 | LONDON | A NETWORK OF SMART INVESTORS WHO ARE COMMITTED TO THE TRANSITION TO A GREENER ECONOMY. | HTTPS://GREENANGELSYNDICATE.COM/ |
| LONDON & SCOTTISH INVESTMENT PARTNERS | 2014 | EDIN- BURGH | ADD EXPERTISE, EXPERIENCE, AND MONEY, ALONGSIDE HANDS-ON MANAGEMENT SUPPORT AND A FRESH STRATEGIC BUSINESS PLAN. THIS CREATES A COMPELLING GROWTH AND VALUE ACCELERATOR FOR SMES – TAKING THEM TO THE NEXT LEVEL. | HTTP://WWW.LSIP.CO.UK/ |
| MINERVA BUSINESS ANGEL NETWORK (MANAGED BY UNIVERSITY OF WARWICK SCIENCE PARK) | 1994 | COVEN- TRY | HIGH GROWTH TECH COMPANIES AND HAS A NOT FOR PROFIT OBJECTIVE. | HTTPS://MINERVA.UK.NET/ |
| NEWABLE VENTURES | 1982 | LONDON | PROVIDE PRIVATE INVESTORS, FAMILY OFFICES AND CORPORATE INVESTORS THE OPPORTUNITY TO INVEST IN POTENTIALLY HIGH GROWTH EARLY-STAGE KNOWLEDGE-INTENSIVE COMPANIES. | HTTPS://NEWABLE.CO.UK/VENTURES/ |
| GABRIEL INVESTMENT SYNDICATE | 2012 | GLAS- GOW | SPECIFICALLY SUPPORTING YOUNG BUSINESSES | HTTP://WWW.GABRIEL-IS.COM/ |

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