Access 4 SMEs
National Contact Points for Innovation

Assessment study report: How does the SME instrument beneficiaries' businesses look like?

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Executive Summary:

The SME instrument is targeting "Highly innovative SMEs with a clear commercial ambition and a potential for high growth and internationalisation". The key question that arises from this statement is: is there any common pattern for these companies?

This is the objective of this deliverable based on an in-depth analysis of more than 50 real SME instrument phase 2 winning proposals in the first four years of the instrument implementation (2014-2017). For this analysis, the project has used a well-though ad hoc questionnaire comprising 44 questions covering the 5 key dimensions that could determine the international scalability potential of a SME. This 5 dimensions covers: company information & status, company value proposition, market knowledge, business scalability and business model.

A total of 56 questionnaires have been collected in this exercise. To show the validity of our dataset with respect the overall SME instrument population, both have been compared in terms of age, & size of the SMEs, and also, which is quite more relevant, in terms of company lifecycle status (which is a parameter used within the business coaching service of the SME instrument).

With that similarity into account, this deliverable presents the main patterns identified for this kind of companies along ten concepts, separated into three dimensions:

- What type of business fits best within the SME instrument?
- What type of target market fits best within the SME instrument?
- What type of teams fits best within the SME instrument?

The patterns identified across these three themes do not guarantee a 100% successful application, but it really gives real clues to intermediaries aiming to support companies within this instrument to define which companies to focus and/or help companies to develop in the right direction during its phase 1 execution.

1 Background

In the frame of the Access4SME project, the deliverable 3.1 named "·Analysis report on SME success factors and best practices", has made a thorough analysis to identify the typology of SME participating in the different instruments of H2020.

Based on its findings, **this deliverable aims to look specifically on the H2020 SME instrument beneficiaries,** as this instrument supports close-to-market activities, with the aim to give a strong boost to breakthrough innovation with a market-creating potential.

"Highly innovative SMEs with a clear commercial ambition and a potential for high growth and internationalisation" are the prime target. The idea of this report is **to understand wider how these "highly innovative SMEs with a clear commercial ambition and a potential for high growth and internationalisation" can be characterized** (if it were possible) and also, **to identify** trends and patterns on **which are the key business elements** that are commonly presented in winning proposals **to support such "breakthrough innovation with market-creating potential"**.

As this is the target, the **SME instrument phase 2 evaluations are based on investment criteria and not on research and innovation.** With this in mind, being funded in phase 2 will mean that the company

- Knows its market and has identified a relevant market opportunity,
- Has a sound and scalable business model
- Has a feasible implementation plan.

These three broad elements are further segmented in detailed sub-criteria along the **Evaluation Summary Report (ESR)** that the European Commission gives as feedback to the companies, **providing a very complete analysis of the company** from many complementary angles, as observed below.

Criterion 1- Impact	**4/5**
The proposal indicates in a convincing way that there will be demand/market (willing to pay) for the innovation when the product/solution is introduced into the market	
The targeted users or user groups of the final product/application, and their needs, are well described and the proposal provides a realistic description of why the identified groups will have an interest in using/buying the product/application, compared to current solutions available	
The proposal provides a realistic and relevant analysis of market conditions, total available market size and growth rate, competitors and competitive solutions and key stakeholders, clear opportunities for market introduction.	
It is described in a realistic and relevant way how the innovation has the potential to boost the growth of the applying company	
The proposal demonstrates the alignment with the overall strategy of the participating SME(s) and the need for commercial and management experience, including understanding of the financial and	

organisational requirements for commercial exploitation as well as key third parties needed	
The innovation /solution has a clear European dimension both with respect to commercialisation and with respect to competitor /competition evaluation	
The strategy plan for commercialisation is described in a realistic and relevant way, including approximate time to market/deployment. Activities to be further developed after phase 2, including additional dissemination measures, are well outlined.	
Measures to ensure "freedom to operate" (possibility of commercial exploitation) are realistic and there is a convincing strategy of knowledge protection, including current IPR filing status, IPR ownership and licensing issues. Regulatory and/or standard requirements are well addressed	
Criterion 2 – Excellence	**3/5**
The innovation aims new market opportunities addressing EU/global challenges	
The included feasibility assessment demonstrates the technological/practical/economic viability of the innovation.	
The proposal provides a realistic description of the current stage of development (TRL 6 or similar for non-technological innovations) and added value of its innovation as well as very good understanding of the competing solutions. Includes good comparison with state-of-the-art, known commercial solutions, including costs, environmental benefits, gender dimension, ease-of-use and other features	
The objectives for the project as well as the approach and activities to be developed are consistent with the expected impact (commercialisation/deployment). Specifications for the outcome of the project and criteria for success are well defined	
The expected performances of the innovation are convincing and have the potential to be relevant from a commercial point of view (Value for money). It is potentially better than alternatives	
The proposal reflects a very good understanding of both risks and opportunities related to a successful market introduction of the innovation, both from a technical, commercial point of view.	
Criterion 3 - Quality and efficiency of implementation	**3/5**
The proposal demonstrates that the project has the relevant resources (personnel, facilities, networks, etc.) to develop its activities in the most suitable conditions. If relevant, describes in a realistic way how key stakeholders / partners / subcontractors could be involved and why and how they were selected (subcontractors must be selected using best value-for-money principles). (Where relevant/) Participants in a consortium are complementary	
The team has relevant technical/scientific knowledge/management experience, and a very good understanding of the relevant market aspects for the particular innovation. If relevant the proposal includes a plan to acquire missing competences, namely through partnerships or subcontracting (subcontractors must be selected using best value-for-money principles)	
Taking the project's ambition and objectives into account, the proposal includes a realistic time	

frame and a comprehensive implementation description	
The work package descriptions and major deliverables and milestones are realistic and relevant, including appropriateness of the allocation of tasks and resources, risk and innovation management	
Total Score (threshold/maximum) In the 2014-2017 period, 12 was the threshold for phase 2. Since 2018, this threshold has been increased to 13.	**12*/15**

As the rating supplied to the companies in the ESR despite covering many sub-criteria **are only qualitative** (very good to excellent, good to very good, fair to good, insufficient to fair), **we have approach our work looking directly though the 30 pages of winning proposals** (50 in total), **to collect** five different set of questions covering **company information & status, company value proposition, market knowledge, business scalability and business model.**

The exercise of looking through a winning proposal with a business dimension in mind has been considered as such a worthy element of the work of this deliverable. In fact, the questionnaire prepared for that, has been used for working group exercises within the General Assembly of the project in Brussels in June 2017 and also in the NCP Training organized jointly by DG RTD-DG GROW and the project in Brussels in October 2017, when the Innovation and SME Work Programme and EIC Work Programme 2018-2020 were officially launch.

Thanks to these two extra sessions, cases have not only been collected from the main partners of this task (namely CDTI (Spain), APRE (Italy), DLR (Germany), EI (Ireland) and IPPT-PAN (Poland) but also **we have had contributions for other 6 countries** (Austria, Czech Republic, France, Hungary, Norway and Portugal).

2 Methodology

The work carried out to collect information on these winning proposals has been standardized through the design of questionnaire with 44 questions. The questionnaire has been distributed to all the NCPs for a voluntary contribution plus to the partners of this task, that had already agreed to conduct a number of cases, 55 in total.

To enlarge this number, the questionnaires was prepared early 2017 despite cases collection has been open until January 2018. By doing this, the questionnaire has served as a hands-on- exercise in two NCP meetings and has enable other NCPs to submit, on a voluntary basis, extra cases for the analysis.

Once all the cases have been collected, CDTI and APRE, as WP and Task leader, have performed the analysis of the data and agree on the set of elements to focus.

2.1 Questionnaire design.

A questionnaire with 44 questions have been designed to capture information on winning proposals based on 5 dimensions, worth to explore further in the context of "highly innovative SMEs with a clear commercial ambition and a potential for high growth and internationalisation".

2.1.1 Company information and status.

This field collects the following 10 elements:

- Company name (although it is anonymized for the sake of the study)
- Company funded year.
- Company HQ location.
- Company number of founders
- Origin of the company (spin off from University or RTO)
- Company dimensions (current FTE and turnover)
- Company target market sector.
- Ph2 information regarding topic and budget.
- Company status, in terms of company development, as expressed within the SME instrument business coaching framework.

Among them, there are 4 key elements worth to analyse to derive potential patterns: 1) The company status, as high growth tends to occur in some stages more than in others[1] 2) the company origin, to identify the suitability of this instrument for spin-offs coming from the research world 3) The company target market sector, especially to understand its timing (long innovation cycles, medium innovation cycles or short innovation cycles, as defined in [2] and finally 4) company

[1] https://hbr.org/1983/05/the-five-stages-of-small-business-growth
[2] Assessing the Investment Potential of SME Instrument beneficiaries. InvestHorizon H2020-

founding team vs. the company FTE, to understand and match company self-development with company status and cross this information on the founding team experience, that is collected as part of the business scalability and business model.

2.1.2 Company value proposition.

The 8 questions is this field aim to understand the value proposition of the company, that is, what is the company selling and how. The value proposition is, by definition, a statement which identifies clear, measurable and demonstrable benefits consumers get when buying a particular product or service. This implies that it has to be useful to convince consumers/clients to select you among different possibilities and for that, the clients have to be able receive/perceive the value you are offering. For that this heading collects information on company offer and competitors landscape, including:

- The company offer (product, service or mix)
- The key elements of such offer
- The main pain points of the demand
- The comparison with the competence and its unfair advantage
- The legal framework that applies to the company.

Within this dimensions, there are a number of elements worth to analyse in a context of companies with high growth potential, starting with the likelihood of projects creating new markets, a compendium of the main elements used to build a powerful value proposition and especially, how winning SME usually tend to protect their unfair advantage over time.

2.1.3 Market knowledge

The 6 questions in this field aims to collect information on how the proposal reflects company knowledge in its market, considering user needs, market structure and competitor analysis.

The 6 questions included in the questionnaire asked for:

- Average growth rate (CAGR) of the company main market
- User needs
- Market structure
- Comparison with competitors
- Main market barrier identified
- Main market barrier addressed in the project

As observed, there is a special emphasis on market barriers, as these can determine company ability to enter in a market and justify the public support needed to overcome them. Generally speaking, market barriers means the existence of high start costs or other obstacles that prevent new competitors from easily entering an industry or area of business. Barriers to entry benefit existing

firms already operating in an industry because they protect an established company's revenues and profits from being whittled away by new competitors. Common barriers to entry include special tax benefits to existing firms, patents, strong brand identity or customer loyalty, and high customer switching costs.[3]

2.1.4 Business scalability

Probably one of the key elements in the context of the SME instrument is the capacity of the company to scale quickly after the SME instrument phase 2 grant, that is if it can have the capacity to multiply revenue with minimal incremental cost. According to Martin Zwilling[4], scalable businesses tend to have high margins (over 50%), low support, and minimum staffs.

To capture the elements of this concept, this field includes 10 questions, but relies on questions already filled in the "company information and status" section and questions to be filled on the next business model section, as the business model itself is a key factor on the potential scalability of the company. Most of the relevant parameters gathered are those proposed within the Business Scalability matrix, developed by the Carnegie Mellon University[5].

The 10 questions are:

- How the company has reached to the current stage
- How much money is needed to reach the market
- External investor in the company
- Expertise of the founding team
- When is the company reaching the market
- Support letters in the project
- Expected growth figures in 3 years (turnover, job, market share vs competitors)

2.1.5 Business model

As the SME instrument is evaluating proposals from a business side, the business model is key to understand the main repetitive features in winning proposals, not only from the product/service side but also from the client perspective. The elements included in this field include a variety of elements ranging from demand, distribution or international presence…

The idea of these questions is to understand the maturity of the different part of the business model and its readiness to scale, and include:

- The main business model of the company (and its relative margin)
- The main revenue model of the company (in terms of effort)

[3] https://www.investopedia.com/terms/b/barrierstoentry.asp#ixzz59icog38M
[4] https://www.forbes.com/sites/martinzwilling/2013/09/06/10-tips-for-building-the-most-scalable-startup/#5a7a05ea5f28
[5] https://cdn2.hubspot.net/hub/41408/file-14210436-pdf/docs/an_introduction_to_the_business_scalability_matrix.pdf

- The existence and size of the demand
- The relationship with distributors.
- The experience of the team

2.2 Questionnaire collection.

A total of 56 questionnaires have been collected in this exercise.

As the country distribution is fixed by design, the best way to characterize the type of companies included in this study is through the fields coming from the "company information and status", namely their age, size and maturity. The distribution of our sample is compared with the overall portfolio of SME instrument phase 2 winners managed by EASME and documented recently[6].

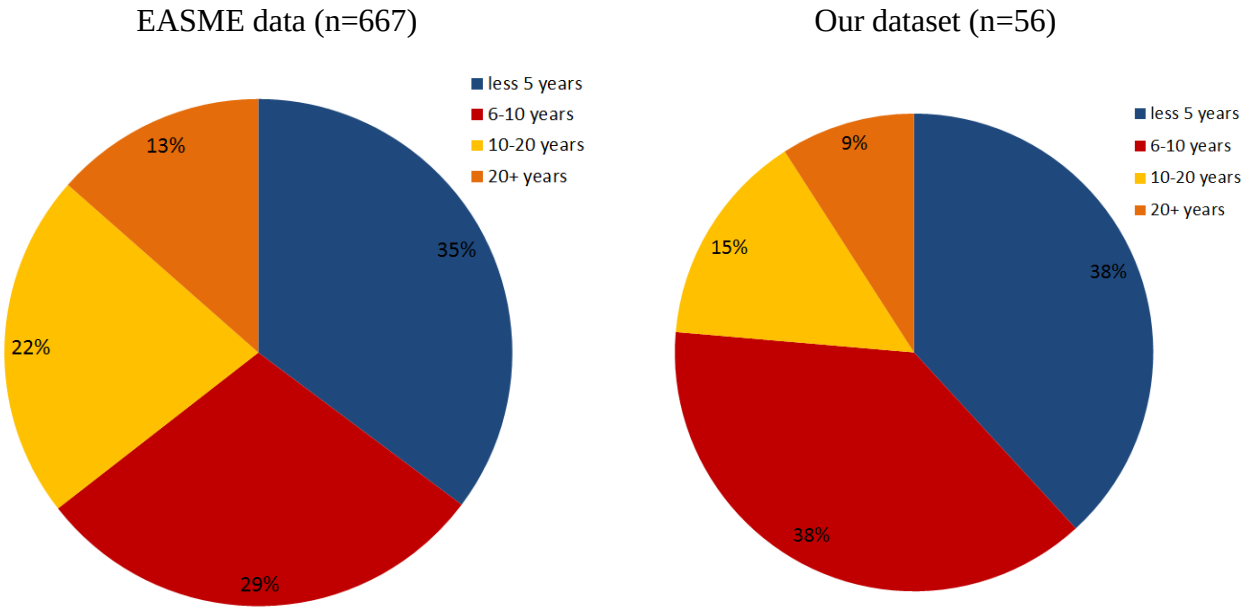

Figure 1: Distribution of companies according to its age compared with the EASME phase 2 dataset.

As it can be seen in the figure for age, 38% of the companies are younger than 5 years (defined as start-ups by the GBER[7]), 24% are older than 10 years and the remaining 38% are in between. Having in mind the phase 2 awardees age distribution observed in figure 1, it can be concluded that our subset selected represent good enough the youngest phase 2 population. However, from a business point of view, maturity (lifecycle) is a more relevant parameter than just age.

Similarly, considering company size, micro and small companies are far more frequent than medium companies. In our dataset, micro share almost mimics EASME dataset, and perhaps medium companies are underrepresented (6% vs 14%). However, having seen the evolution of the instrument along 2014-2017, it is a reality that medium size companies are not the key type of participants that the instrument is attracting.

[6] Is the SME-instrument delivering growth and market creation? Assessment of the performance of the first finalized phase II projects. Final report – 27th of February 2018.
[7] Commission Regulation (EU) N°651/2014 of 17 June 2014.

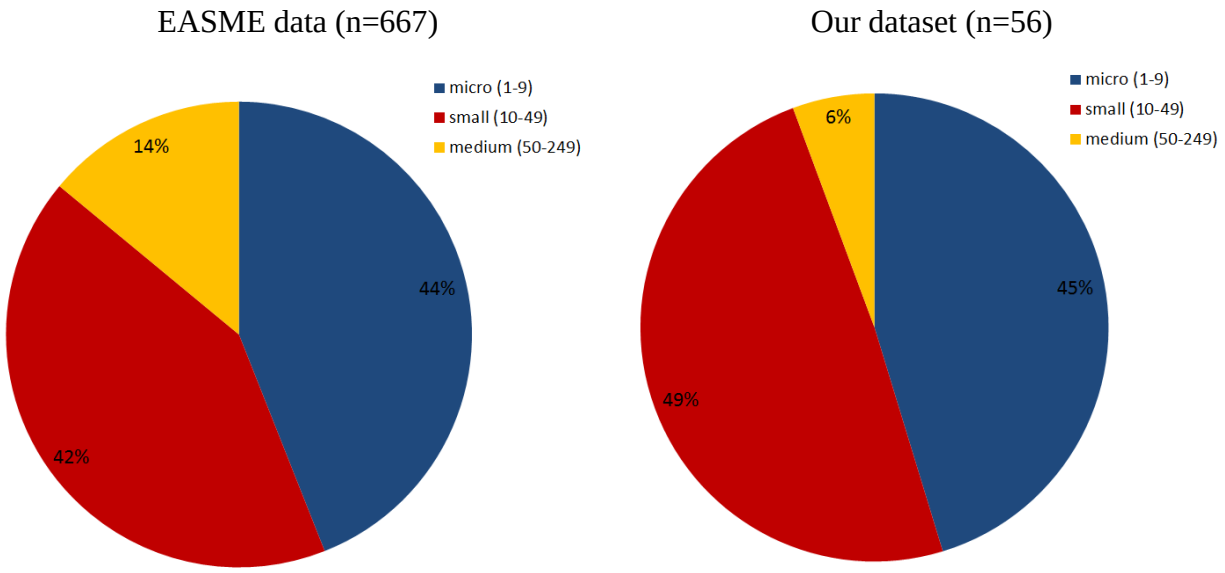

Figure 2: Distribution of companies according size compared with the EASME phase 2 dataset.

As these two parameters do not match fully with the target SME instrument, the company status, as defined within the SME instrument business coaching framework, is used to really ensure the relevance of the subset compared with the current overall portfolio. As seen in the figure, companies in a project-to-project scenario are the ones more common followed by those in the upscaling stage and seed stage.

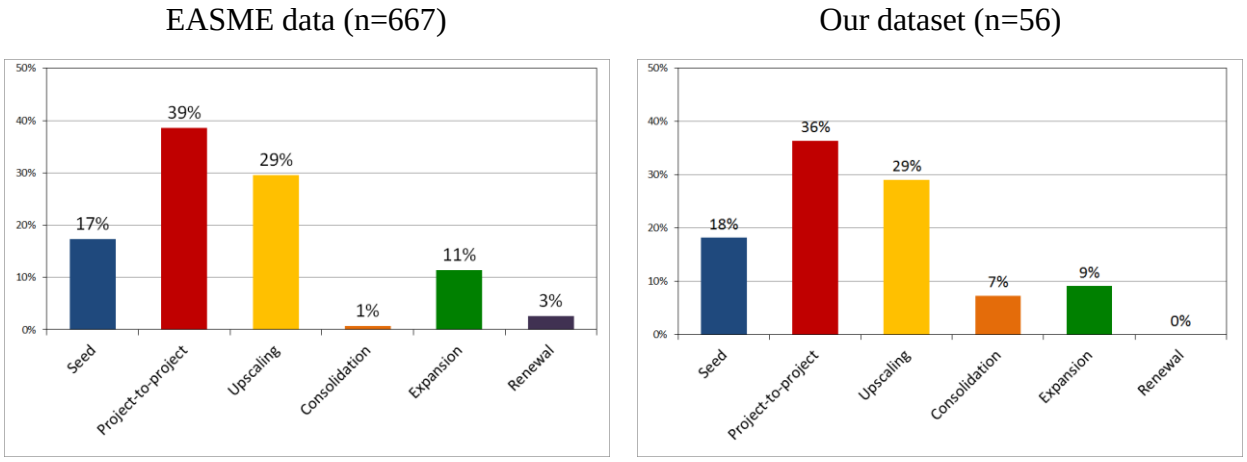

Figure 3: Distribution of companies according their current status in the life-cycle of the business.

Considering the nature of this exercise, an extra dimension has to be considered to present the results and this is the market dynamics, in terms of innovation cycles[8] . Unfortunately, there is not an objective way to classify a project into the three types of market proposed: short innovation cycle markets (SIC), mid innovation cycle markets (MIC) or long innovation cycle markets (LIC).

[8] Assessing the Investment Potential of SME Instrument beneficiaries. 2016. Final report form the Independent Investment Expert Group

The approach of using the topics to do it, as done in the study of reference[9], is not perfect, but can give a preliminary snapshot on the market type for the dataset analysed.

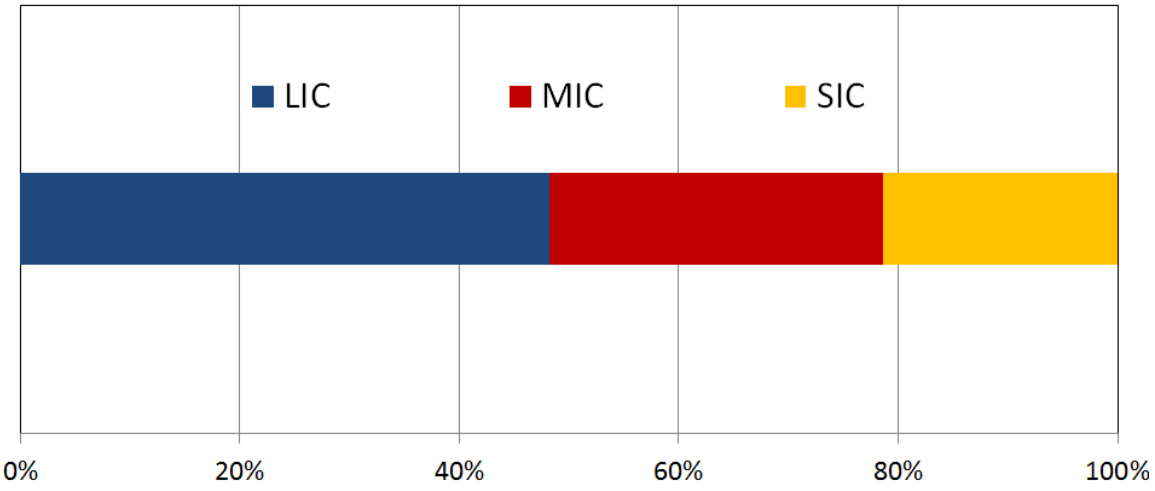

Figure 4: Market innovation cycle distribution based on topic selection. (n=56)

Although it can not be considered in itself a segmentation variable, it has been found in our dataset that 21% of the companies analysed are spin-off from either a university or a research organization. Considering the data from the European Startup Monitor 2016[10], where spin-off represent on average less than 12% of the start-ups created, having a 21% in our SME instrument beneficiaries dataset demonstrates that this instrument fits especially well for these companies to move research to market.

[9] Assessing the Investment Potential of SME Instrument beneficiaries. 2016. Final report form the Independent Investment Expert Group
[10] http://europeanstartupmonitor.com/fileadmin/esm_2016/report/ESM_2016.pdf

3 Results

Keeping the focus on the objective of this deliverable, ("capture the main elements of the SME instrument phase 2 winners value proposition to their market"), this section will also present valuable trends and patterns with respect the market knowledge of the companies and especially on the set of business elements that are key (and typically presented) to be a competitive SME instrument phase 2 business proposal.

3.1 Which type of business fits best to the SME instrument expectations?

3.1.1 What do they sell?

SME instrument aims to target "highly innovative SMEs with a clear commercial ambition and a potential for high growth and internationalisation". According to our dataset, most beneficiaries businesses are based on the commercialization of products, quite more often than selling just services (hardly 10%).

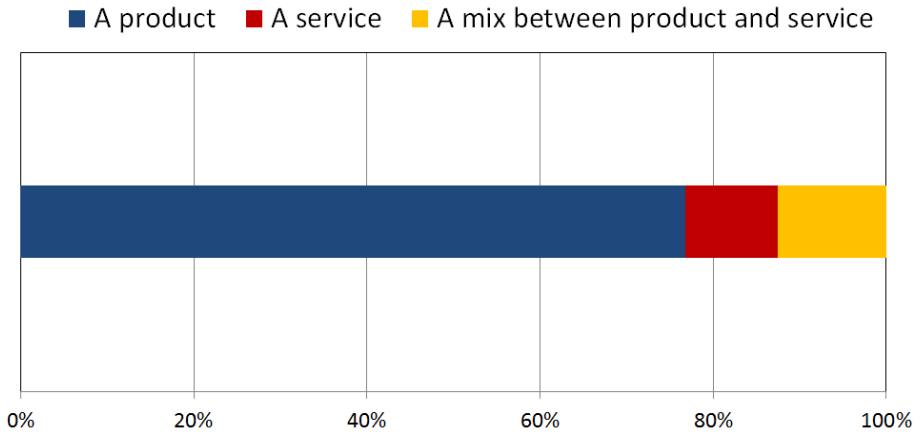

Figure 5: What do you sell? Dataset n=56.

Looking into literature, both ways of operations have their pros and cons[11], however, from a scaling perspective; [12] a service based business has only three options for scaling:

- Turning the services into products.
- Automating wisely part of the services.
- Redefining your service logic through partnering.

In the three of the cases, there's a bit of a pivot involved to move from servicing a set stable of limited clients to servicing an ever growing number without constantly expanding your workforce.

If you only scale by hiring new people, you're not actually scaling at all.

[11] Johnston, Kevin. "Selling a Product Vs. Selling a Service." http://smallbusiness.chron.com/selling-product-vs-selling-service-55446.html.

[12] https://medium.com/hi-my-name-is-jon/how-to-scale-a-service-business-3723c320a71d

Selling a product	Selling a service
Advantages	Advantages
Products offer a uniform solution to customers' problems. If you sell products, you sell identical versions to numerous customers. You may offer advanced or improved versions of products, but even those remain very similar to each other. Your customers can evaluate the features before they buy, and if you do not sell it to one, you can try to sell the same item to another one. When you sell a product, you can focus more on selling than on customizing the product.	When you sell a service, you sell an intangible. You do not have to limit your pitch to pre-existing features, because you can adjust the features of a service to meet the needs of each client or customer. You can emphasize aspects of your service that will solve your customer's problems or satisfy their needs and you can offer a trial period for using your services. If the customer does not keep the service, you do not have used goods on your hands to dispose of. Investment needed in advance, can be quite limited.
Disadvantages	Disadvantages
You spend money on products before you make any income from them. Depending on the complexity, it can be a relevant amount of money and time. Furthermore, in physical products, you must have some stock. Whether you manufacture goods or purchase them for resale, you must constantly estimate how much you need on hand to meet demand. You must constantly work on sales projections so that you know how much inventory to maintain.	You can find it difficult to describe your service to clients precisely. In fact, people you pitch to may not be able to visualize what you do. You can counter this somewhat by focusing on how your service benefits customers, but even then you may have to repeatedly articulate why your service has value. Customers may express more reluctance when buying a service, because unlike a product, they can't evaluate it before they use it.

Table 1: Pros and Cons of selling a product or a service.

3.1.2 Who do they sell to?

77% of the SME instrument beneficiaries analysed are approaching the market using a business to business model (B2B), with less than 10% using a business to customer model (B2C) and a testimonial presence of business to government model (B2G).

Typically, B2C or business-to-consumer businesses sell their products or services to consumer and rely on thousands or even millions of low lifetime value customers (=customers that net the company as little as a few cents to a few thousand euros of revenue on their lifetime). From a customer acquisition point of view, their cost per customer acquisition should be very low in order to make the acquired users profitable.

B2B businesses require fewer customers because each one is worth more. Often, B2B businesses make their money selling a large good or service to another business once to a few times a year. Because B2B businesses live and die by the few customers they have, churn rate (the rate at which customers abandon the service) is a very important metric and the customer acquisition cost can be significantly higher.

Because B2B businesses have a much longer sales cycle and a significant limited set of higher life time value customer, higher touch marketing channels work very well. In fact, many B2B companies generate their first sales to a business owned by someone in the founder's team personal network.

Understanding the logic of the SME instrument and how it funds the final steps to take the product or the service to market through a set of high TRL activities, the high prevalence of this type of business is duly justified as it allows business to gain trust of a first set of clients. For B2C models, these customer development activities are less significant from a market share perspective and projects do not solve their investment in marketing needs, which tends to be rather relevant in these businesses.

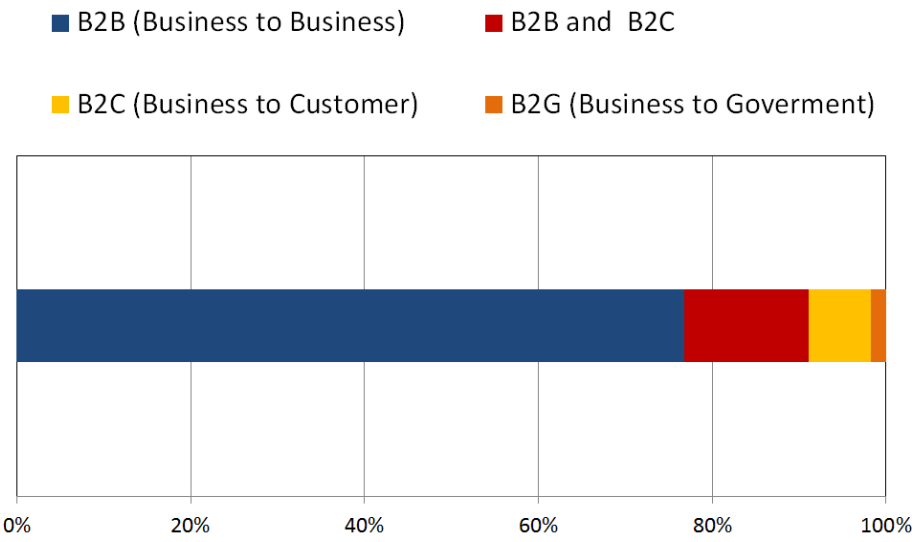

Figure 6: Who do you sell to? Dataset n=56.

3.1.3 How do they sell?

Although there are many ways to characterize how to monetize a business[13], within this data collection we have maintained a pragmatic approach considering a scaling perspective. In this respect, four possibilities were considered: High number of sales-High benefit per sale/ High number of sales-Low benefit per sale/ Low number of sales-High benefit per sale and Low number of sales-Low number of sales (although this option was not even considered in the frame of the logic of the SME instrument. The key question under this is to make a choice around selling more units (i.e. maximizing reach) versus selling more expensive units (i.e. maximizing per-unit

[13] Toolbox set for SMEs for close-to-market activities in H2020. D35 Access4SME project (H2020-730826)

profitability). This is a choice that every SME must make, and depending on the perspective and a number of variables, among other the B2B or B2C approach, one model is better than other.[14]

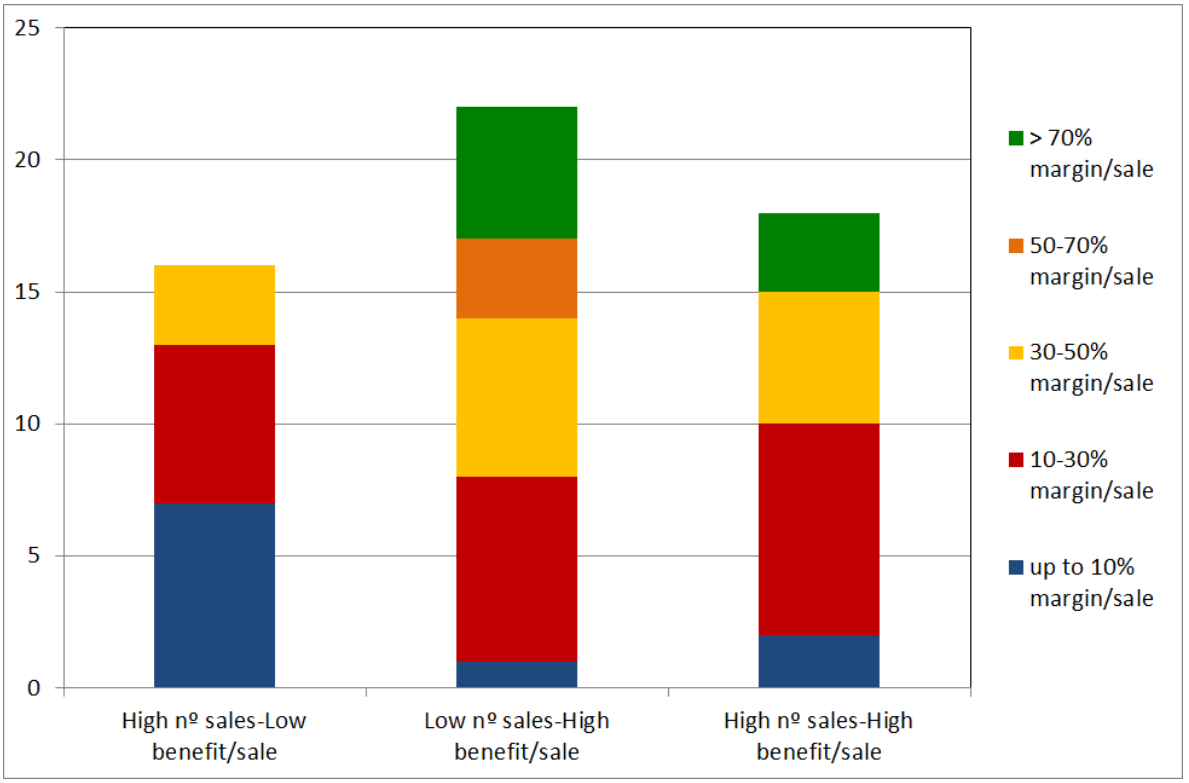

Figure 7: How do you sell? Dataset n=56.

According to the data collected, there is a quite even distribution among the three options. This field has been crossed with the expected margin per sale to check its coherence, even though high margin per sale means different depending on the sectors. As observed in the figure, less than 30% margin occurs in most of the low benefit/sale cases, while margins above 30% is quite more often in the high benefit/sale models, confirming somehow the data robustness.

Seen this in perspective, SME instrument logic prefers businesses aiming to have high margin per sale (which is fact represents 70% of the cases). The question that this fact arises is how this high margin could be maintained in time.

Isolating the 40 cases with high margin/sale it can be seen that in most cases, a solid IP protection is already in place or in progress giving the SME its unfair advantage protection. (Please, note that IP does not only include patents but also other means of formal legal protection)

Only in less than 20% of the cases, this unfair advantage is claimed to be maintained through other means, typically an entry barrier defined by the market itself or by the own characteristics of the product.

Clearly, if IP is possible within a market, it is clearly a welcomed feature in competitive SME instrument proposals.

[14] https://blog.asmartbear.com/price-vs-quantity.html

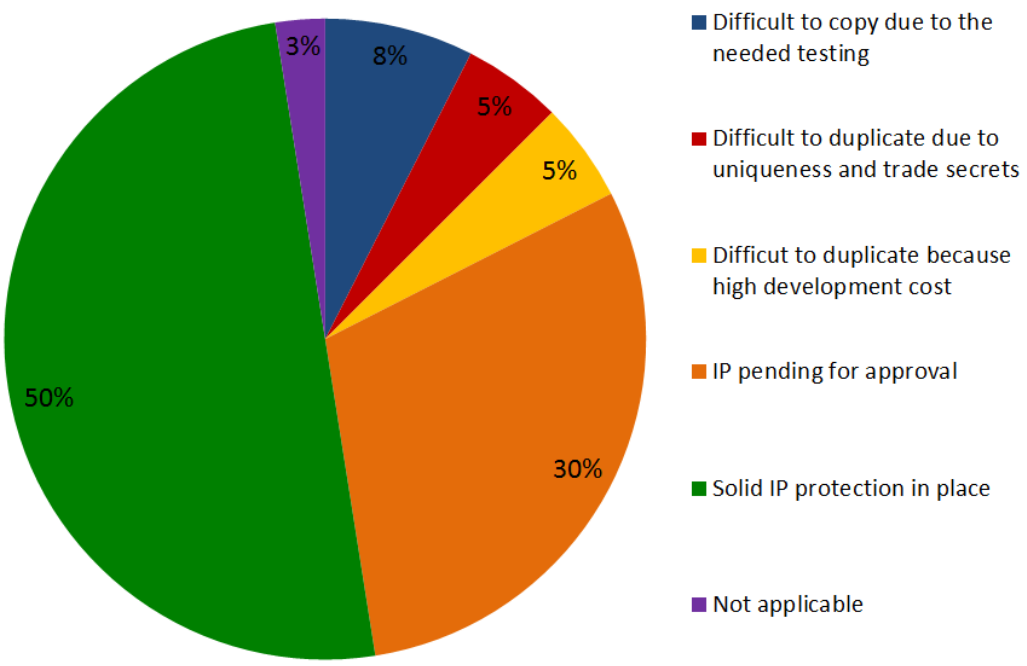

Figure 8: Analysis of the protection of a high commercial margin business.

3.1.4 Why do they sell?

A company value proposition is a statement which identifies clear, measurable and demonstrable benefits consumers get when buying a particular product or service.

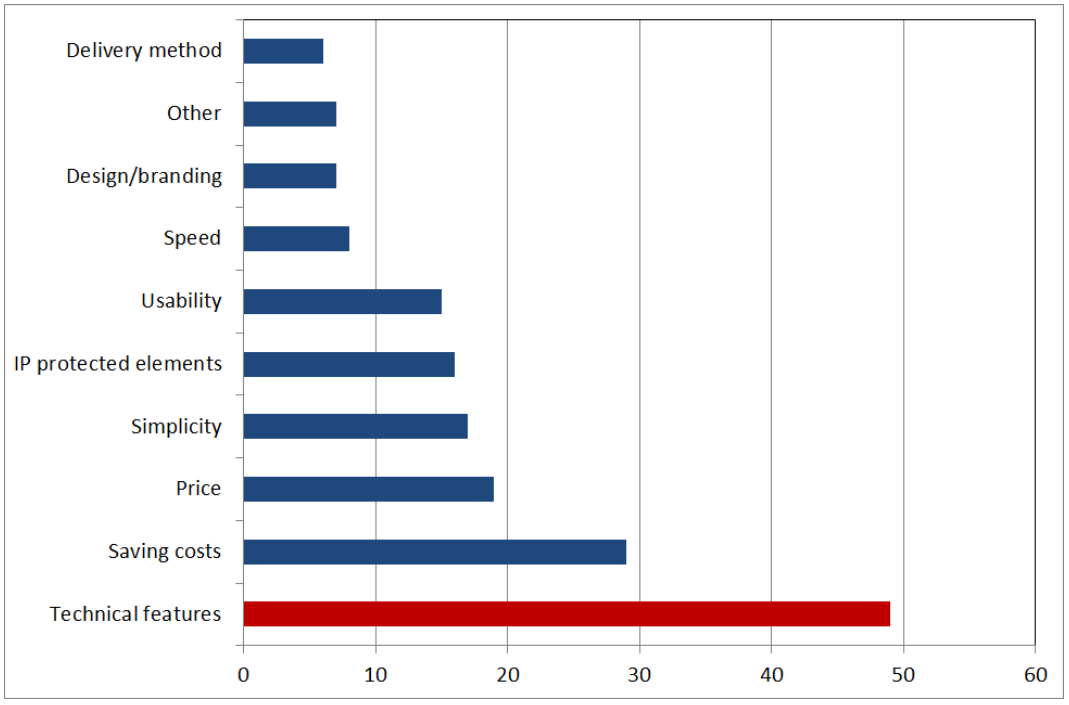

Figure 9: Value proposition elements claimed by the beneficiaries (n=56, several options were possible)

As it should convince consumers that the company product or service is better than others on the market, it typically has a comparative format and include clear claims on what value this product or service is giving to the client.

According to the data analysed, "technological features" is still the top claim that SME instrument beneficiaries are offering their client as the key element of their value proposition, although saving cost is also present in more than half of the cases. Conversely, elements as delivery method or design are only cited in less than 20% of the cases.

Compared with the user needs identified in the different markets (next figure), it can be seen a good match between user needs and company offering at global level. However, as the data is obtained from the proposal document, it is clearly biased towards the technology side.

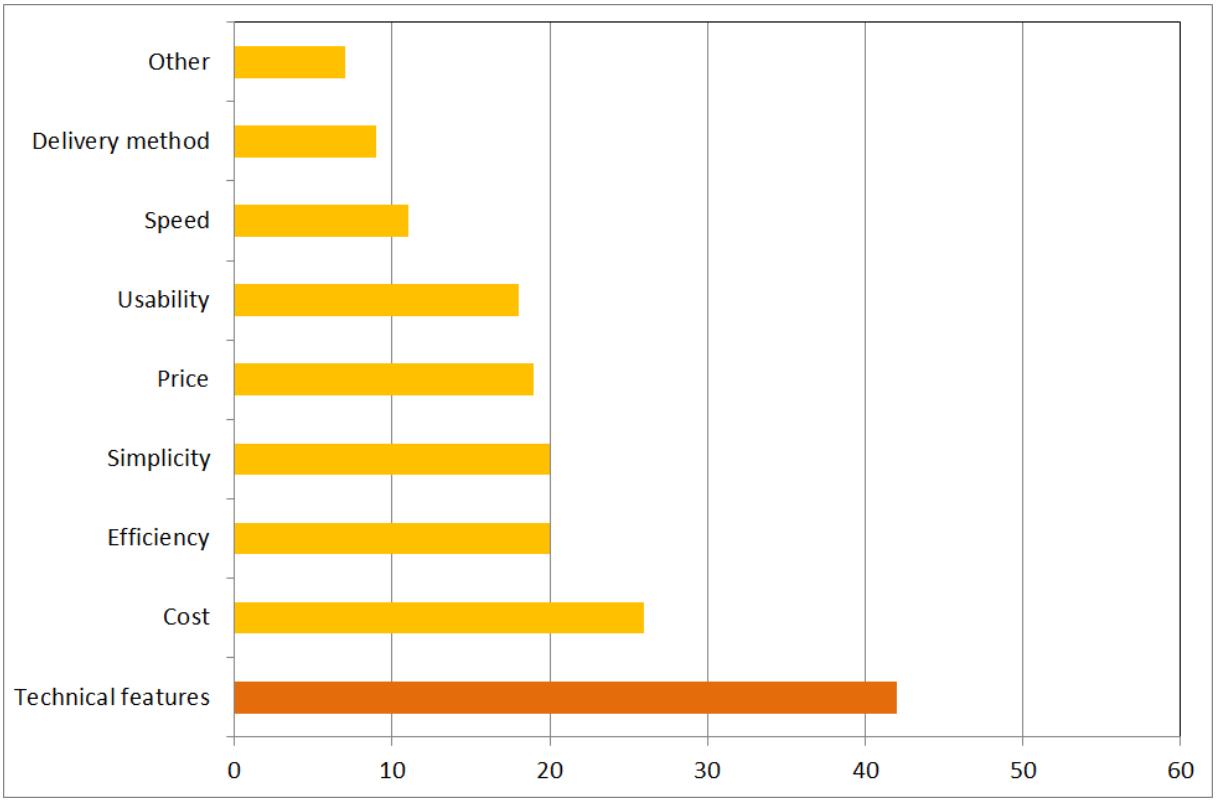

Figure 10: User needs identified by the beneficiaries in their markets (n=56, several options were possible)

Using instead how the company "sells" itself in the market, it can be seen that in 55%f of the cases they are approaching a known problem from a different perspective (disruptive innovation) while in 40% of the cases, they are offering an improved version of the product (functionalities or lower cost), suggesting an incremental innovation approach.

This data is coherent with the data from the next figure where the companies compare themselves with competence, suggesting that in 2/3 of the cases they are approach differently the market either for a known problem or under a new problem identified. With this data, it can be said that, in 17% of the cases, they are claiming to be already "market creating innovators" satisfying a new need or delivering the first product for an unserved need.

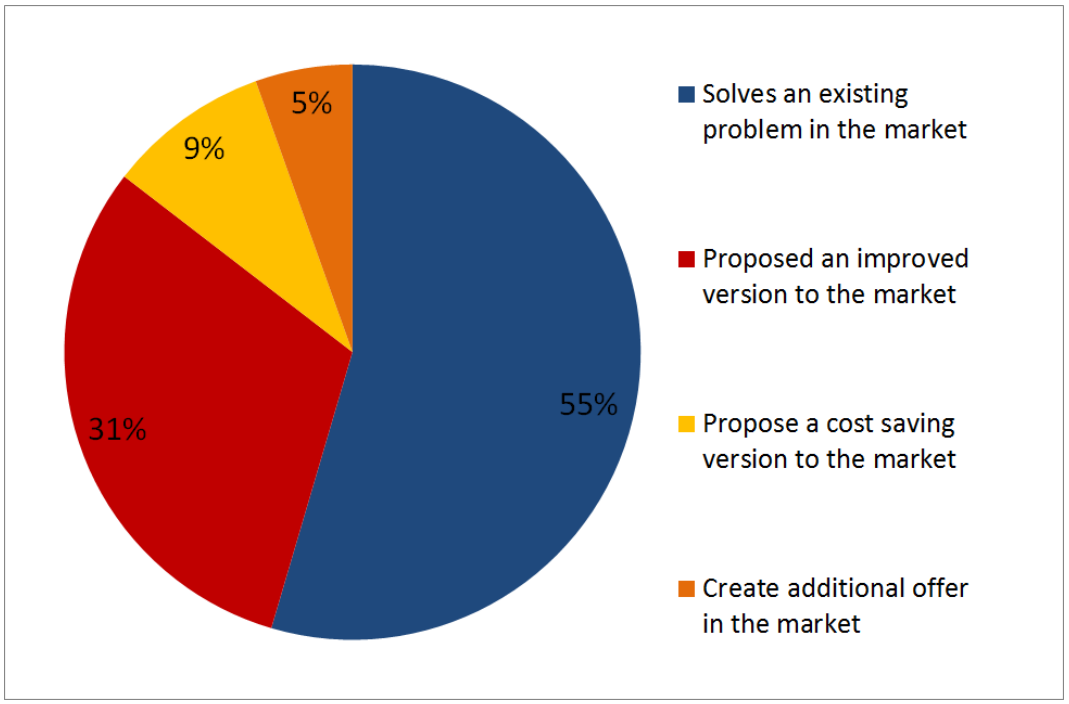

Figure 11: How companies present their offer with respect to the market.

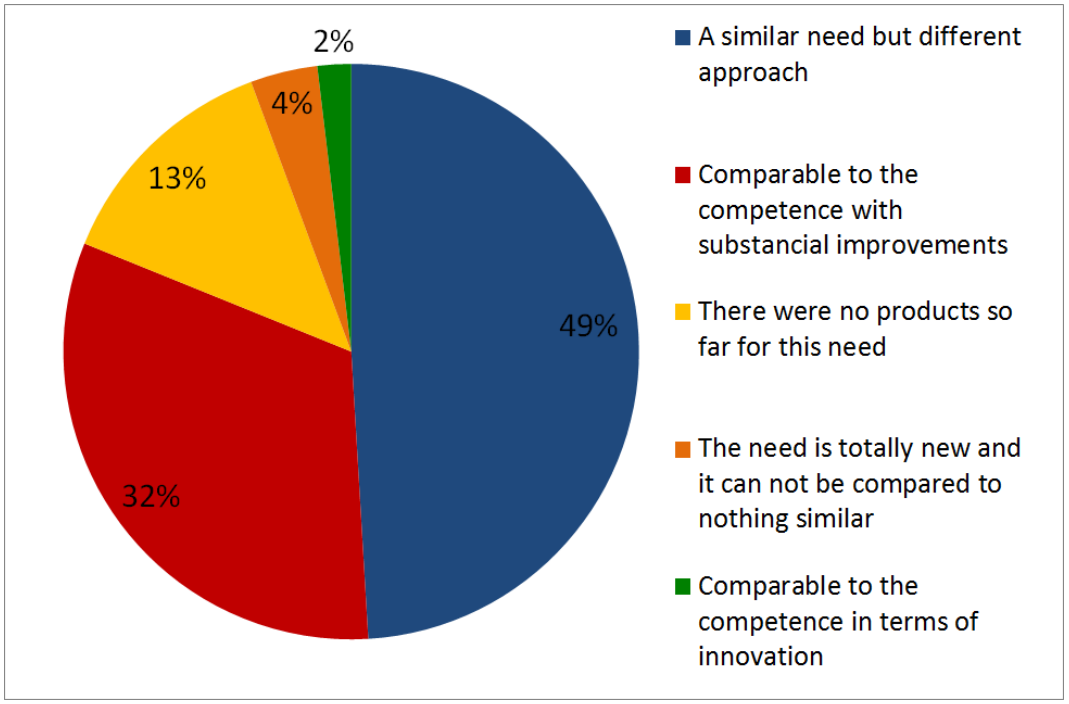

Figure 12: How companies present their offer with respect to the competence.

3.1.5 How quick they expect to grow?

Considering the target companies that the SME instrument is approaching, growth expectations is a relevant parameter to look at, despite it is only an estimation to be done at proposal stage.

In that respect it can be seen that turnover is expected to be at least doubled in more than half of the cases while in terms of employment, company expect to grow a bit less, with the most common case being between 20-50% increase.

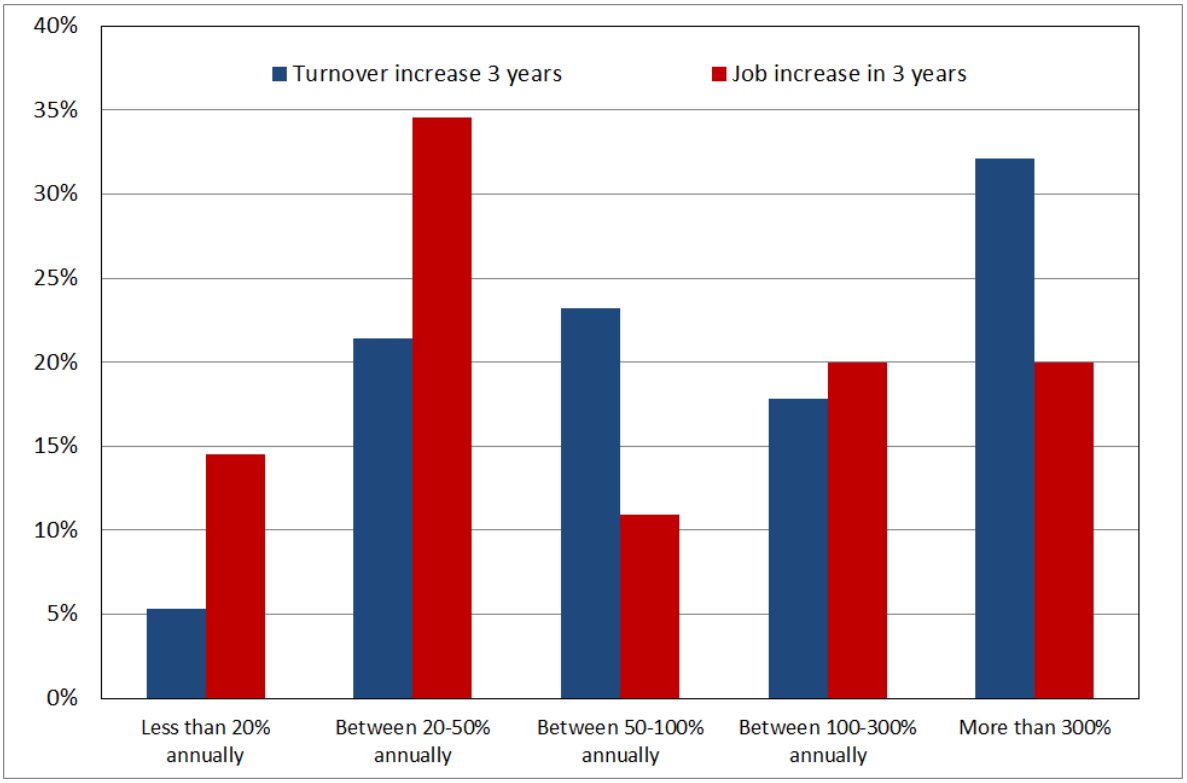

Figure 13: Turnover and job increase expectations (n=56)

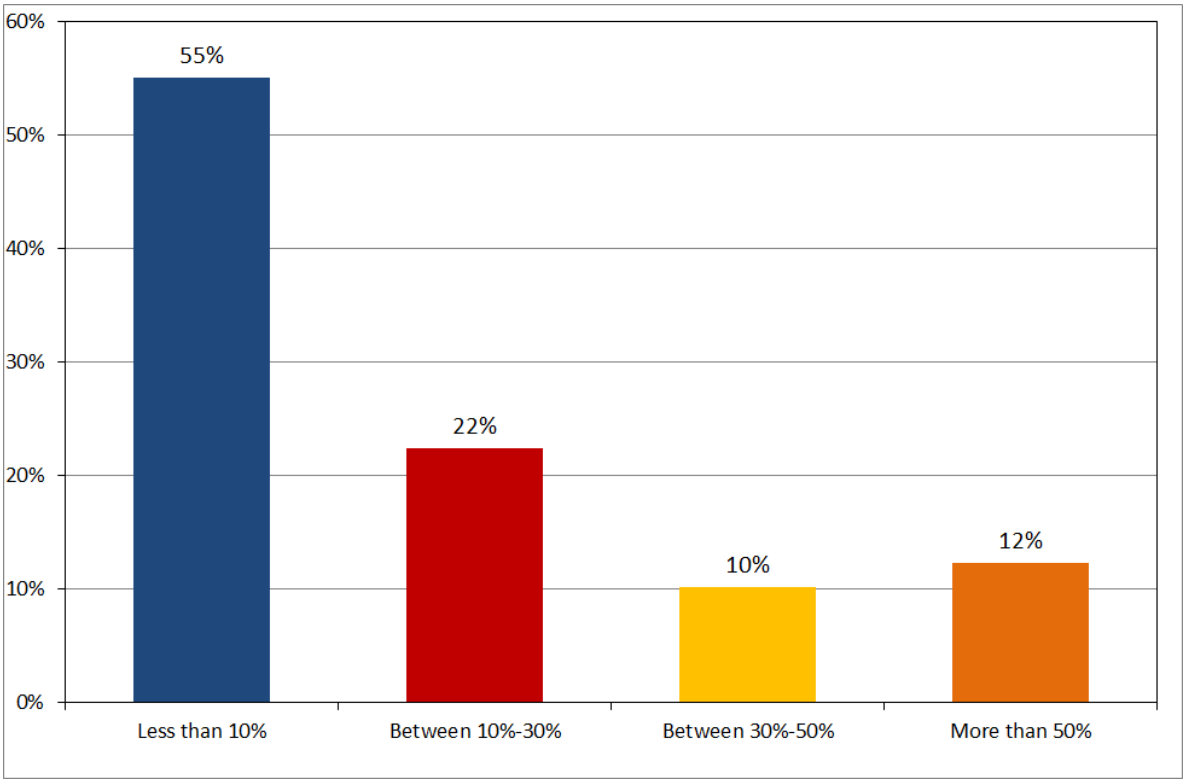

Figure 14: Market share expectations after 3 years of having finalised the project.

Even more relevant than job and turnover is to see their expected market share three years after the project. This is really the measure to understand company ambition within their sector. It can be seen, that in 45% of the cases this figure is above 10%. Defining if this target is relevant enough to become a key player in the target market is very market-specific, however a further analysis per type of market will be presented in the next heading.

3.2 What type of markets fits best with SME instrument expectations?

3.2.1 Market growth and structure

As the SME instrument is targeting SME with high growth potential, it makes sense to have a preliminary analysis of which market conditions foster the creation of high growth firms, although is widely documented that 1) high growth is not disproportionally present in any specific sector, including technology-based ones and 2) that by definition, high growth is not a steady phenomenon but an episode in the company lifecycle. [15]

In this sense, markets with positive CAGR are, by definition, the natural ecosystems where high growth episodes occur, especially when companies are young and small. This is concluded looking into the reported CAGR of the target market of beneficiaries, as in 60% of the cases, this CAGR is above 10%.

Analysing market characteristic under its structure, the SME instrument beneficiaries markets are:

- Market dominated by a reduce set of players (45%). In oligopolistic markets, independent suppliers (few in numbers) can effectively control the supply, and thus the price, thereby creating a seller's market. They offer largely similar products, differentiated mainly by heavy advertising and branding, and can anticipate the effect of one another's strategies. When the market is segmented enough, it is the most common scenario, typically with one or more LE in the lead.
- Very fragmented markets with many players (33%). In these markets, there is no one company that can exert enough influence to move the industry in a particular direction. The lack of major players in a fragmented market means that customers have not yet given its loyalty to any one business. You have room for both innovation and experimentation, and you do not have to fight for market share against a major brand. Fragmentation means you have the opportunity to develop your business according to your own instincts and market research, however this also mean that having high margins is less probable as the market gets closer to the perfect competition market.[16]
- Emerging markets with still not many players (18%) In these markets, there is still not a clear picture of market share, as the market is not consolidated. There are companies entering it and testing the customer behaviours and can typically be a niche market of a bigger market share, or even a blue ocean that is in the process of being populated. In this

[15] OCDE 2013. "An International benchmarking analysis of public programmes for high growth firms.
[16] https://en.wikipedia.org/wiki/Perfect_competition

scenario, customers are still under a testing mode and not even loyal to the market needs identified. These markets are still malleable and evolve towards the mono-oligopoly model or towards the perfect-competition model.

- Blue Ocean markets (4%) These markets behave based on the view that market boundaries and industry structure are not given and can be reconstructed reaching an extra demand which is out there, largely untapped. The key of the problem is how to reach it, requiring a shift of attention from supply to demand, from a focus on competing to a focus on value innovation to unlock new demand. [17]

Crossing CAGR information with market structure, as seen in the figure it can be seen that CAGR expectations are the highest in the blue oceans markets (4% of the cases analysed), while is rather variable in the rest of market scenarios (basically depending on the market itself).

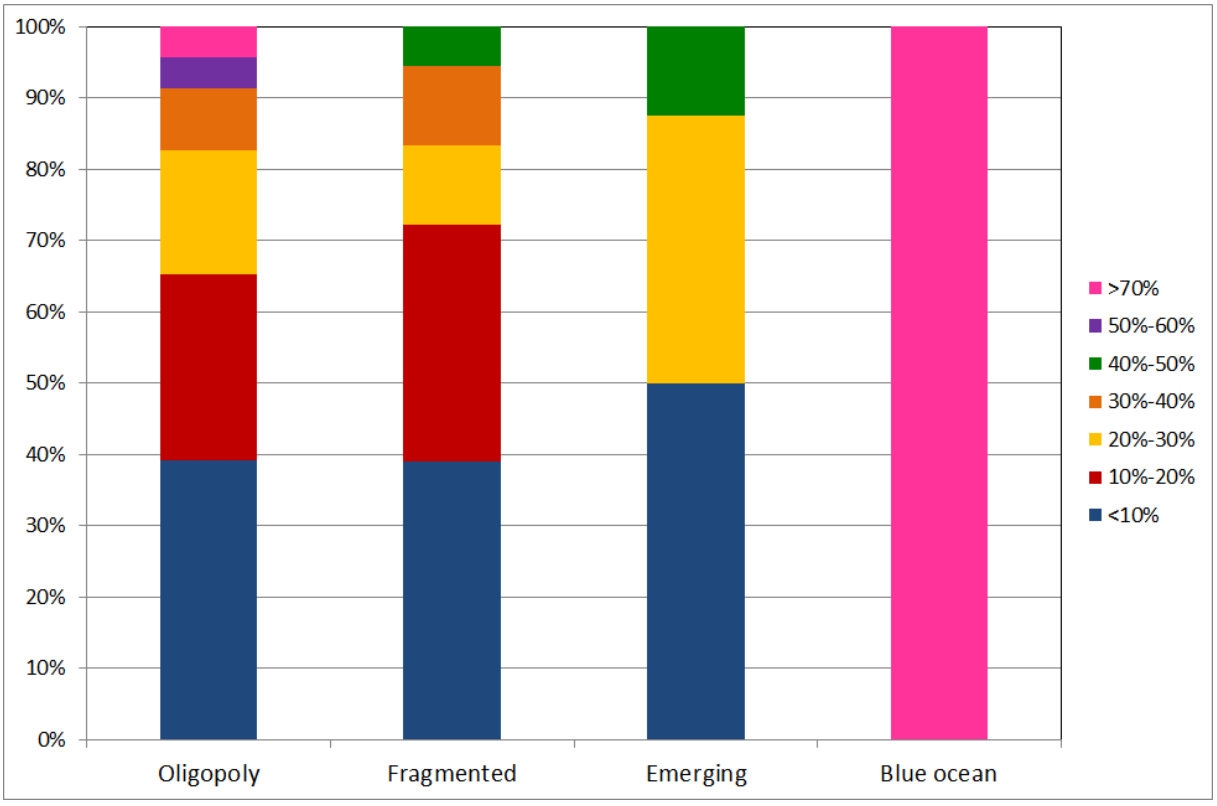

Figure 15: CAGR depending on the type of market structure (n=49)

Crossing company expected market share along these four market types, lead to the distribution found in the next figure.

Clearly, SME instrument are prone to be more market relevant in blue oceans market and emerging markets where competence is not yet fully established. Clearly, the SME instrument has the strongest added value in those cases, helping SME to accelerate their market positioning to capture a higher market share. With respect to markets already established, it is also highlighted that the companies expect that the SME instrument support help them to become a relevant partner in oligopolistic markets as almost 40% of them expect to reach more than 10% of the market share. In

[17] https://en.wikipedia.org/wiki/Blue_Ocean_Strategy

very fragmented markets, it seems that the SME instrument has the least expected impact, however due to the nature of these markets, size tend to be large enough for many companies to take advantage of that.

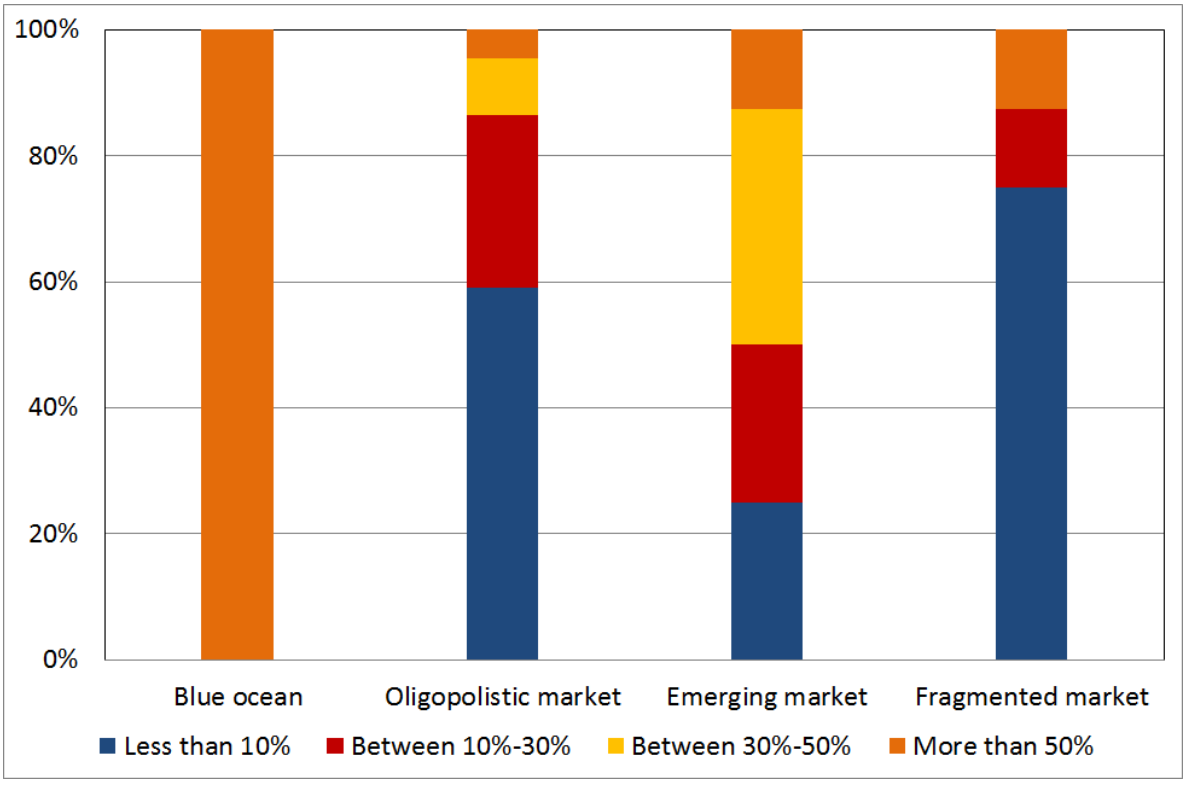

Figure 16: Market share expectations of SME instrument beneficiaries in the different markets (n=56)

3.2.2 Market barriers

As most of the innovation policy measures covers market failures, in the SME instrument case, these market failures are linked to SME different market barriers that hamper their ability to benefit from the business opportunity they have identified.

In this respect, the analysis has identified the most common market barrier that need to be surpassed depending on the market type and on the market innovation cycle length.

As observed in the next table, market entry cost and the need of demonstrating the product/service are the two key elements highlighted in most of the cases. Apart from these two, each market structure has a different couple of needs to be covered thanks to the SME instrument.

In oligopolistic environments, the needs are a high investment (oligopolistic markets tend to have high entry costs) but also the urgent need of finding a first strong reference. Conversely, in very fragmented markets, this need is more linked to reaching enough client mass to build a strong positioning in the market together with complying with regulation (typically very fragmented and resource consuming). Finally, in emerging markets which are being shaped, investment to reach quickly is also a relevant market barrier.

These arguments are strong elements to deserve a public support as the one offered by the SME instrument, since in many cases, private funds are not eager to cover this high risk.

Market barrier linked to the…	Blue ocean (n=2)	Oligopoly (n=25)	Fragmented (n=18)	Emerging (n=10)
Demonstration status of the solution	**0**	**10**	**9**	**8**
Customer loyalty to established brands	0	2	5	0
Investment needed to reach the market	1	7	2	5
Acquisition of enough client mass	1	3	6	2
Finding a lead customer	0	6	1	0
Market regulation in place or forthcoming	0	6	8	3
Market entry marketing costs	**0**	**16**	**11**	**6**
Other market barriers	0	1	6	1

Table 2: Market barriers vs market structure.

Making this analysis based on market innovation cycles, market entry cost and the need of demonstrating the product/service are still the two key elements highlighted in most of the cases.

In this case, for LIC markets, regulation becomes one of the key barriers while for MIC, investment to reach the market is still relevant. In SIC, this is no longer so critical and the barrier shift to getting enough clients mass.

Market barrier linked to the…	SIC (n=11)	MIC (n=17)	LIC (n=27)
Demonstration status of the solution	**4**	**8**	**15**
Customer loyalty to established brands	1	3	4
Investment needed to reach the market	2	6	6
Acquisition of enough client mass	4	2	6
Finding a lead customer	0	2	5
Market regulation in place or forthcoming	4	3	10
Market entry marketing costs	**7**	**9**	**19**
Other market barriers	2	1	5

Table 3: Market barriers vs market innovation cycle.

3.2.3 Market knowledge

As the SME instrument has a clear market focus, knowing the market is an asset to be demonstrated. Within the questionnaire, there are three elements that somehow measure this knowledge;

- The level of definition of the business opportunity, in terms of existence and size.

- The inclusion of support letters to the project (basically from potential clients of key stakeholders) trying to evaluate how far is a real traction for the business.
- The degree of maturity of the channels to reach to their market and the key partners to deploy the business.

The combined vision of the three elements can give a clearer picture of the expected dimensions worth to explain clear in the proposal.

Starting from the demand, existence and size is the most relevant parameter that frames a business opportunity. As such, all cases had already tested its size and its existence, however for that, different sources have been used. In 95% of the cases, they have already verified the existence of the demand through a direct experience in the market with potential users or based on current client needs. Furthermore, in 40% of the cases, they report having used also a formal data analysis to complement such demand existence.

Regarding the size, 57% of them claim to know its size based on an in-depth study and historical data while 27% of the sample has validated the business opportunity size based on their current customers. The rest of the sample (17%) is still working to validate it (typically during the phase 2 project) and so far they are working based on rough estimates of the demand size.

To complement these two preliminary figures, the existence of will to pay among their customer is a second element to test business viability. Numbers clearly show that having a letter of intent is key in successful SME instrument application (88% of all the cases had at least 1), especially coming from clients (almost 80%) or key stakeholders (60%). It clearly adds a trust element to the business side of the proposal.

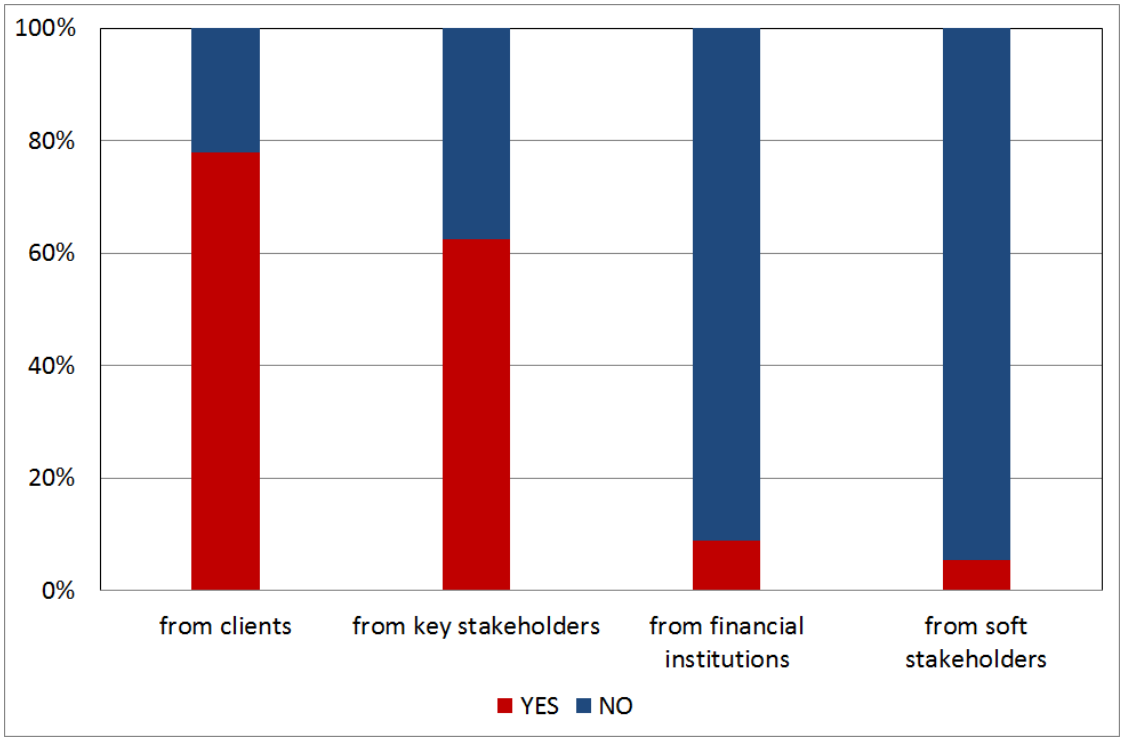

Figure 17: Letter of intent attached to the proposal coming from… (n=56)

Finally, the maturity of the distribution channels gives an indication on the readiness of the business model itself. In this case, it can be seen that distribution channel are mainly so far planned but not yet secured., while it occurs similar with other key partners needed to deploy the project. As observed, hardly 20-30% of the projects have already the business model market ready in that respect.

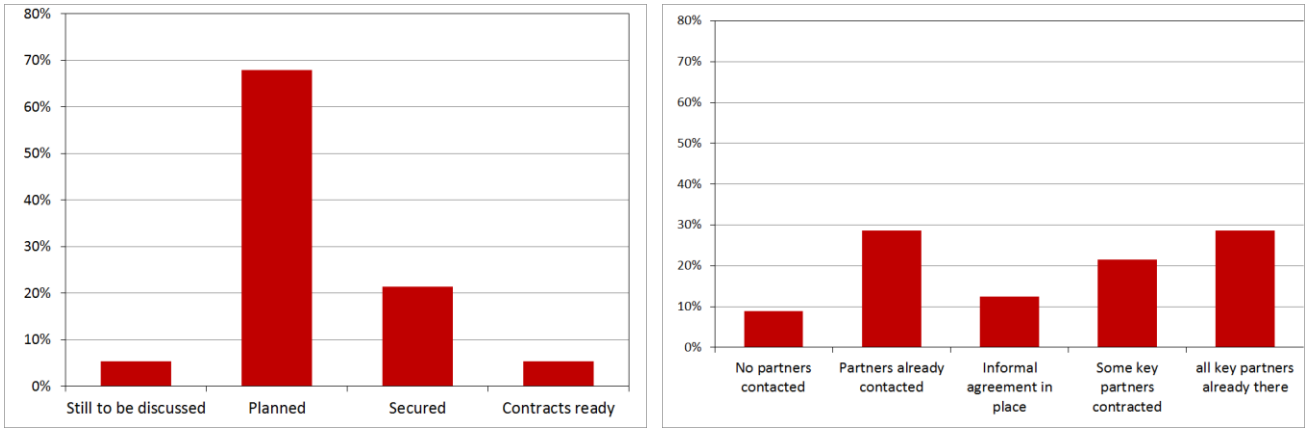

Figure 18 (Left): How far are the distribution channels ready? (Right): How far are key partners already involved?

3.3 What type of team fits better with the SME instrument expectations?

The team is at the heart of any SME ability to take advantage of a business opportunity as the execution is the real driver of an SME vision, business model planning and meeting the different milestones. To analyse this pattern in the SME instrument dataset information on the company history and the managing team is captured.

3.3.1 The history of the company and its investor (if any)

Since the SME instrument starts with a TRL6, information on how they have reached there is a relevant parameter to see its commitment so far with their product and its complexity. Three conclusions are taken from the questionnaires analysed:

- In most of the cases, they have reached TRL 6 committing their internal resources (80%).
- It is also very relevant to see that the SME instrument is a follow-on funding for other public funding in almost 60% of the cases
- Only in 7% of the cases, the company business is based on acquired IP developed by a third-party.

Besides, in 73% of the cases, the company already had some type of investment before entering the programme. As it can be observed in the next figure, the most common case is a VC like investment, followed by bank debt. Other types of equity investment, as Business Angels or industrial partnerships, are also representative in the dataset as they occur in around 20% of the cases. It can be concluded that this external investment is also acting a kind of validator of the business idea to ensure that the SME instrument proposal has a tangible potential.

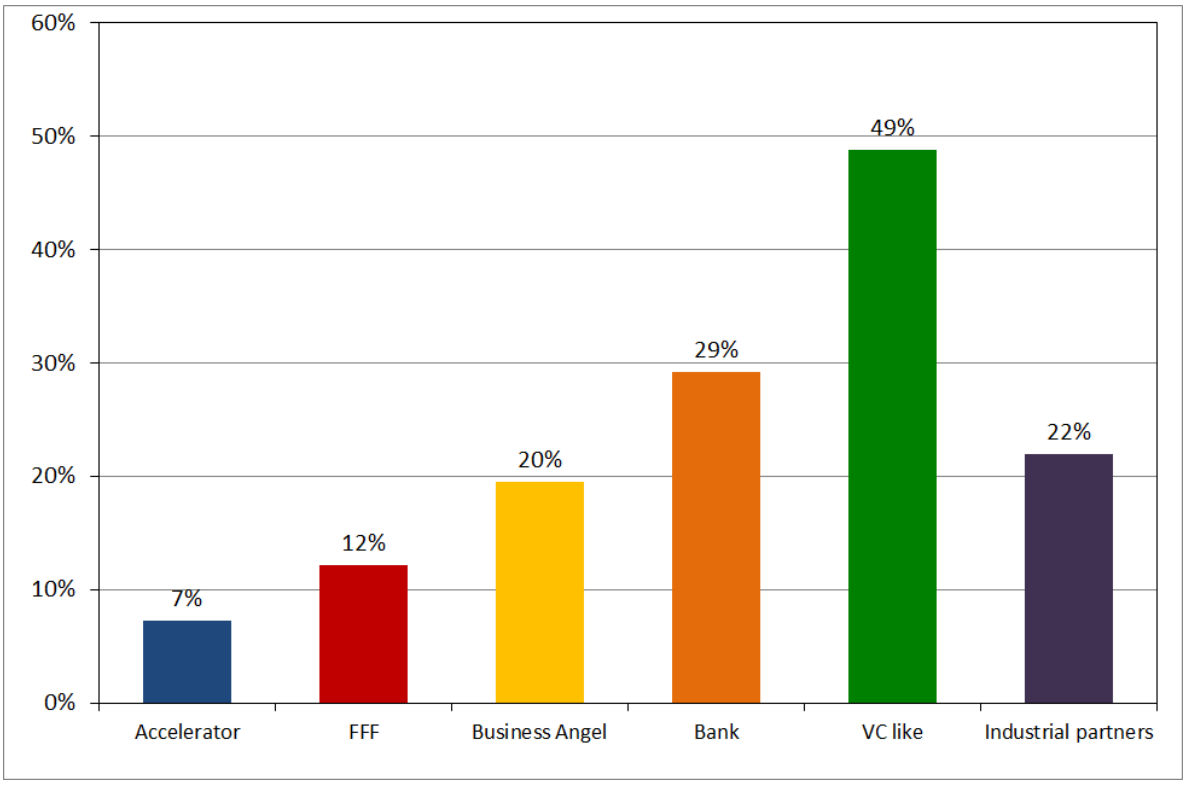

Figure 19: Type of investment in the SME, considering that you already had some (n=41 out of 56)

3.3.2 The business experience of the team

The SME instrument is targeting high growth companies and as such their managing team should bring experience in managing companies. Analysing the corresponding fields in the questionnaire, in all cases the conclusions are converging: having a team with business and management experience is a must in the SME instrument.

Figures show that in 100% of the cases, they reported previous business experience from the team and in 2 out of 3 reported having worked previously in a managerial business position. Furthermore, almost half of them already had a previous experience as an entrepreneur.

Looking specifically to this subgroup (25 out of 56), 60% reported to have started 2 SME, 20% reported to have started more than 2 SMEs and even 24% of them reported to have successfully grow and sell a previous SME.

4 Learnings and recommendations

The results of this report highlights the common patterns observed in a representative sample of the SME instrument beneficiaries (almost 60) as "food for thought" for NCPs or intermediaries aiming to target correctly this kind of support to their SME clients.

As the analysis has been done following three questions

- What type of business fits best within the SME instrument?
- What type of target market fits best within the SME instrument?
- What type of teams fits best within the SME instrument?)

the learnings have been also aligned to these three dimensions.

Business dimensions.

- **B2B funding needs in the "valley of death" fits rather better than the B2C funding needs** (first large contract vs large marketing effort to reach many early adopters) **with the SME instrument funding offer**, and as such, it can be seen in the sample that in most case, an SME instrument project will primarily aim to sell under a B2B approach. Having this approach has a big advantage from a scaling perspective as it just needs a "manageable" number of clients to interact with, increasing their lifetime value along the time. Due to the technological heritage of the programme, **typically an SME instrument still aims to sell a product rather that a service** which also facilitates scaling considering economies of scale in manufacturing and distribution[18].
- **High margin per sale is a common expectation in most of the cases,** even considering that each sector understand differently what is a "high margin". The SME instrument proposal needs to specifically explain how they can be able to charge such high margin and how they will maintain it in time. **The most common argument for that is to have a solid IP protection already in place or in progress.** As alternative, this unfair advantage is claimed to be maintained through an entry barrier defined by the market itself or by the own nature of the product.
- The SME instrument sample beneficiaries **tend to approach a known problem from a different perspective (disruptive innovation) in almost half of the cases,** with a better offer approach in 30% of the cases (incremental innovation) **and so far only in 20% of the cases claimed to satisfy a new need or delivering the first product for an unserved need (market creating innovation).** Considering the actual frequency of occurrence of market creating innovations, it can be envisaged that if it is the case and is well-justified, it is a key winning asset for being a successful SME instrument. If not, disruptive innovation is well enough.

[18] SaaS is considered here a product rather than a service since it is really developed as such although it is exploitable as as a service. In fact, physical product and SaaS are the top "outputs" of the projects analysed.

Market dimensions.

- The SME instrument under EIC aims to fund innovations that create new markets, so **blue oceans are the real target of the instrument. However** it can be said that **emerging markets** (still in development) **or fragmented markets** (where there is room for many competitors) **is a good alternative for powerful SME instrument proposals** if they are able to demonstrate that they know their dynamics well enough.
- **The existence of strong market barriers gives logic to using public funds to help SME to grow, although they are very dependent on the market structure.** In oligopolistic environments, the needs are a high investment (oligopolistic markets tend to have high entry costs) but also the urgent need of finding a first strong reference. Conversely, in very fragmented markets, this need is more linked to reaching enough client mass to build a strong positioning in the market together with complying with regulation (typically very fragmented and resource consuming). Finally, in emerging markets which are being shaped, investment to reach quickly is also a relevant market barrier.
- As the SME instrument deals with market, **it is fundamental that the market opportunity is already well tested (in existence and size).** Moreover, the existence of "will to pay" among their potential customer is crucial for the application process. **Having letter of intent from potential clients is key in successful SME instrument application.** Similarly, the SME instrument application has to explain the readiness of the business model itself, especially the route to market (typically distribution channels, either own forces or third party forces). This aspect is a relevant issue to planned and show some advances in the proposal, but most of the projects work on securing them during the project duration.

Company dimensions.

- **Age and size do not set a typical SME instrument target company** as 38% of the beneficiaries are younger than 5 years in terms of age (defined as start-ups by the GBER[19]), and 44% are micro SME in terms of size. Clearly, **business maturity is a more relevant parameter for targeting the SME instrument, support especially to those SME which are in the project-to project phase or in the upscaling phase.**
- As the SME instrument start its support in TRL 6, the companies already claimed to have had previous investment, either internally (80% of the cases), either thanks to a previous grant phase at some level (60% of the cases) of thanks to external investors (73% of the cases). **This pre-investment acts a kind of validator of the technology or the business idea to ensure that the SME instrument proposal has a tangible potential.**
- Being the team a key factor of success of the SME instrument business, **a strong business team with business experience is a must in this programme, either as a previous experience in larger corporations or as an entrepreneur.** Only with technological staff is hardly impossible to get an SME instrument, especially now where the face to face interview in Brussels is added to the evaluation process.

[19] Commission Regulation (EU) N°651/2014 of 17 June 2014.

Although the proposed herein elements do characterize a typical SME instrument "robot portrait" winning proposal from a business perspective, they have to be, in any case, clearly explained in the proposal document, properly substantiated with figures and data and convincingly exposed in the face to face interview part of the phase 2 evaluation process.

To help companies in that process, the SME toolbox proposed by the project and downloadable here can be a perfect suite of tools to work in-depth several of the different aspects herein presented.