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## INTRODUCTION

The SMARTENERGY project implements a set of integrated actions aimed to enforce the cooperation level of 5 different but leading energy clusters in their respective countries (i.e. Environment Park - Italy, Tenerrdis - France, Archenerg - Hungary, Flux50 - Belgium, Cluster Tweed - Belgium) and 1 major cluster for digital technologies (Minalogic - France). The specific objectives of the SMARTENERGY project are:

- Increase the business support capacity of the clusters in the partnership, with a special focus on supporting SMEs to bring to the market new products and services which need to increase their maturity and readiness level from the final prototype level (TRL 7) to the production/ commercialization level (TRL 9);
- Support at least 42 SMEs, 10 clusters and 8 technology centres/ scaling up support organisations in accessing the global market;
- Develop a common strategy for the ESCP, focused on the design of an alliance or metacluster for energy transition at EU level.

To successfully achieve these objectives, the SMARTENERGY project integrated approach will consist of a range of activities: a detailed benchmark of the services offered, several capacity building and peer to peer activities for cluster managers aimed to develop new skills in providing customized support services, and testing and implementing activities aimed at providing these services in the most effective manner through the new 'ClusterXChange' pilot scheme.

Activities will mainly target SMEs (i.e. members of the clusters and of other clusters being part of the network), European cluster management staff, regional authorities involved in S3 implementation in the respective regions, and the innovation actors being part of their ecosystem for innovation.

The improved skills and cooperation level of the SMARTENERGY ESCP-4x will result in a stronger capacity of supporting market outreach of innovation in the emerging industry of digital energy towards energy transition.

## EXECUTIVE SUMMARY

The report is the result of a benchmarking exercise carried out under the EU-funded (COSME programme) project 'Grow faster with energy clusters towards energy transition'. The detailed benchmarking of the services offered by both the partner clusters and the actors in their innovation ecosystem provide the basis for targeting those services aimed to increase the business support capacity of the clusters in the partnership. Existing support services are often duplicated and therefore increasing business support capacity of clusters in the partnership requires new approaches in the delivery of services to fall outside classic services. The results of the surveys show that companies face critical challenges, including finding customers, breaking barriers in access to finance, accessing new markets, and bringing products to the market. The benchmarking exercise paves the way to create innovative services outside the market that can address challenges of the companies. This is especially important in the current time of COVID-19 where businesses face problems to survive. Businesses need to increase growth and sales.

Current strengths of the partner clusters offer the possibility to provide top-notch services jointly. Some partners have direct access to test sites and facilities that could be potentially used in transnational and international cooperation projects. Access to public funding through the preparation of tenders and project proposals is a key aspect of the services. But, this approach should be diversified to differentiate from other peer organisations and to provide added-value and create synergies with other business support services, like internationalisation and accessing third markets. Current EU policies focus on integrating the private sector in the delivery of international cooperation and development external aid. Partner clusters should become key players in this field and also follow the same approach towards funding opportunities funded by international donors, like the World Bank or Multilateral Development Banks.

COVID-19 has pushed forward digitalisation fastly. Increasing the business support capacity of the partnership should be embedded through digitalisation of services, and this includes capacity building activities for members and B2B matchmaking activities and access to private investors. The vast majority of companies show a keen interest in energy and ICT cross-sectoral cooperation and networking and future business support activities and capacities should create a comparative advantage in this field against other peer organisations.

Most of the companies rely on cluster business support to approach international markets. This shows a trust in the delivery and know-how of clusters in this field. Developing business development strategies and consultancy services in this field should focus on activities to ensure steady profitability in third markets and increase the turnover of companies. Strengthening the presence at local level and/or opening branch offices of the partnership could springboard the direct support to companies.

Some partner clusters are members of international alliances, like the International CleanTech Network and COSMENERG-4i, with an already established network and capacities. Joining synergies between both partnerships could be the basis for the common strategy focused on the design of an alliance or metacluster for energy transition at EU level.

## METHODOLOGY

As part of the deliverable 2.1, the partnership carried out a preliminary joint benchmarking on the services, tools, methodologies and operational instruments already used by the partner clusters to support SMEs to access the public and private financial ecosystem opportunities for industrialisation step (from TRL 7 to 9). This was to detect already developed and tested innovation to market services and methodologies by each partner and to pave the way for the development of a joint methodology and sharing action.

Archenerg Cluster from Hungary was responsible for the coordination and preparation of the deliverable. Archenerg proposed a format and methodology in a virtual meeting to collect and organize the information about the experiences already done by the cluster partnership on the delivery of the services for the industrialisation of innovation. For this purpose, Archenerg Cluster prepared two draft surveys that the partner clusters discussed and agreed in a virtual meeting to:

- Collect information regarding the activities of support to industrialization offered by the members of the innovation ecosystem (e.g. research centres, financial institutions, large enterprises, consulting and service companies) - Survey 1.
- Collect and organize the specific needs of SMEs in terms of market outreach of innovation, creating homogeneous categories to each of which corresponded to specific support services offered by the clusters (e.g. coaching, customer search, financial means, staff ...) - Survey 2.

Following the virtual meeting, Archenerg Cluster prepared the final versions of the two surveys in English (included in Annex 2 to this report) using google forms and adjusting most of the surveys' multiple-choice questions to opt for 3 different replies. Each partner cluster translated the surveys into the local languages, namely Italian, French, and Hungarian. Flux50 partner used the English version for the dissemination of the surveys into their innovation ecosystem and among their members.

The partner clusters decided to disseminate the two surveys and make them available for feedback for a period of 2 weeks and a half. Each partner cluster disseminated the two surveys among their partners in the innovation ecosystem and their members.

Following the closing of the surveys, the partner clusters had another virtual meeting where they discussed the preliminary results in terms of participation and feedback. Each partner cluster prepared a summary of the results at cluster level. Archenerg cluster prepared the joint analysis/approach to draw key conclusions and recommendations. The partner clusters will use the joint analysis and the conclusions and recommendations to develop and define the common methodology.

## RESULTS PER CLUSTER

### ARCHENERG RESULTS

#### SURVEY 1 - Activities of 'go-to-market' support offered by members of the innovation ecosystem

The total number of actors that replied to the survey 1 was 6, and this includes regional stakeholders operating in Hungary and mainly in Csongrad region and universities, financial intermediaries and clusters. Half of the actors employ more than 50 people and the remainder mostly organisations of 10-30 staff.

Regarding collaborative innovation and co-creation, the regional ecosystem operating in Csongrad region (i.e. clusters, universities, financial intermediaries) focuses mainly on partner search and technology scouting and the organisation of innovation thematic working groups. Regarding collaborative innovation/ co-creation, Archenerg Cluster offers services for partner search and technology scouting and this linked to business and matchmaking. The cluster has strongly participated in activities linking project ideas at different levels of development and linking them with both private investors and public opportunities for development. For organisational development, organisations in Csongrad region focus mainly on roadmap techno development.

Regarding acceleration of growth, most of the stakeholders focus on business matchmaking (B2B) and business and project labelling. The majority of them have SME/Helpdesk services. Two universities have test platforms and facilities and all of them deal with innovation running programmes. Archenerg does not have testing facilities itself, but COSMENERG-4i partners have access/shared top-notch testing facilities in Warsaw.

The ecosystem in Csongrad region has experience in internationalisation and access to third markets. For instance, the majority of them offer joint booths in international fairs and export advice. They also prepare international market studies. Archenerg is strong in internationalisation and access to third markets, especially through COSMENERG-4i. Marketing and promotion related services focus mainly on online advertising and event organisation, including seminars, webinars and conferences. For training and coaching three stakeholders, including universities, clusters and financial intermediaries, provide trainings on pitch preparation and coaching, which is also linked to the key services they offer, especially networking with investors and venture capitalists. Three actors also provide finance engineering services.

Access to public tenders and funding opportunities, all stakeholders focus on partner search and half of them have the capacity to prepare project proposals and tenders. But, the capacity is mainly linked to opportunities at regional and national level. But, the University of Szeged has the capacity to prepare EU-funded proposals. Only one cluster focuses on funding for digital innovation through cascade funding.

Regarding business matchmaking, the majority of the stakeholders provide services on support to attend/ participate in international trade fairs and events and also B2B matchmaking. This can be linked to the services they also offer in the field of internationalisation and access to third markets. Archenerg is located in Szeged in the border with both Romania and Serbia. Archenerg attends/ participates in many international fairs, especially in Serbia and provides B2B matchmaking services at both national, regional and international level.

All stakeholders provide training activities related to IPR. This is linked too to the services they provide for training and coaching, and especially to vocational training, legal and HR aspects. Archenerg and COSMENERG-4i have an agreement with IPR SME Helpdesk to provide training on IPR for companies going international to ASEAN.

#### SURVEY 2 – Specific needs of companies for market outreach of innovation

A total number of 19 companies located in Hungary replied to the survey. Most of the companies had less than 10 or between 10 and 50 employees. No start-up participated in the survey and only 3 companies had a number of employees going from 50 to 250. The majority of the companies perform their activities in the fields of renewable energy production, energy efficiency and construction industries and real estate development. Two companies worked in the field of smart energy and cybersecurity. All companies were potentially interested in taking part in the ClusterXChange initiative with none of them replying negatively. The vast majority of the 19 companies are facing new market challenges at both EU and international level. In this regard, the majority of the companies assess their capacity to face challenges and opportunities at both the EU and international level as fair or strong.

The companies consider that the key success factors to strengthen their capacity to introduce new ideas, processes and products in the market are the capacity to undertake research and development, access to national, regional, international and EU grants. The fact of having a solid internationalisation strategy and access to third market is a big priority for many of them. The majority of the companies have collaboration agreements with organisations supporting technology transfer and innovation to market but at the same time most of them do not perform and/or attend any technology and knowledge transfer activities. Almost half of the companies rate their level of innovation needs to reach the market as TRL 6-7-8 with on the other hand 4 of them rating the level as TRL 1-2-3. Three companies rate their level as TRL 4-5.

Regarding the difficulties to access technology and funding, most of the companies acknowledge that competition, access to finance, and costs of production are the most relevant challenges with the majority assessing access to financing/ funding a critical issue for the improvement of their technological assets.

Those companies that assessed access to financing/ funding as a critical challenge for equity finance (venture capital, business angels) consider lack of market trust and exit route uncertainties as the main challenges. Lack of information and equity gap also appear important. In terms of non-bank finance, most companies consider that incapability to launch crowdfunding, to offer special financial arrangements and, to target peers for joint lending are the key challenges. Regarding main barriers to access key technologies to retain competitiveness and capitalise new markets, almost half of the companies consider that financial barriers are the most pressing ones. Both knowledge and information barriers and material access barriers also appear as important. The majority of the companies do not have alternative ways for the improvement of technological assets.

Regarding networking and joint cooperation processes, more than half of the companies participate in networking activities (local, national or international) conducting to expanding international market opportunities and the majority of them also have a keen interest in energy and ICT cross-sectoral networking and collaboration. Most of the companies are interested in ICT cross sectoral applications linked to construction industries and real estate development, energy efficiency and smart energy and cybersecurity. Most of the companies have an international business strategy. Their priorities in the short term focus mainly on searching partners in the target markets, carrying out market research and developing a business development strategy for market penetration. In the long-run the vast majority of the companies would like to ensure steady profitability in the third market and increase the overall turnover of the company. Some of them are also interested in establishing in a third country through opening a branch office. The majority of the companies rely on external assistance to develop the internationalisation strategy. Most of them approach the international markets through cluster business support, that can include internationalisation alliances and support to attend international fairs and trade shows.

## **TENERRDIS – MINALOGIC CLUSTERS**

### **SURVEY 1 - Activities of 'go-to-market' support offered by members of the innovation ecosystem**

Regarding the type of the respondents it is worth noticing that a large variety of structures has responded to the SmartEnergy survey. This can be explained because the Auvergne Rhône-Alpes Region is highly innovative with a strong network of support structures to Innovation. Auvergne Rhône Alpes Region for example has the highest number of innovation clusters in France. Minalogic and Tennerdis are strongly collaborating with and connected to this ecosystem, as reflected in the variety of respondents' type; public and private; however, except for one consultancy company, all respondents are non-for-profit organisations.

Tenerrdis and Minalogic carried out this survey jointly and addressed it to 3 types of structures: 1/ Digital-experts 2/energy-experts and 3/general innovation support structures. The majority of respondents are general innovation support structures followed by 4 Digital-expert and 4 Energy expert structures.

Regarding the support to R&D and innovation services, half of the respondents offer project ideation and brainstorming. The other half offer partner search / technology scouting. Moreover, more than 71% of the respondents offer innovation programme running, being regional, national or European funding (mainly in form of cascade funding grants). These answers show that the Region Auvergne Rhône Alpes has a rich and well structured innovation ecosystem, offer funding for innovation and is home for a large number of support organisations to R&D and innovation. However only one

incubator has answered the questionnaire showing that start-up support is less strong or that this type of organisation is less connected.

When it comes to acceleration or Growth, an important link in the innovation value chain is the industrialisation issue. Luckily the survey shows that Access to industrialisation expertise is present in the answers together with Open Innovation and Business matchmaking. The concept of Open Innovation is being pretty much extended in the regional innovation ecosystem. Tennerdis and Minalogic have gained strong expertise in Open Innovation that can be reinforced with the support of their local partners.

In order to provide full innovation support all along the entire product life cycle and the technological value chain, Access to private financing resources is also a strength in the regional innovation ecosystem. Hence, the majority of respondents offer Networking with Venture Capitalists (VC) as one of their main services. It mainly comes from the fact that Digital developments especially in the hardware sector (microelectronics) but also energy developments require high volumes of investments. Quite naturally the regional innovation ecosystem has been organized to cover the support on private investments.

And finally all along the innovation process, numerous occasions are offered to attend an event being thematic (Digital, Energy, mixed-themes), technology-oriented, for networking and matchmaking or even at international level with Regional Joint booth on international fairs. The event offer is rich and various and the SmartEnergy project can tap into these opportunities offered in the innovation ecosystem in Auvergne Rhône-Alpes as nearly all respondents organize all types of events for innovation support.

## **SURVEY 2 - Specific needs of companies for market outreach of innovation**

Out of the 33 replies, 75% out of them are small companies less than 50 employees, out of which 27% are start-ups. The majority of companies are from the AI and IOT sector followed by smart applications (Grid, Cities...). The diversity is quite representative of a combination between the Energy and Digital sectors. All companies, except for one, are potentially interested in participating in the ClusterXChange programme, which is a very good indicator.

Most of the companies are facing new market challenges/ opportunities that require new business approaches. Many of them consider that their capacity to face challenges is weak, which shows a significant need for business support. Companies consider that the key factors to strengthen the capacity to introduce new ideas is better access to public grants, followed by the capacity to undertake R&D. They apply for stronger access to international markets and initiatives to facilitate business matchmaking. Most of the companies do not have a collaboration agreement with organisations supporting technology transfer and innovation, which opens the possibility for SMARTENERGY project to develop this type of business cooperation. Those companies with agreements concern clusters, SATT (Technology Transfer Accelerator Offices), of a few with Chambers of Commerce and Industry. More than half of the SMEs target high level TRL (>6), with the lower rates relating to start-ups. 85% of the companies do not use enterprise software for customer service, product assessment, creating new disruptive ideas or sharing business platforms. A minority of them use some tools, including lean management, CRM, or in-house developed tools. The key challenges relate to better access to finance, find customers and reduce production costs. Access to financing/ funding is a key and critical issue for the vast majority of them, though.

Regarding challenges that companies face to access financing/ funding for the overall improvement of the companies' technological assets, uncertainty comes first followed by maturity gap (interest rate risk for risk-sensitive assets and liabilities), and lack of adequate business plan. For equity finance, venture capital, business angels, the lack of market trust gets most of the answers, but also equity gap, exit route uncertainty and incapability to access national, regional and EU/ international grants. In overall terms, most of the challenges relate to the non-control of the market and the business environment. In terms of non-bank finance, the incapability to access national regional, and EU/international grants is the first challenge followed by finance, and the incapability to launch crowdfunding and contact peers for joint lending.

The main barriers that companies are facing in terms of accessing to key technologies to retain competitiveness and capitalise on new markets, financial aspects are the key barrier, followed by regulatory barriers, which is linked to the French system where the administration plays a key role. Barriers linked to knowledge (skills, knowledge and information) is also important.

More than one third of the companies say that they have alternative ways for the improvement of the technological assets. Adaptation of the schedule planning of the company, involvement of share-holders, partnerships with academics, internal development resources, find outwards partners that could invest in one technology, licensing, , secure and develop the equity, R&D partnership with platform (ex: Provademse), are examples. More than half of the companies participate in networking activities (local/national/international) conducting to expanding their international market opportunities.

Two thirds of the companies show a keen interest in energy and ICT cross-sectoral networking and collaboration, and they quote renewable energy production, smart and energy sustainable buildings, smart cities applications and AI and IoT energy applications as the key ones.

Almost half of the companies have an international business strategy and their priorities are searching partners in the target market, undertaking pre-market consultations, which equals to developing a business development strategy and opening an office in third countries for prospection purposes. For the companies, to achieve steady profitability in the third market and increase the overall turnover of the company is a key issue followed by the full establishment in a third country through opening a branch office.

More than half of the companies rely on external assistance to develop their internationalisation strategy. Most of the companies approach international markets through joining international alliances followed by business support directly provided by clusters. Some of them they attend international fairs and trade events.

## **ENVIRONMENT PARK – CLEVER**

### **SURVEY 1 - Activities of 'go-to-market' support offered by members of the innovation ecosystem**

Regarding the support to R&D and innovation services, CLEVER is the only cluster in the consortium offering a direct access to test site, thanks to the laboratories located in the facilities of Environment Park, the management organisation of the cluster. This aspect offers the possibility to support companies for pilot test activities in the frame of both transnational and international cooperation projects.

Services for organizational development include the involvement of the members in supporting the development of local human resources through education and training programs, according also to the specific needs of skilled resources identified. Regione Piemonte implemented national initiative of tertiary education labelled as ITS (Higher Technical Institutes) offering training programmes defined by its promoters and shareholders: Universities, industries, High Schools. The thematic areas are consistent with national S3 Strategy and at least one of the regional Clusters is member of each Foundations managing the ITS. In order to support the development of local human resources, the Clusters in Piemonte set up collaborations with the regional Higher Technical Institutes (ITS) Foundations according to their respective application domains (such as cleantech, mechatronics, ICT...). ITS System manages post-graduate courses offer highly qualified technical training to facilitate job-placement, matching employment needs and challenges with appropriate technical skills. The ITS courses are carried out in collaboration with companies, universities, research centres and local authorities to develop new skills in technological areas considered strategic for the economic development and competitiveness. Regional Clusters in Piemonte collaborate with the ITS System to create a link between tertiary education and companies belonging to the clusters' network, to inform and train on opportunities for collaboration with these 3rd level training courses, also through funding measures dedicated to Clusters, which could give ITS students stronger opportunities to be hired by companies.

Internationalisation services of innovation regional actors benefit of the synergy with activities of CEIP Piemonte. Piedmont region is in fact one of the few regions in Italy that can count on a dedicated regional internationalisation agency called *CEIP Piemonte – Centro Estero Internazionalizzazione Piemonte*, a 100% public regional agency dedicated both to attracting inward investments and to support local companies willing to operate on foreign markets (export promotion). This agency carries out all the activities included in the topics of the survey

The answers to the survey show that digital marketing services have a strong incidence, with 4/7 of the respondents offering specific service to improve competences for positioning companies and products through on line platforms, direct on line promotion projects and activities to analyze and support the digital growth of enterprises.

Vocational training is also a strong component of all the regional clusters and actors of the innovation ecosystem, often implemented in collaboration with training organizations or with the support of dedicated EU projects for the increasing of knowledge and capacity building of SMEs (H2020, Erasmus+). A distinctive element is the training on legal aspects and technical standards.

#### **SURVEY 2 - Specific needs of companies for market outreach of innovation**

No one of the respondents in Piemonte declares to perform any knowledge transfer activity. This could be an interesting starting point to develop new dedicated services through SMARTENERGY project.

The level in the use of innovation management tools seems to be lower than the average, only 2 of the 13 answering companies make use of such tools.

Regulatory barriers to access technology are perceived as very strong in comparison to the average results for the consortium, both at a general level than for accessing to key technologies to retain competitiveness and capitalize on new markets (section 2, question n.9)

Weakness factors in the access to debt finance are concentrated on uncertainty (6/13, compared to 38/98 of the whole consortium) and lack of adequate business plan (10/98, compared to 10/09 for the whole consortium).

Barriers in the access to equity finance (venture capitalists, business angels) are focused on the lack of information, which is very relevant (9/13 compared to 16/98 for the whole consortium). The SMARTENERGY methodology implementation should consider this particular issue.

#### **TWEED CLUSTER**

##### **SURVEY 1 - Activities of 'go-to-market' support offered by members of the innovation ecosystem**

Tweed cluster has different kind of organizations for the first survey, but only one type, 'cluster', appears several times. Indeed, TWEED constantly collaborates with Cluster Infopole ICT, cluster GreenWin (related to Green Chemistry, Innovative Construction Materials and Environmental Technologies), and cluster MecaTech (related to mechanical engineering). All those sectors are connected with the energy sector. The sizes of organizations are quite small, only 2 of them have over 50 people (university and agency in charge of management funds).

Regarding collaborative innovation/ co-creation, The results are clearly similar to the global results of the survey, namely, partner search/technology scouting, innovation thematic working groups, and thematic innovation workshops and events but Tweed cluster also has a specific point related to intelligence and lobby on energy regulatory framework. For acceleration of growth, business and project labelling initiatives is the most important point/ services. But, on the other hand, no actor selected business matchmaking probably because it is already included in other points.

All actors in the innovation ecosystem of Tweed cluster provide services linked to access to R&D innovation. But, all organisations provide services focusing on access to R&D platforms/ facilities. The majority also has services on innovation programme running. Access to competences and human resources is a service that all actors provide, being probably a key point for companies. On the other hand, no actor focuses on diagnoses and transformation plans.

Regarding internationalisation and access to third markets, most of the organisations offer exploratory missions and joint booth on international fairs and trade events. Some of them also provide international market studies. The majority of actors in the innovation ecosystem of Tweed Cluster offer services linked to event organisations (seminars, webinars, conferences, etc). An example is the organisation of the Waloon Innovation Fair. Training and coaching services are weak in general terms, with less than half of the actors providing training and coaching on legal aspects. For services linked to access to private financing sources, most of the stakeholders have services on financing engineering and support in R&D financing sources research. Regarding access to public, regional, national, EU and international tenders and funding opportunities, both services on proposal and tender writing and collective information are strong. For business matchmaking, classic B2B matchmaking services are important. Actors do not provide too many trainings on IPR but they have some trainings on technical and legal advice.

## **SURVEY 2 - Specific needs of companies for market outreach of innovation**

Companies are active in most of the sectors, but energy communities, which is a new sector with high growth, or construction industries and real estate development are missing. All companies are interested in participating in ClusterXChange Initiative and all of them are facing new market challenges/ opportunities requiring new business approaches.

Companies have shared opinions about their capacity of facing the challenges/opportunities identified for new businesses, assessing the capacity as either faire, weak or strong. A solid internationalization strategy and access to third markets, and access to distribution channels, are the two most important factors for companies to introduce new ideas, processes and products in the market. Half of the companies have a collaboration agreement with organisations supporting technology transfer and innovation to the market. The majority perform or attend technology and knowledge transfer activities. The level of TRL is strong for companies, with more than half of them having a TRL higher than 6. The majority of the companies use innovation management tools. These two last aspects are very positive.

Regarding difficulties to access technology and funding, the most relevant challenge is clearly to find customers, and the least relevant is production costs. More than half of the companies consider access to financing/ funding a key and critical issue for improving the companies' technological assets. For the key challenges the companies face in terms of accessing financing and funding for the overall improvement of the technological assets (for debt finance – bank lending), the most important factor is uncertainty. Regarding the key challenges the companies face in terms of accessing financing and funding for the overall improvement of the technological assets (for equity finance – venture capital, business angels), most of the companies do not seem to find important. Regarding the key challenges the companies face in terms of accessing financing and funding for the overall improvement of the technological assets (for non-bank finance), the incapability to access national, regional and EU/international grants, and incapability to launch crowdfunding are the most important challenges. The main barriers that the companies face in terms of accessing to key technologies to retain competitiveness and capitalise on new markets, are barriers related to finance, knowledge and information access and access to skills. Most of the companies acknowledge to have alternative ways for the improvement of technological assets.

Regarding networking and joint cooperation processes, most of the companies participate in networking activities expanding their international market opportunities. All companies have keen interest in energy and ICT cross-sectoral networking and collaboration. Companies have interest for many energy and ICT cross sectoral applications, except for the field of construction industries and real estate development. Most of the companies have an international business strategy. Searching for relevant partners in the target market is the main priority for a short-term international business strategy and the full establishment in a third country through opening a branch office is the main priority for a long-term international business strategy. Most of the companies do not need external assistance to develop their internationalisation strategy. Some companies that do not rely on external assistance approach the international markets attending international fairs and trade shows. One company approaches the international markets through a network of local partners.

## **FLUX50**

### **SURVEY 1 - Activities of 'go-to-market' support offered by members of the innovation ecosystem**

Out of the 10 organisations that replied to the survey, half of them were big organisations with more than 50 employees. Regarding collaborative innovation/ co-creation, Project ideation and brainstorming services make up to 70% of the offered services. Examples include the Innovatrix : guide for start-up business plan, created free online course AI in business, with a chapter on Energy, with already more than 2,000 participants. Other relevant examples relate to smallscale tailormade thematic workshops with matchmaking, explicit cocreation toolkit, different research project formulas (ICONS, SBOs, Innovation Boosting), events for different target groups, etc. Regarding acceleration of growth, open innovation tools are mostly used to support companies' growth.

For access to R&D and innovation, access to R&D platforms/ facilities is the service mostly offered in R&D innovation. An example is 'EnergyVille' which accelerates its partners' R&D path via the most suited collaboration schemes

e.g. academic chairs, funded PhD's, public-funded R&D consortia, - public/private funded bilateral R&D projects, industrial residencies and consultancies building on their state-of-the-art labs <https://www.energyville.be/labs>

Innovation organisations in Flanders focus on roadmapping the development of technology in order to increase the organisational development of the companies in most of the cases. Also access to competences/skills and HR are an offered service by half of them and very necessary if we see that skilled employees are one of the main challenges in Flanders to boost market uptake of innovation. In internationalisation and access to third markets, joint booths in international fairs and export advice and supported missions are the main tools provided. For marketing innovation, events and seminars often in cooperation with EU organisations are the main tools. But, positioning specific products in the market is also important.

Organisations in the innovation ecosystem in Flanders have a variety of trainings, with legal aspects and pitch preparation and coaching being the most relevant ones.

Regarding the access to private financing the respondents focus on networking with VC and Support in R&D financing sources research (financial institutes). Banks are often members of the clusters and most of the organisations have relevant partnerships with VC, banks, offer specialised consultancy and have a special financial programme for start-ups. Most of the organisations offer support services for public funding channels but don't do the proposal writing. For business matchmaking, support for the participation in fairs, and the organisation of B2B's are the main tools to match companies & innovation stakeholders in the Flemish innovation landscape for energy. Two thirds of the innovation organisations in Flanders organise and/or provide advisory services on IPR.

## **SURVEY 2 - Specific needs of companies for market outreach of innovation**

Half of the respondents of the survey were start-ups and small companies. All of them indicate to be potentially interested in the ClusterXchange scheme that the project. Nearly all of the respondents are facing new market challenges/opportunities (both at EU and international level) requiring new business approaches. More than 75% rate their capacity of facing the challenges/opportunities to identify new businesses as weak. Matchmaking opportunities, access to funding and a solid internationalisation strategy are in the top 3 to strengthen the company's capacity to introduce new ideas, processes and products in the market. 55% of the companies have a cooperation with clusters, innovation agencies, chambers of commerce, etc to support technology transfer and innovation. 60% of the companies have other technology and knowledge transfer activities and they collaborate with projects and other product suppliers/universities for this purpose. More than half of the companies have TRL ranging from 6 to 9.

Regarding difficulties to access technology and funding, the lack of skilled staff, regulation, and finding customers are in the top 3 of the current most relevant challenges of the companies. Also speeding up the development is mentioned.

For half of the respondent access to finance is a key success factor for improving the company's technological assets. Uncertainty, not far looking research funding, maturity gap, lack of support e.g. living lab and the speed of development are mentioned as challenges for access to debt finance - bank lending. Regarding access to equity finance - venture capital lack of market trust and support are mentioned as main barriers. The most important challenges that companies are facing in terms of accessing to key technologies to retain competitiveness and capitalize on new markets are apparently regulatory and financial barriers. 33% of the companies have alternative ways for the improvement of technological assets: collaboration with peer researches, small subsidies and own investments, continuous test & release cycles, large-scale living labs to test innovations on a real scale, strong innovation roadmap & international relevant partnerships with R&D and testbeds in collaboration with ngo's are mentioned here. Most of the companies participate in networking activities (local / national / international) conducting to expanding your international market opportunities and show a keen interest in energy and ICT cross-sectoral networking and collaboration.

Most of the companies have a business strategy prioritising on short term searching for relevant partners and developing a business development strategy for market penetration scoring the most. For the long term, steady profitability in the third market and increase of the overall turnover of the company is the focus for most of the respondents. Almost 90% of the companies are not relying on external assistance to develop their internationalisation strategy. Those doing this, attend/ participate in international fairs or use business support offered by clusters.

## ANALYSIS OF THE RESULTS – JOINT APPROACH

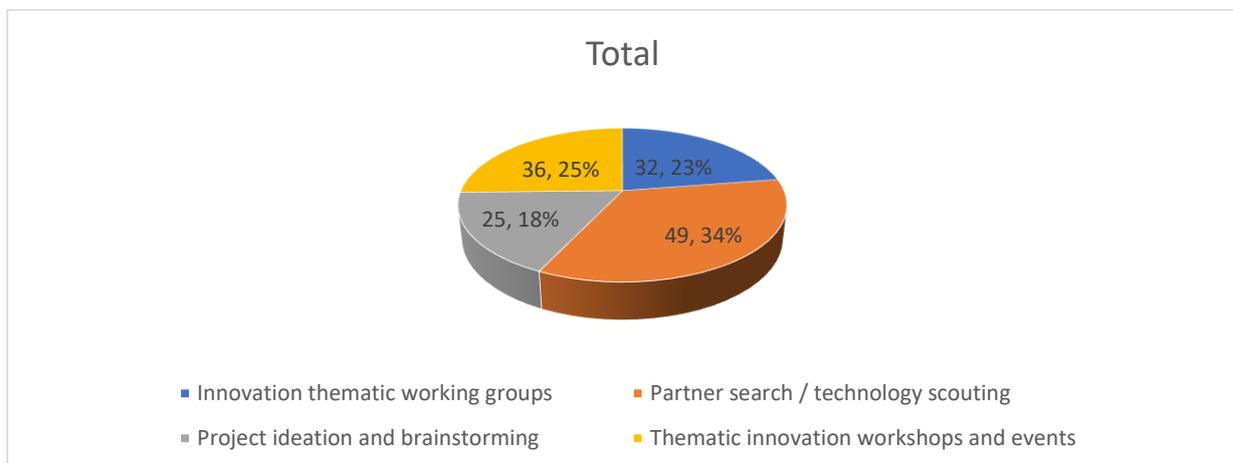
Archenerg Cluster addressed survey 1 to 36 organisations and survey 2 to 75 SMEs. Ternerrdis and Minalogic sent the surveys 1 and 2 to 577 companies and organisations combined. Clever addressed survey 2 to 150 SMEs and survey 1 to 8 organisations. Tweed Cluster sent the surveys to 149 companies and members combined. Flux50 addressed the survey 1 to 24 organisations and survey 2 to 118 companies.

### SURVEY 1 – Activities of ‘go-to-market’ support offered by members of the innovation ecosystem

A total number of 55 members of the innovation ecosystem replied to survey 1. Out of the total, one third of the respondents were clusters, followed by incubators/ accelerators, technology transfer organisations and universities in number. Other replies came from other type of organisations, including financial intermediaries, chambers of commerce and industry, business and management schools, public administrations and regional authorities, research organisations, consultancies and start-up support organisations. Around 40 % of the organisations employ more than 50 people. Around one third of them employ a range of 10-30 people, with the remainder being actors of small size (less than 10 people) and organisations employing between 30 and 50 people. Half of the actors come from France and Belgium (42) and the remainder from Italy and Hungary (13).

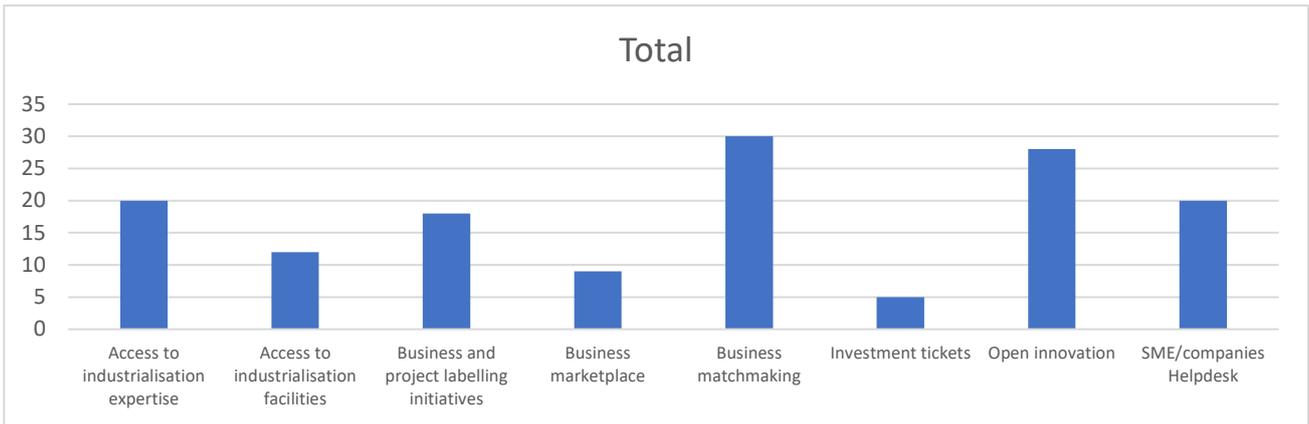
### COLLABORATIVE INNOVATION/ CO-CREATION

Almost half of the actors offer services related to partner search/ technology scouting. Other services such as innovation thematic working groups and thematic innovation workshops and event are also key services provided by the organisations in the partners’ innovation ecosystem. The settings of these services are probably linked to other services that also appear as important, such as project ideation and brainstorming. Only a few actors offer services such as soft landing for start-ups or workshops of beginners.



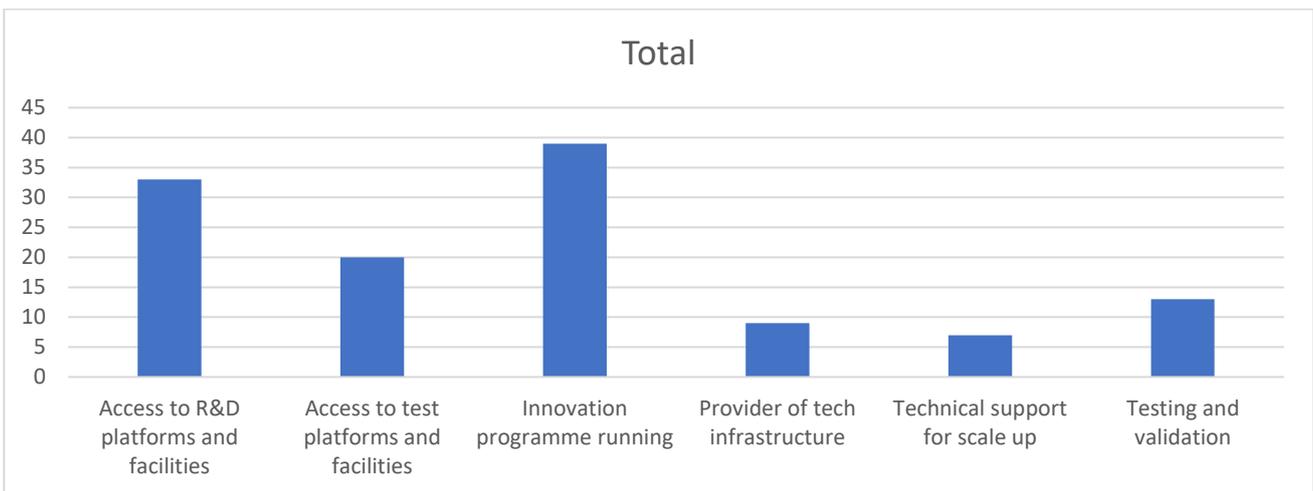
### ACCELERATION OF GROWTH

Regarding services focused on acceleration of growth, the key services provided are linked to open innovation and business matchmaking. Actors in the innovation ecosystem also provide services on business an project labelling initiatives and access to industrialisation expertise. Many actors also have SME/companies dedicated helpdesks. But, services such as investment tickets and business marketplaces are rare.



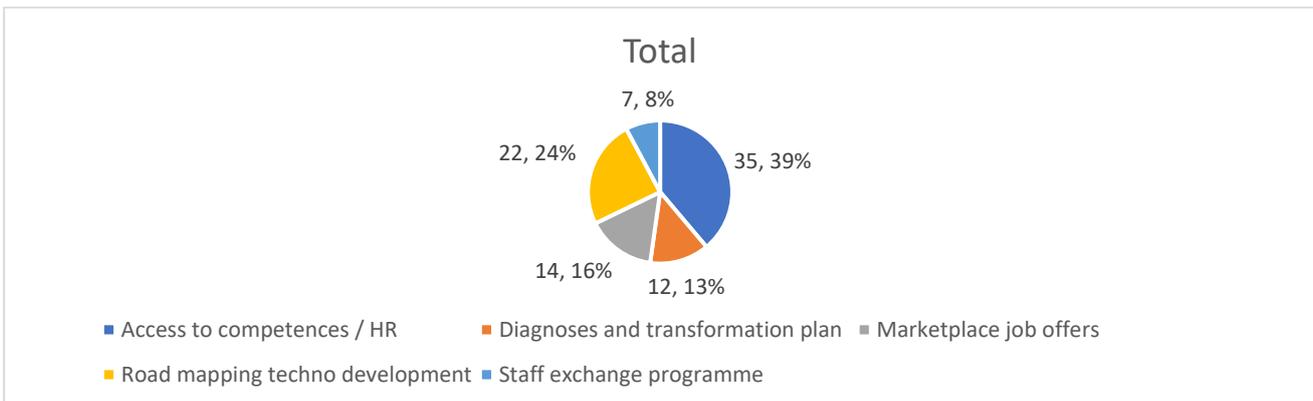
### ACCESS TO R&D INNOVATION

Actors in the innovation ecosystem provide services on innovation programme running and access to R&D platforms and facilities mostly. Some of them also provide access to test platforms and facilities. But, other services such as technical support for scale-up and testing and validation do not appear to be important. Testing and validation could be linked to other services such as access to R&D/test platform and facilities, though.



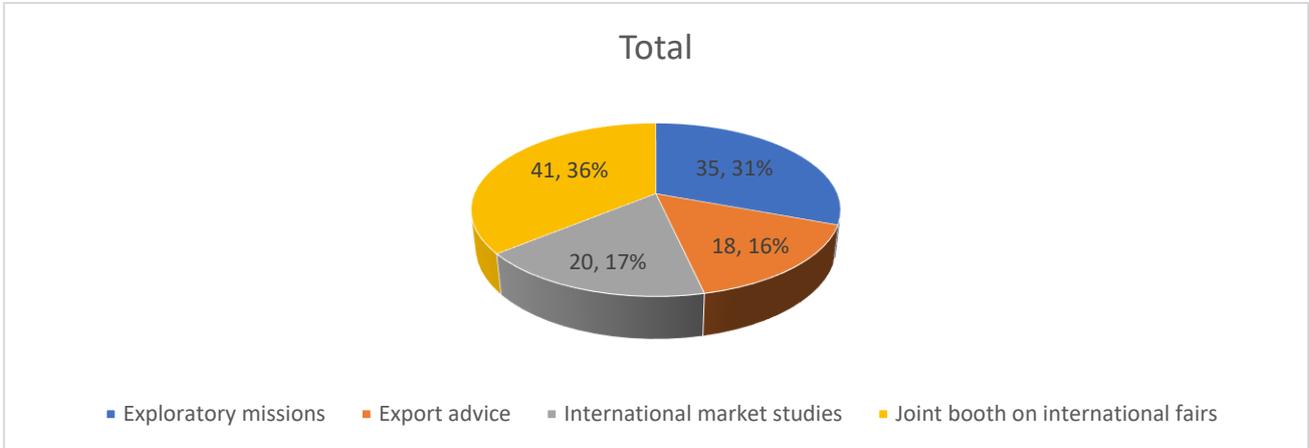
### ORGANISATIONAL DEVELOPMENT

Regarding organisational development, access to competences/ HR and road mapping and techno development are the most important services among the actors of the innovation ecosystem. Market place job offers and diagnoses and transformative plans are quite rare.



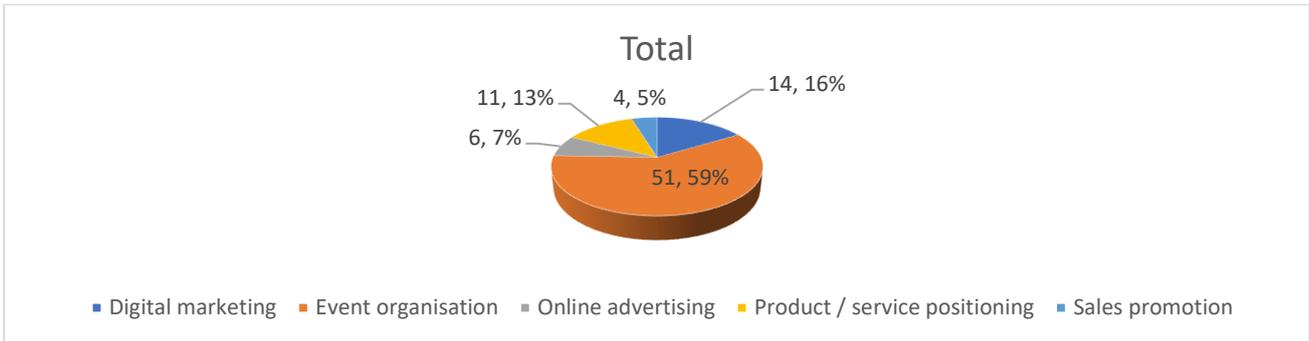
### INTERNATIONALISATION AND ACCESS TO THIRD MARKETS

Services on internationalisation and access to third markets seem to be important for the actors in the innovation ecosystem. Joint booth on international fairs and exploratory missions are the key services. But, consultancy services also seem to have some importance, especially as regards international market studies that can be the basis for the provision of other services, such as export advice.



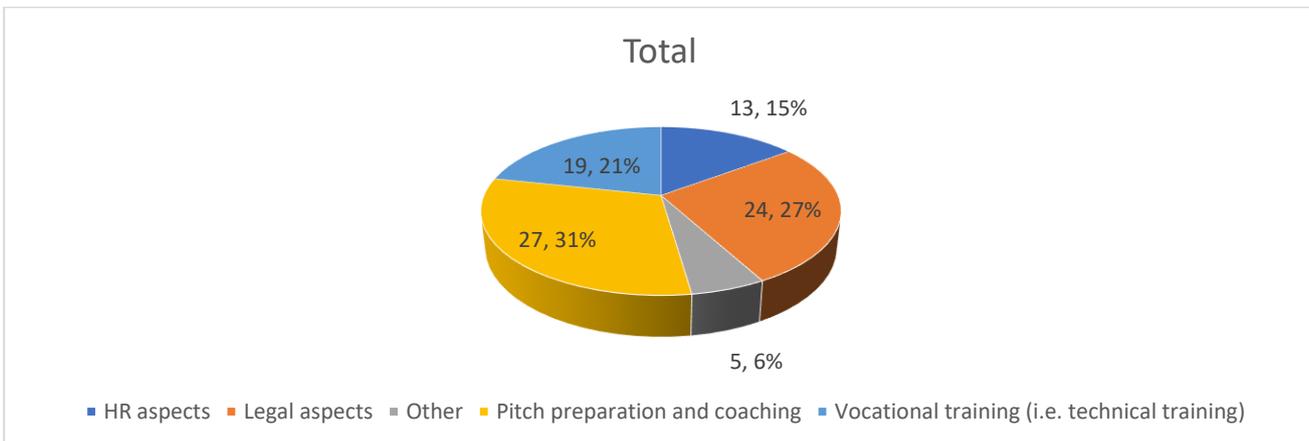
### MARKETING AND PROMOTION

Event organisation (seminars, webinars, conferences, etc) is the key service among the actors of the innovation ecosystem. Other services, like digital marketing, online advertising or sales promotion seem very low compared to the key service.



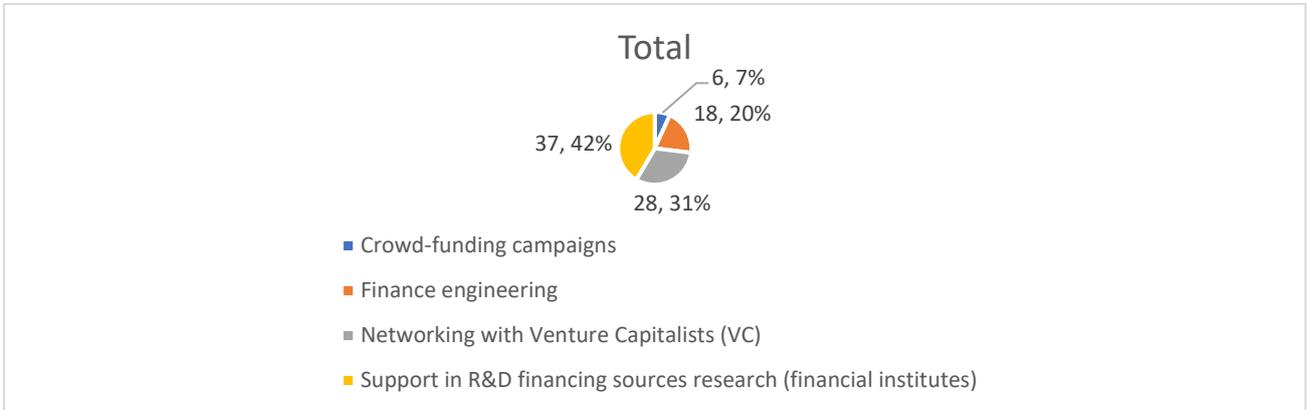
### TRAINING AND COACHING

Regarding training and coaching, pitch preparation and coaching is the key service. This could be linked to preparing clients to attract private investors/ funding. But, other services like specialised training/ coaching on legal aspects, or technical issues are also important.



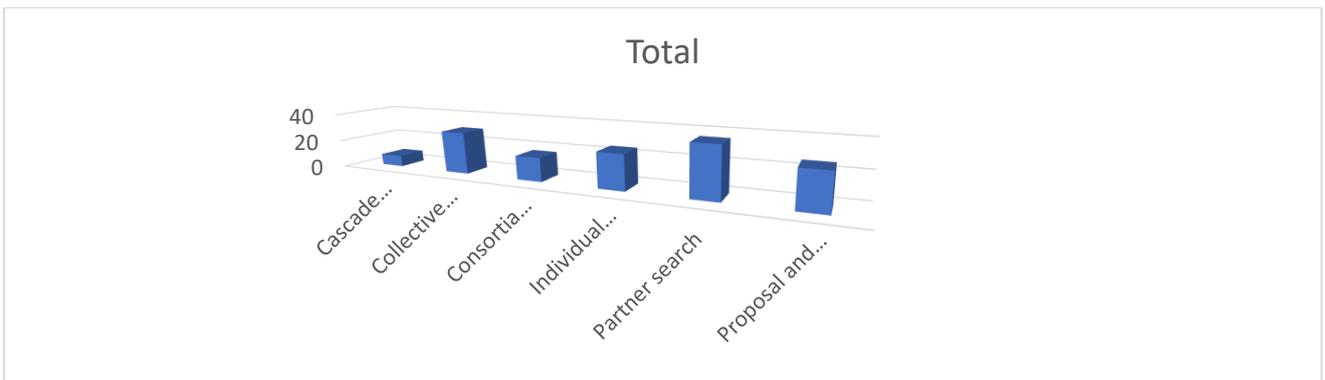
### ACCESS TO PRIVATE FINANCING SOURCES

Regarding access to private financing sources, support in R&D financing sources research (financial institutes) is the key service. But, networking with venture capitalists (VC) and finance engineering (e.g. plan for investment equity, credits, loans, tax advantages, etc) are also important. Services like crowd-funding campaigns are rare.



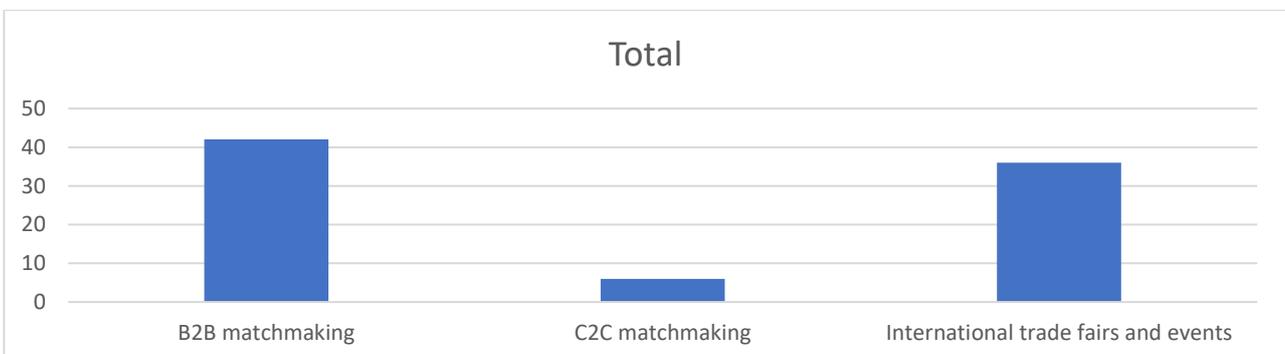
### ACCESS TO PUBLIC, REGIONAL, NATIONAL, EU AND INTERNATIONAL TENDERS AND FUNDING OPPORTUNITIES

Regarding access to public, regional, national, EU and international tenders and funding opportunities, partner search, collective information, and services on proposal/ tender writing are the main ones. Other services for the development of digital innovation such as cascade funding are rarely serviced.



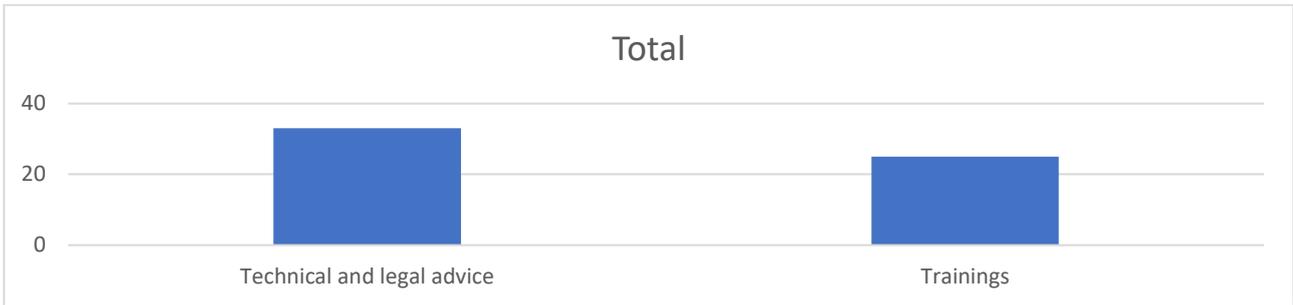
### BUSINESS MATCHMAKING

Actors focus on B2B matchmaking services and support for attending/participation in international trade fairs and events. The latter is probably embedded in the B2B matchmaking services.



### INTELLECTUAL PROPERTY RIGHTS (IPR)

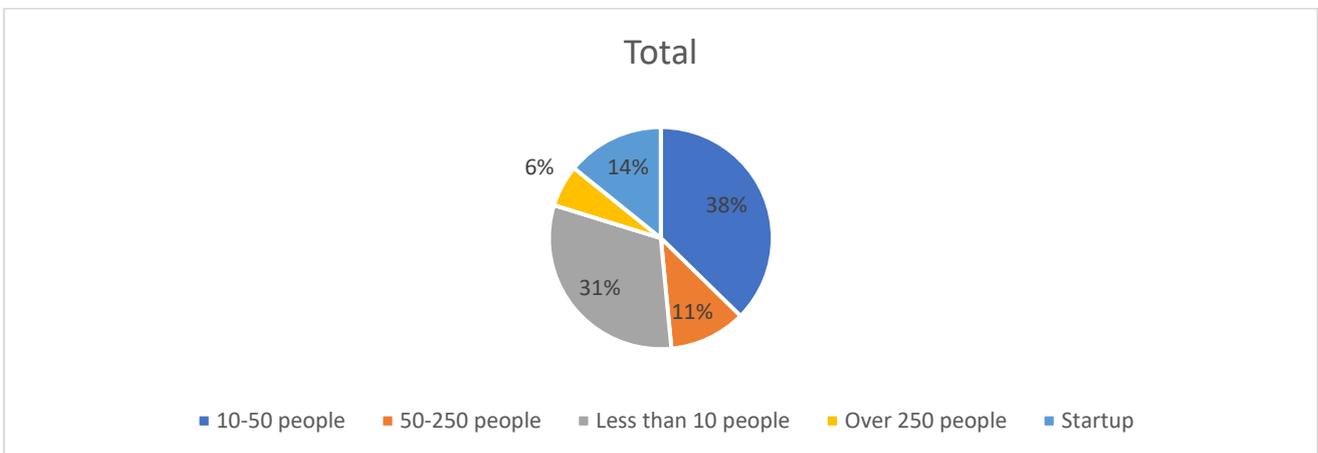
Many actors provide IPR services, with technical and legal advice being the most prominent service. But, trainings on IPR are also important in the service portfolio of the actors.



## SURVEY 2 – Specific needs of companies for market outreach of innovation

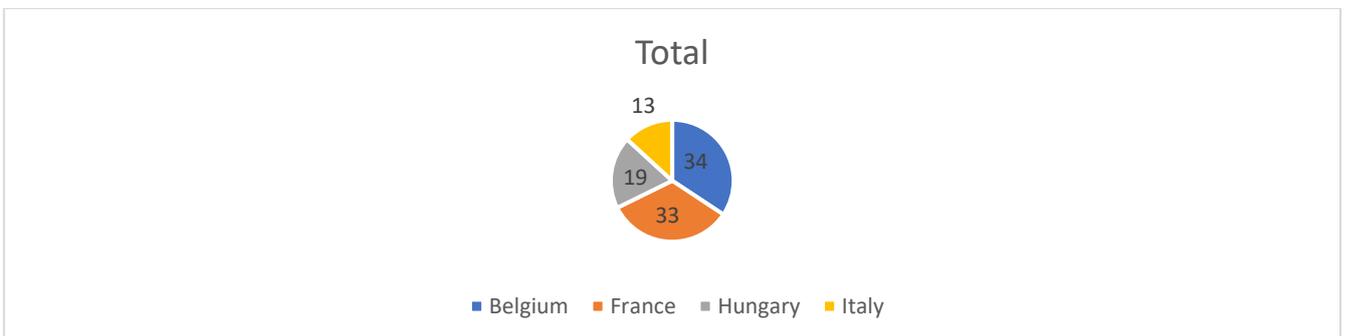
### COMPANY SIZE AND COUNTRIES

A total number of 99 companies replied to the survey. Out of the, more than one third were companies employing between 10 and 50 people. Almost half of the replies came from companies of less than 10 people or start-ups



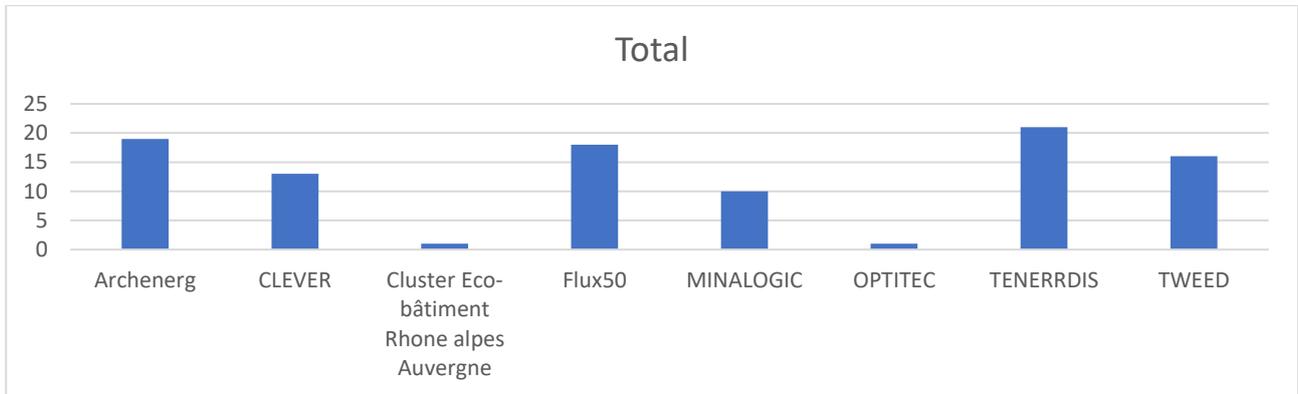
### COUNTRIES

Out of the total, the vast majority of companies were French and Belgian, followed by Hungarian and Italian companies in number.



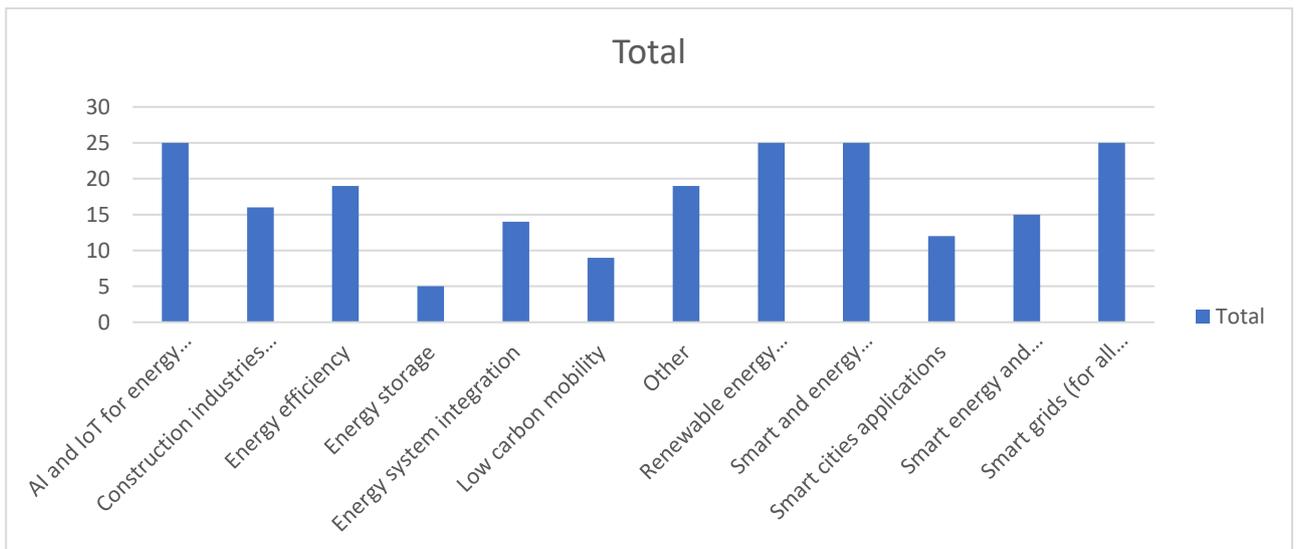
## CLUSTERS

Out of the total, most of the companies were members of the partner clusters, Archenerg, Clever, Flux50, Minalogic, and Tweed, with very few companies being members to outside clusters.



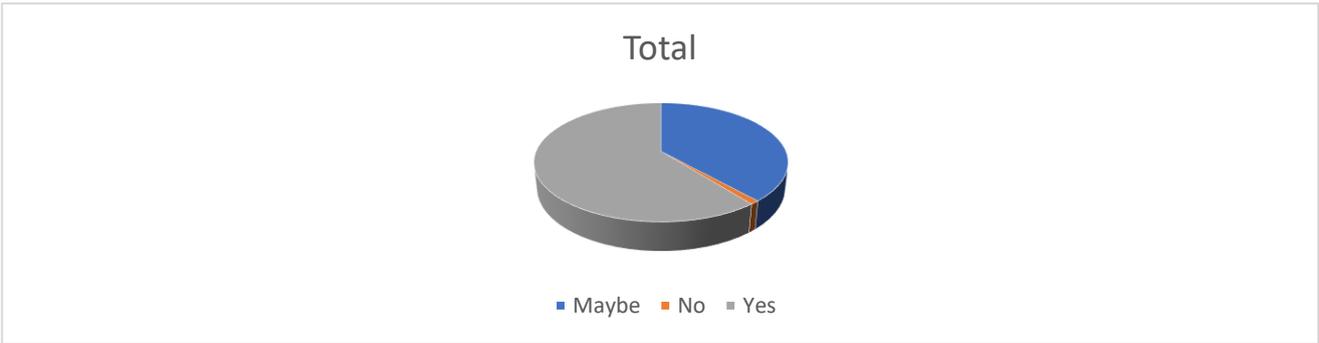
## COMPANY SECTOR/ TECHNOLOGY DOMAIN OF APPLICATION

Companies came from different sectors within the overall field of environmental technologies. Many of them are active in the fields of AI and IoT for energy applications, renewable energy production, smart energy and sustainable buildings and smart grids (for all energy vectors). But, other sectors are also important, including, construction industries and real estate, energy efficiency, and smart energy and cybersecurity.



**Are you interested in taking part in the ClusterXChange Initiative, accessing the vouchers for the participation in the exchanges/visits to be organized between companies and supporting innovation organizations in the 4 countries (Belgium, France, Italy, Hungary) participating in the SMARTENERGY project?**

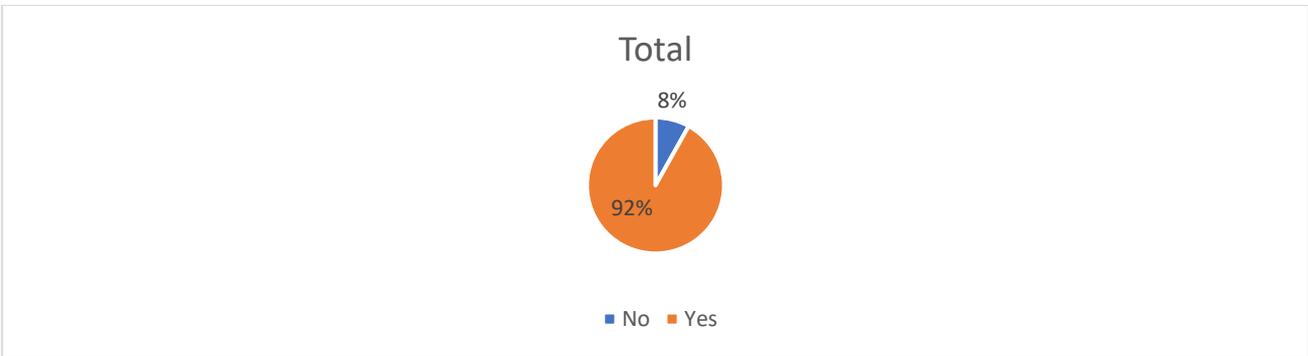
The majority of the companies replied that they were potentially interested in taking part in the ClusterXChange Initiative.



**SECTION 1 – INNOVATION MANAGEMENT LEVEL AND NEEDS FOR TECHNOLOGY TRANSFER**

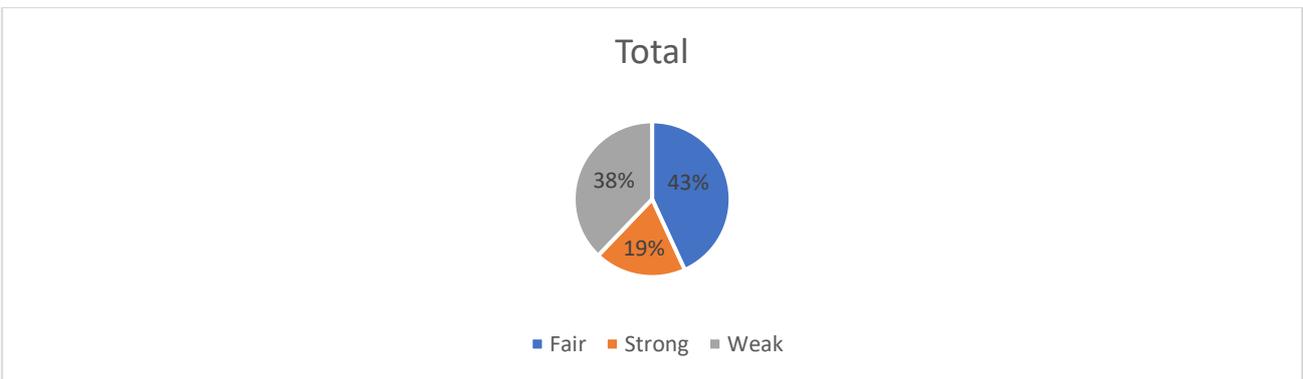
**1. Is your company nowadays facing new market challenges/opportunities (both at EU and international level) requiring new business approaches?**

The vast majority of companies replied that they are currently facing new market challenges/ opportunities at both the EU and international level, requiring new business approaches.



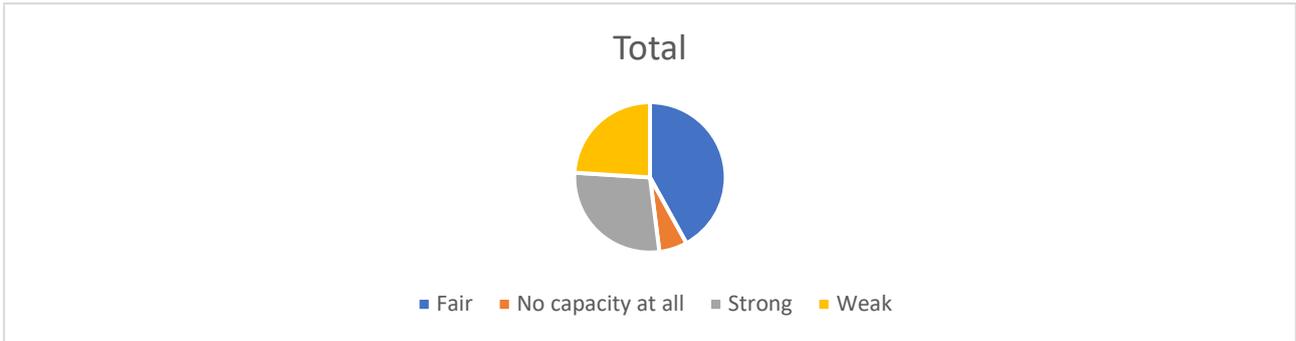
**If yes, how would you rate your capacity of facing the challenges/opportunities identified for new businesses? – On the EU market.**

In terms of current capacities for facing the challenges/ opportunities identified for new businesses on the EU market, most of the companies rate their capacity as weak or fair, with only a small part assessing their capacity as strong.



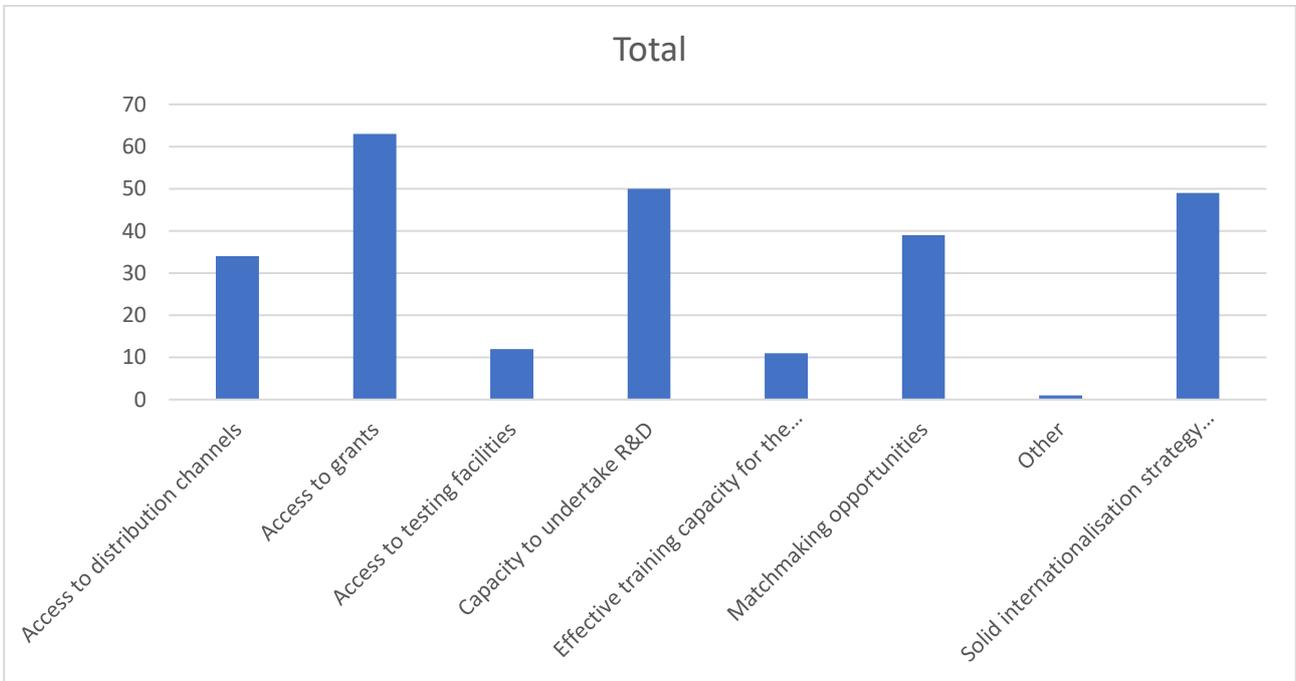
**If yes, how would you rate your capacity of facing the challenges/opportunities identified for new businesses? – On the international market**

In terms of current capacities for facing the challenges/ opportunities identified for new businesses on the international market, most of the companies rate their capacity as fair or weak, with only a small part assessing their capacity as strong. A minority of the them acknowledge that they don't have capacity at all.



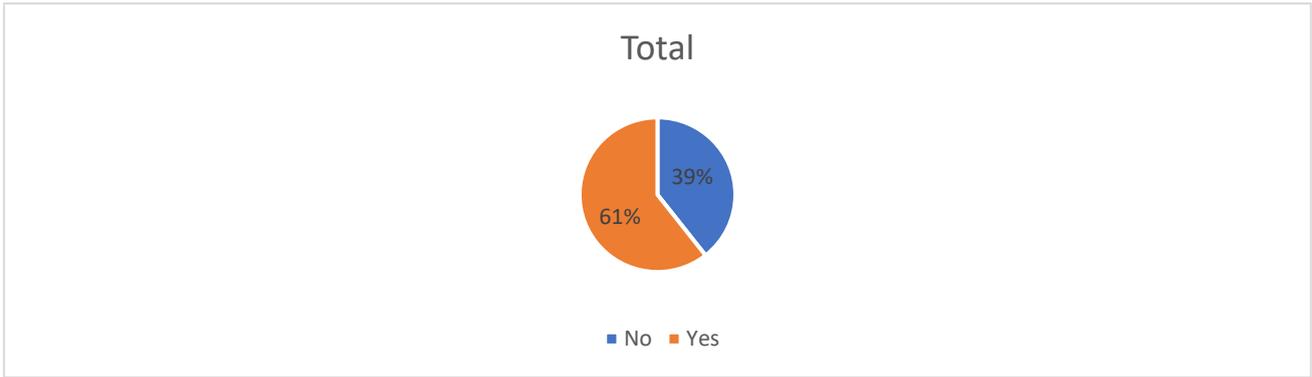
**2. Which key success factors do you think could strengthen your company’s capacity to introduce new ideas, processes and products in the market? Please, select up to three answers.**

In terms of key success factors to strengthen the capacity to introduce new ideas, processes and products in the market, the majority of the companies consider that access to grants, capacity to undertake R&D and a solid internationalisation strategy to access third markets are the key factors. Other factors such as matchmaking opportunities are also relevant for the to some extent.



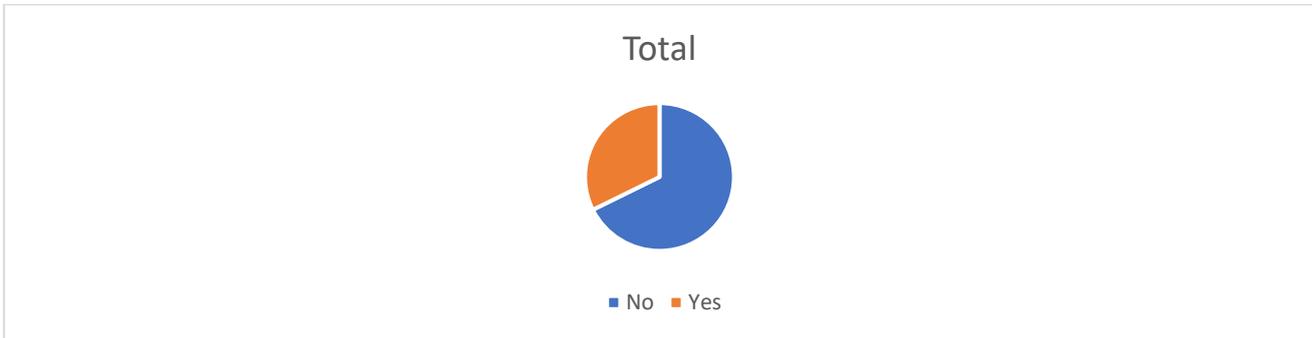
**3. Does your company have any kind of collaboration agreement with organizations supporting technology transfer and innovation to market (e.g. innovation agencies, clusters, chambers of commerce and industry, etc)?**

In terms of key success factors to strengthen the capacity to introduce new ideas, processes and products in the market, the majority of the companies consider that access to grants, capacity to undertake R&D and a solid internationalisation strategy to access third markets are the key factors. Other factors such as matchmaking opportunities are also relevant for the to some extent. Around



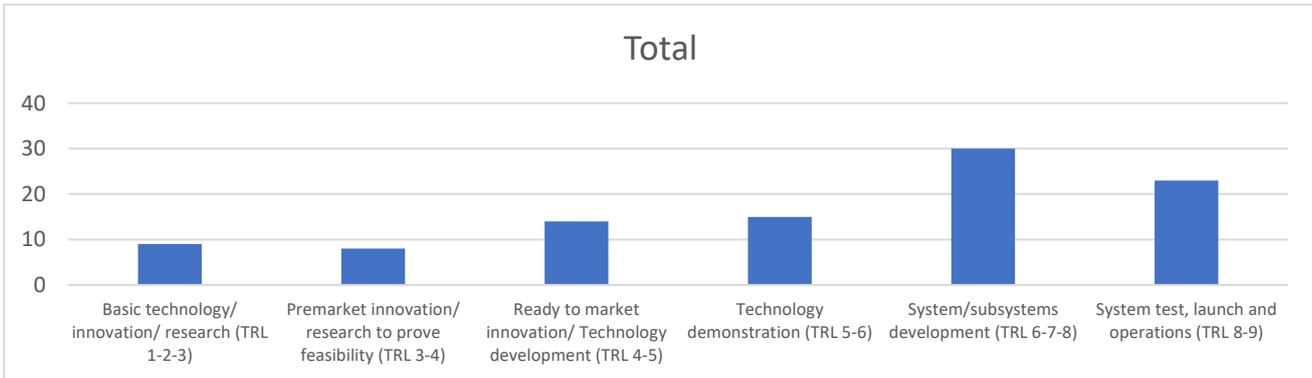
**4. Does your company perform and/or attend any technology and knowledge transfer activities?**

Almost 70% of the companies perform and/or attend technology and knowledge transfer activities.



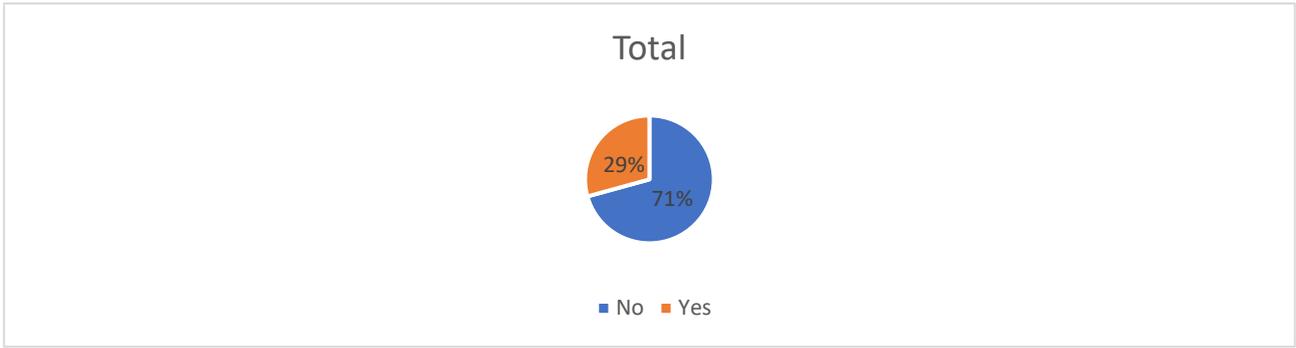
**5. How would you rate your level of innovation needs to reach the market (TRL level)?**

Most of the companies rate quite high their level of innovation needs to reach the market, with the majority acknowledging TRL 6-7-8 and TRL 8-9.



**6. Which innovation management tools (if any) does your company use (e.g. enterprise software for customer service, product assessment, creating new disruptive ideas, sharing business platforms, etc)?**

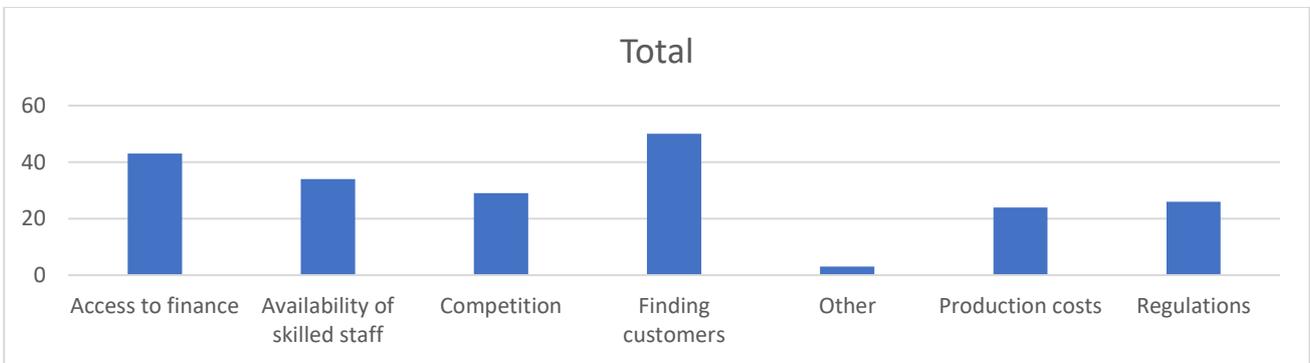
More than 70% of the companies do not use any innovation management tool (e.g. enterprise software for customer service, product assessment, creation of new disruptive ideas, sharing business platforms, etc).



**SECTION 2 – DIFFICULTIES TO ACCESS TECHNOLOGY AND FUNDING**

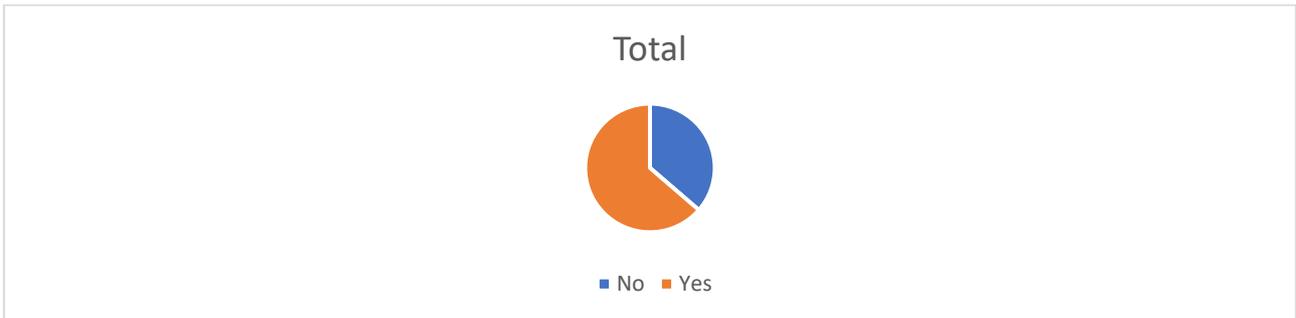
**7. What is currently the most relevant challenge your company is facing?**

Regarding difficulties to access to technology and funding, most of the companies consider that finding customers and access to finance are the most relevant challenges currently. Other challenges such as availability of skilled staff, competition, and production costs are also important.



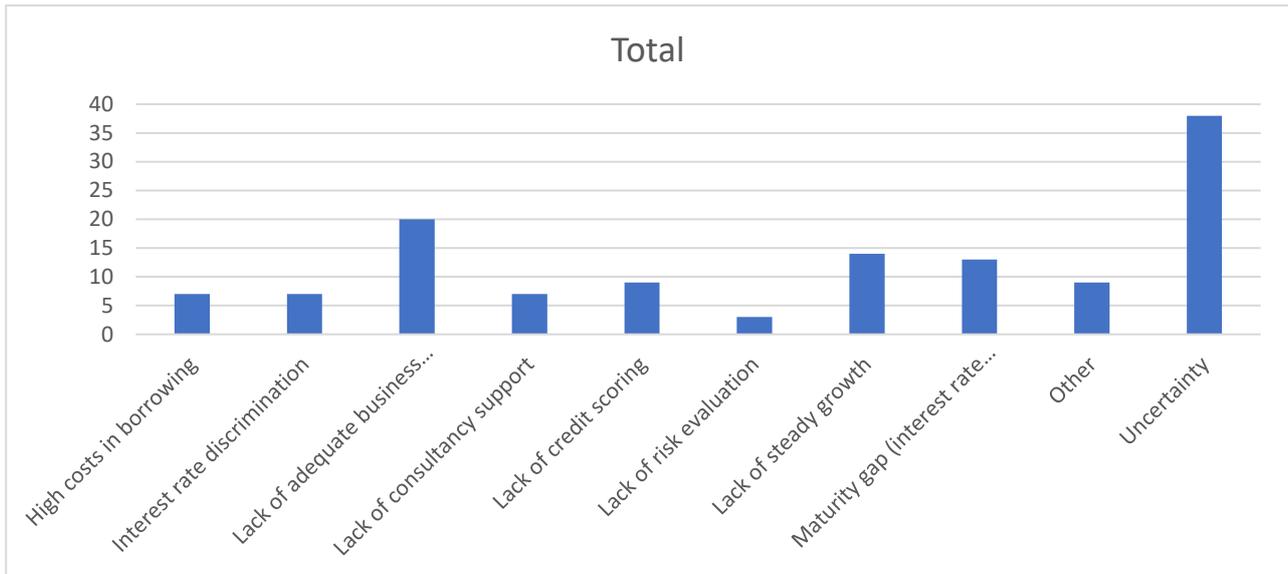
**8. Is access to financing/ funding a key and critical issue for improving your company’s technological assets?**

More than 60% of companies consider that access to financing/ funding is a key critical issue for improving their technological assets.



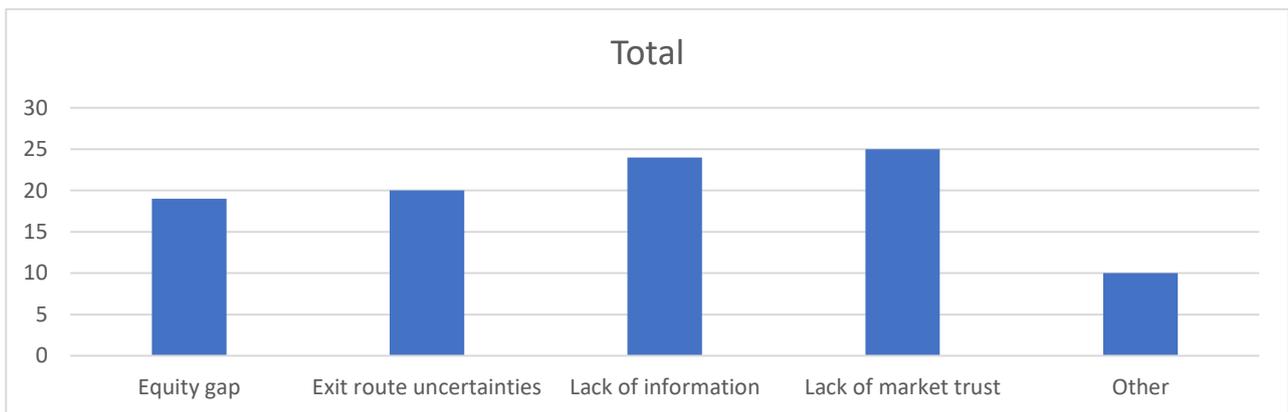
If yes, which are the main challenges your company faces in terms of accessing financing and funding for the overall improvement of the company’s technological assets? **FOR DEBT FINANCE – BANK LENDING.**

Those companies that consider that access to financing/funding is a key critical issue for improving their technological assets, assess uncertainty, lack of adequate business plan and steady growth as the key challenges.



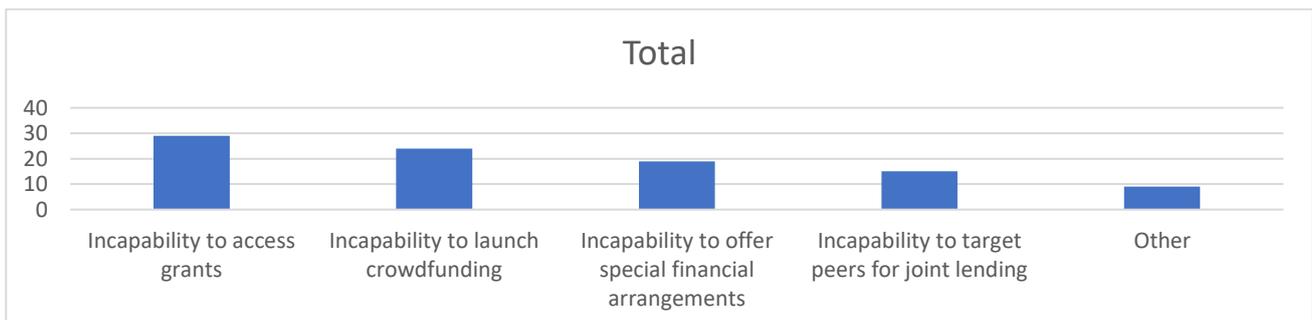
If yes, which are the main challenges your company faces in terms of accessing financing and funding for the overall improvement of the company's technological assets? **FOR EQUITY FINANCE – VENTURE CAPITAL, BUSINESS ANGELS. P**

Those companies that consider that access to financing/funding is a key critical issue for improving their technological assets, assess lack of market trust and lack of information as they key challenges. But, other challenges also seem to be important, including equity gap and exit route uncertainties.



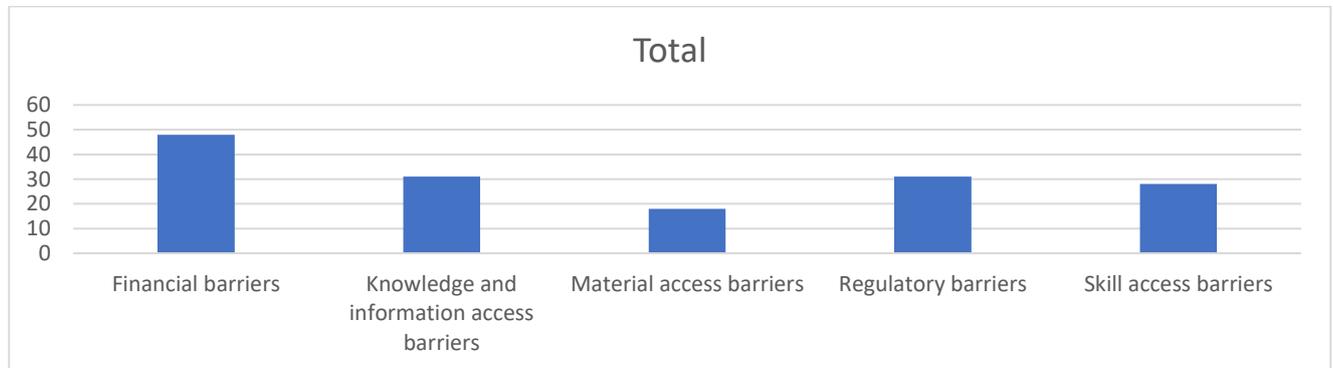
If yes, which are the main challenges your company faces in terms of accessing financing and funding for the overall improvement of the company's technological assets? **FOR NON-BANK FINANCE.**

Those companies that consider that access to financing/funding is a key critical issue for improving their technological assets, assess the incapability to access grants and to launch crowd funding as they key challenges. But, other challenges also seem to be important, like the incapability to offer special financial arrangements and to target peers for joint lending.



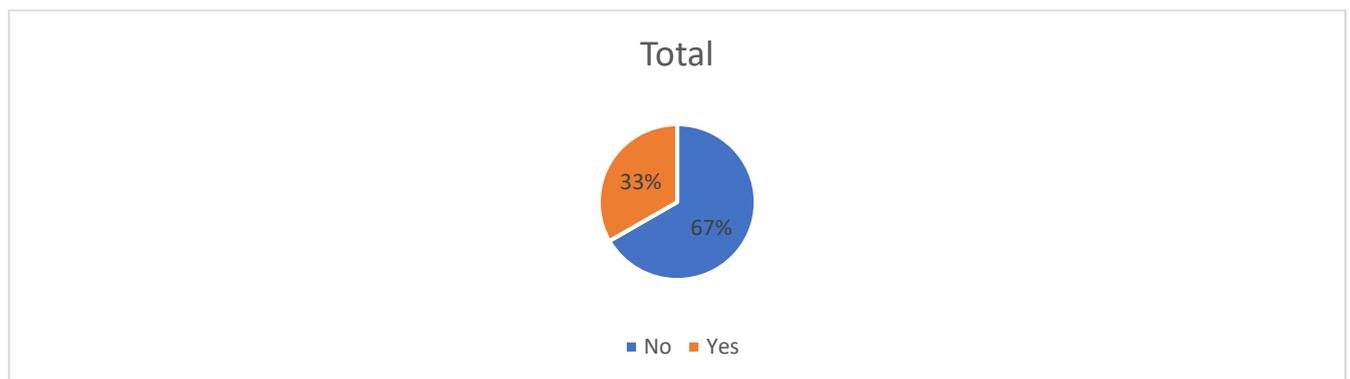
**9. What are the main barriers that your company faces in terms of accessing to key technologies to retain competitiveness and capitalize on new markets? Please, select up to three answers.**

Most of the companies consider that the main barriers that they face in terms of accessing key technologies to retain competitiveness and capitalise on new markets are financial barriers, knowledge and information access barriers, and regulatory barriers.



**10. Does your company have alternative ways for the improvement of technological assets?**

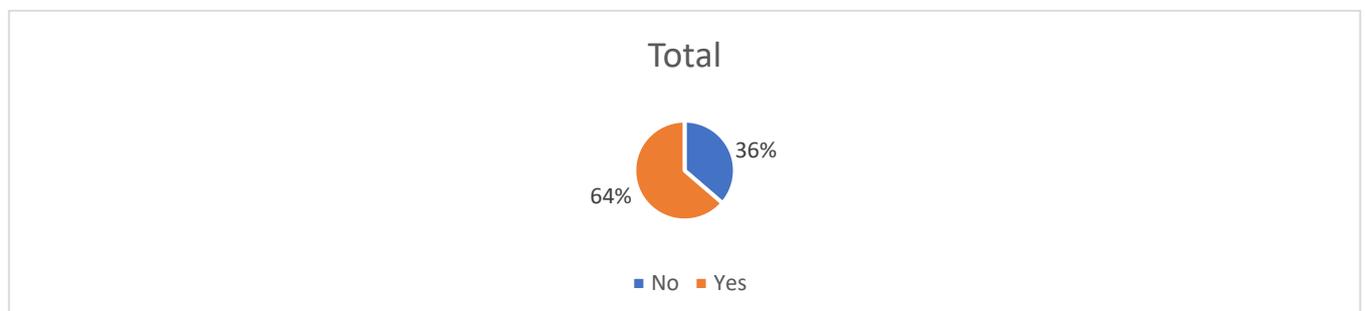
More than 65% of the companies do not have any alternative way for the improvement of their technological assets.



**SECTION 3 – NETWORKING AND JOINT COOPERATION PROCESSES**

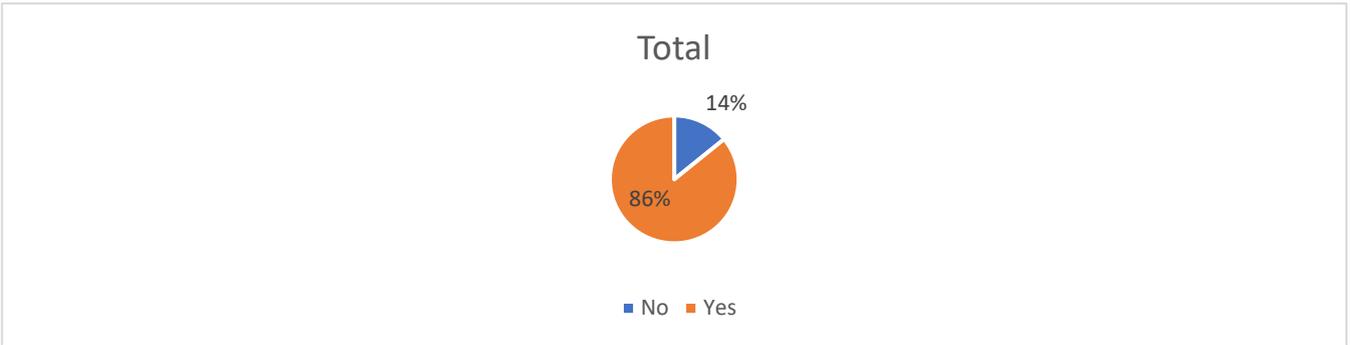
**11. Does your company participate in any networking activities (local / national / international) conducting to expanding your international market opportunities?**

More than 60% of the companies participate in networking activities (local/ national/international) conducting to expanding their international market opportunities.



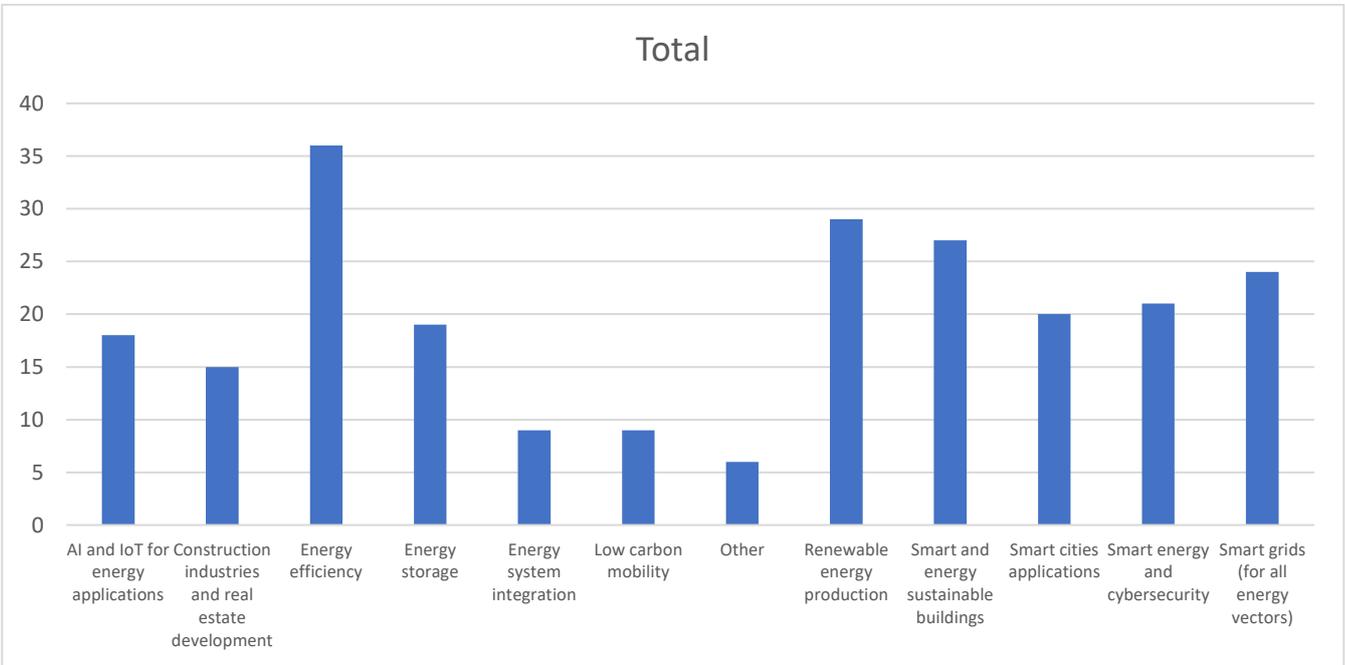
**12. Does your company have interest in energy and ICT cross-sectoral networking and collaboration?**

The vast majority of the companies have a keen interest in energy and ICT cross-sectoral networking and collaboration.



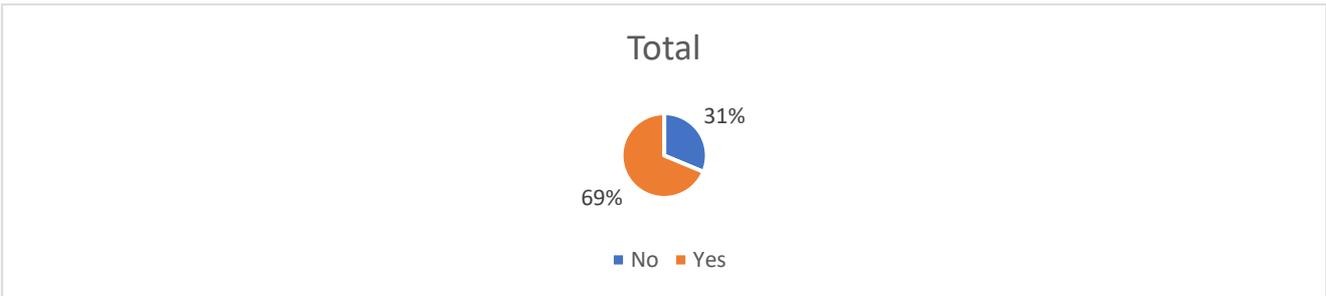
**If yes, which energy and ICT cross sectoral applications is your company interested in? Please, select up to three answers.**

Those companies interested in energy and ICT cross-sectoral networking and collaboration show an interest in the fields of energy efficiency, renewable energy production, smart and energy sustainable buildings and smart grids (for all energy vectors). Other fields appear of interest such as smart energy and cybersecurity and AI and IoT for energy applications.



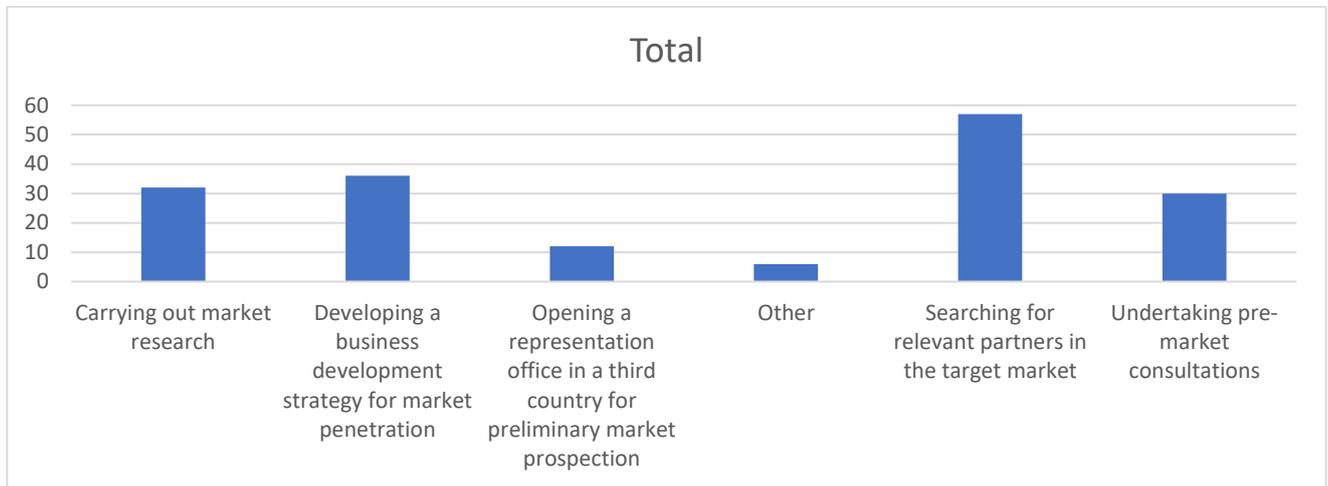
**13. Does your company have an international business strategy?**

Almost 70% of the companies have an international business strategy.



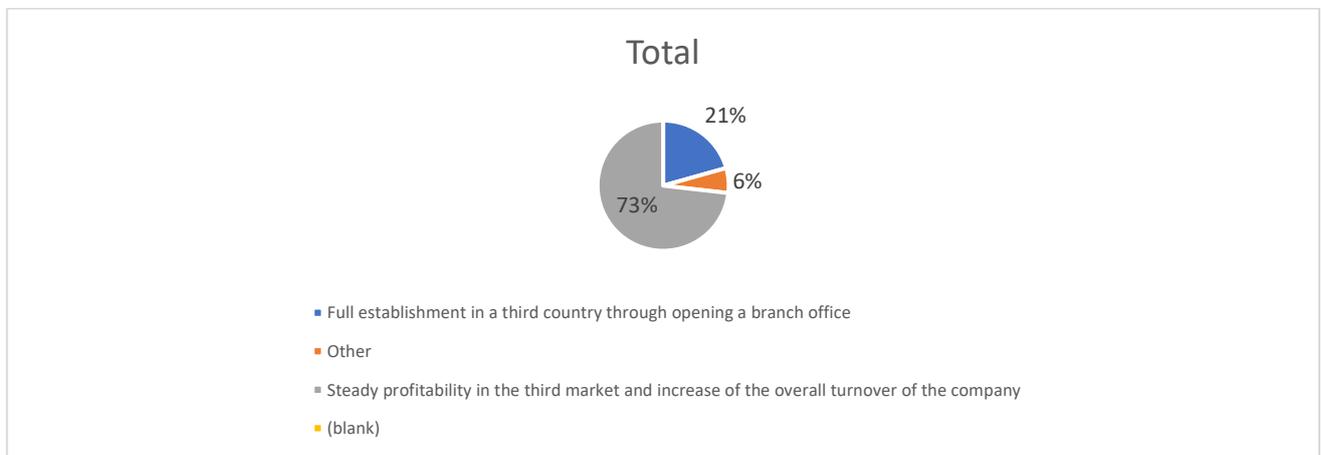
**If yes, what are the main priorities for the short and long-terms? SHORT-TERM**

Companies consider that searching for relevant partners in the target markets and developing a business development strategy for market penetration are key priorities in the short-term. But other priorities are also important, like undertaking pre-market consultations and carrying out market research.



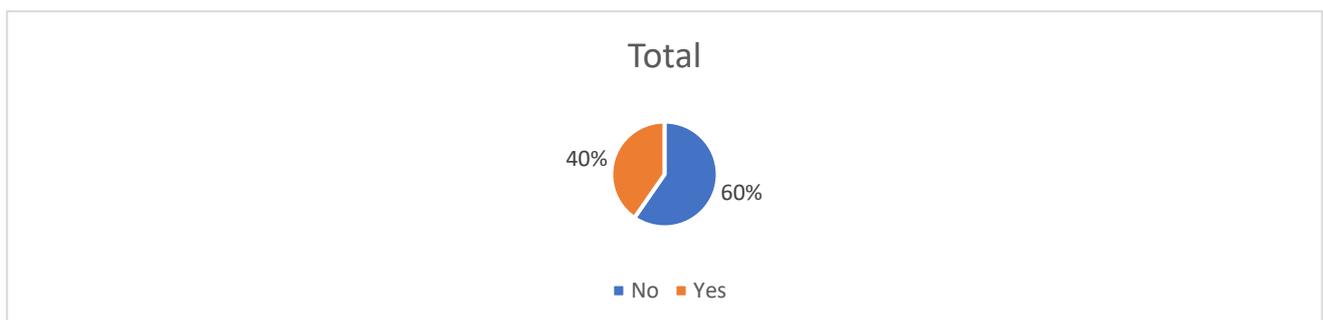
**If yes, what are the main priorities for the short and long-terms? LONG-TERM**

Companies consider that achieving steady profitability in the third market and increase the overall turnover of the company is the key priority in the long-term. For this, the full establishment in the target third country and opening a branch office could be a springboard for this. More than 20% of the companies consider the establishment in the target country a key priority in the long-term.



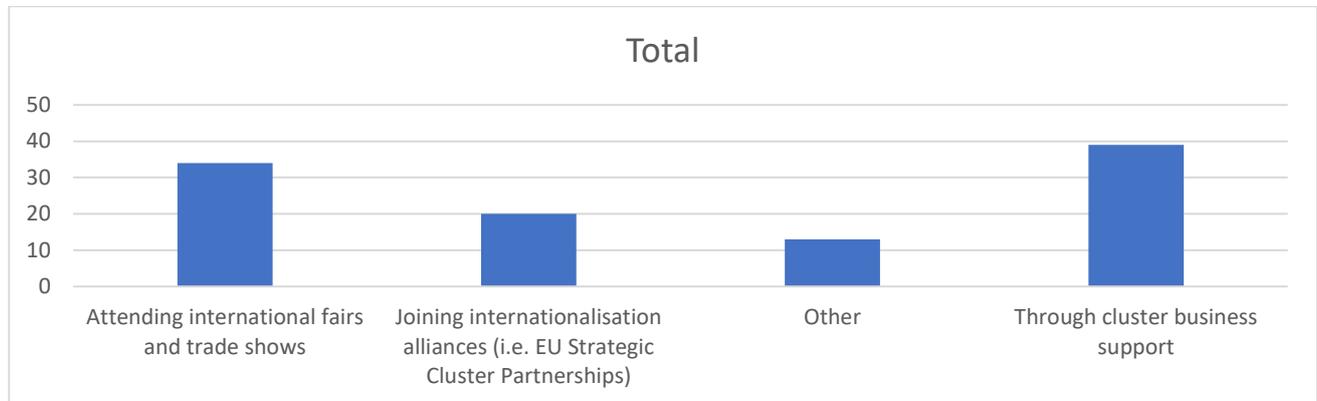
**14. Is your company relying on external assistance to develop its internationalization strategy?**

Almost 60% of the companies are currently relying on external assistance to develop their internationalisation strategy.



### If not, how does your company approach the international markets?

The majority of the companies approach international markets through cluster business support and attending international fairs and trade shows. The latter could be linked to cluster business support. Some companies also join international alliances for going international.



## CONCLUSIONS AND RECOMMENDATIONS

Following the individual and joint analysis, we can draw the following conclusions and recommendations:

- Most of the actors of the innovation ecosystem of the partner clusters provide services for their clients that fall under the same remit of the services of partner clusters. Both actors and partner clusters offer classic services in overall terms. The general trend is that the provision of services is often duplicated creating competition among peer organisations. New dedicated services under SMARTENERGY should have an innovative and distinctive approach to offer in the market additional added-value to members. The benchmarking exercise paves the way to target those services that could be developed.
- It is urgent to cover and/or provide enhanced services that can address current and future challenges of companies. These include access to new markets, finding customers, breaking barriers in access to finance (e.g. venture capitals, business angels, etc), and bringing products to the market. The key challenges are embedded in the undelying necessity to find/ target both private and public funding and place products and services in the market both at national and international level with a view to increase growth and sales and ultimately create decent jobs/ employment. This is very important currently in the time of COVID-19 where business survival rates will fall dramatically.
- Most of the actors do not offer direct access to test sties and facilities. CLEVER offers the possibility to support companies for pilot test activities. Archenerg Cluster through COSMENERG-4i also offers the possibility for pilot test activities, in a top-notch research centre in Warsaw. This possibility could be used in the framework of both transnational and international cooperation projects.
- Most of the actors provide access to public funding through the preparation of tenders and project proposals. This service is very important and should continue but it should be mainstreamed differently and be diversified in the approach. Most actors focus on EU-funded projects, and regional and national funding. But, in the case of the EU, there are funding schemes where clusters/companies could participate, especially in the field of international cooperation and development and current EU supported business activities (i.e. EU External Investment Plan, etc). Current EU policies in the field of international cooperation and development highlight the importance of the private sector as key player in development and cooperation in third countries. Partner clusters should become key players in this field and participate in EU-funded projects/ funding schemes (i.e. EuropeAid, etc) outside the scope of 'classical' funding schemes (i.e. COSME, H2020, etc). The same approach should be mainstreamed at international level (i.e. World Bank funding, Multilateral Development Banks, etc). Archenerg Cluster provides this service and COSMENERG-4I action plan moves in this direction. This diversified approach could be linked to services to penetrate new markets.

- COVID-19 has accelerated already existing changing trends in the world, and pushed forward digitalisation. Capacity building (i.e. trainings, awareness raising workshops, etc) and B2B activities, including those linking companies with investors should follow this trend.
- The vast majority of companies show a keen interest in energy and ICT cross-sectoral networking and collaboration. The comparative advantage of the partnership in this field should be the backbone for future activities and services.
- The majority of the companies rely on cluster business support to approach international markets. One key service should be to provide companies/ clients with business development strategies and top-notch consultancy services in this regard. The service should focus on activities to ensure steady profitability in the third markets and increase the overall turnover of the companies. Local representatives or partnership’s branch offices could overcome the necessity of members to open branch offices in third countries.
- International CleanTech Network and COSMENERG-4i (Archenerg) could be the basis for setting-up the metacluster at EU level. Both entities have the network and the capacities to provide superior combined services. Joining synergies between both partnerships could be the basis for the common strategy focused on the design of an alliance or metacluster for energy transition at EU level.

## ANNEX 1 – SUMMARY OF THE SERVICES PROVIDED BY EACH PARTNER CLUSTER

### ARCHENERG CLUSTER

Archenerg Cluster was founded in 2007 and is located in Szeged, Hungary. It has around 80 members, including SMEs and large companies. Archenerg’s focus areas are renewable energy, building industry, project generation and management, training, research, organizational and process development innovation, environmental protection, and lobbying and advocacy.

Archenerg is a founding member of COSMENERG-4i, the biggest EU Strategic Cluster Partnership in the field of renewable energy and environmental technologies originating in Central and Eastern Europe and the Balkans, and member of one European Strategic Cluster Partnership for Smart Specialisation Investments aiming to pursue proactive and business-oriented cross-sectoral cooperation of SMEs in the field of cyber security and smart building. The following table summarises the services that Archenerg Cluster provides to members on bringing innovation to the market and support to industrialization.

Activities of ‘Go-to-Market’ support	Archenerg services
Collaborative innovation / co-creation	<ul style="list-style-type: none"> <li>– Project ideation and brainstorming</li> <li>– Thematic innovation workshops and events</li> <li>– Partner search/ technology scouting</li> </ul>
Acceleration of growth	<ul style="list-style-type: none"> <li>– Business matchmaking (B2B conventions, etc)</li> <li>– Business marketplace</li> <li>– SME/ companies Helpdesk</li> </ul>
Access to R&D innovation	<ul style="list-style-type: none"> <li>– Innovation programme running</li> <li>– Access to R&amp;D platforms and facilities</li> </ul>
Organisational development	<ul style="list-style-type: none"> <li>– Access to competences/HR</li> <li>– Road mapping techno development</li> </ul>
Internationalisation and access to third markets	<ul style="list-style-type: none"> <li>– Joint booth on international fairs</li> <li>– Export advice</li> </ul>
Marketing and promotion	<ul style="list-style-type: none"> <li>– Online advertising</li> <li>– Event organization (seminars, webinars, conferences, etc)</li> </ul>
Training and coaching	<ul style="list-style-type: none"> <li>– Legal aspects</li> <li>– Pitch preparation and coaching</li> </ul>
Access to private financing sources	<ul style="list-style-type: none"> <li>– Support in R&amp;D financing sources research (financial institutes)</li> </ul>

Access to public, regional, national, EU and international tenders and funding opportunities	<ul style="list-style-type: none"> <li>– Proposal and tender writing</li> <li>– Partner search</li> </ul>
Business matchmaking	<ul style="list-style-type: none"> <li>– International trade fairs and events</li> <li>– B2B matchmaking</li> </ul>
Intellectual Property Rights (IPR)	<ul style="list-style-type: none"> <li>– Trainings</li> </ul>

## TENERRDIS – SERVICES ON INNOVATION TO THE MARKET AND SUPPORT TO GROWTH

Tenerrdis was founded in 2005 with HQ located in Grenoble, France. An office has been set up in January 2020 in Lyon. Tenerrdis accounts for 230 members, Local authorities, Academics and Research centers and Companies out of which most of them are SMEs (150).

Tenerrdis is the Cluster for the energy transition and a catalyst for innovation across France’s Auvergne-Rhône-Alpes region, a hub for the European—and global—energy industry.

By facilitating partnerships among businesses, research centers, education, and other organizations spanning the public and private sectors, Tenerrdis creates the collaborative ecosystem needed to foster new energy technology projects that build expertise, generate new business opportunities, and create jobs.

Tenerrdis has been awarded with a Gold Cluster Management Excellence in 2015, and has been selected amongst the 50 French Competitiveness Clusters recognized and support by the National State in 2018 (Cluster 4.0).

Tenerrdis leverages the many partnerships it has built over the years to point its members toward the resources and contacts most likely to help bring their innovations to the market and, more generally, to provide them with the most appropriate form of support according to their stage of development

The following table summarizes the services provided by Tenerrdis .

<b>Activities of ‘Go-to-Market’ support</b>	<b>Archenerg services</b>
Collaborative innovation	<ul style="list-style-type: none"> <li>– Project ideation and brainstorming</li> <li>– Thematic innovation workshops, events, cross topics events with partners</li> <li>– Identification of the adequate funding windows to public, regional, national, EU and international tenders</li> <li>– Research of partners and techno scouting, international benchmark</li> <li>– Expertise and certification of innovative projects</li> <li>– Personalized support heading to maximizing chance of success when submitting projects</li> <li>– Coordination of structuring projects at a regional level (Hyway in the H2 field)</li> <li>– Common techno roadmap with other clusters within the region (cross sectorial) or out of the region (Energy Clusters)</li> </ul>
Acceleration of growth	<ul style="list-style-type: none"> <li>– Business matchmaking (B2B conventions, B2B matchmaking etc)</li> <li>– SME/ companies, territories Helpdesk</li> <li>– Certification of innovation solutions ready to be put on the market (Energized by Tenerrdis labelling)</li> <li>– Club des partenaires initiative : “Partners Club” – Exclusives services to members covering their fields of expectations and needs</li> <li>– Partnering with Solar Impulse Foundation to contribute to give a label to 1000 innovative Energy solutions</li> <li>– Introduction to advisors for key functions like industrial scale-up, hiring, etc</li> </ul>
Access to R&D innovation	<ul style="list-style-type: none"> <li>– Collaboration at the national level of Energy Transition policies (CSF:biomass, Hydrogen)</li> <li>– Co-elaborating upwards Innovation programmes with regional or national authorities (CEI : Call of Expression of interest)</li> <li>– Access to R&amp;D platforms and facilities</li> </ul>
Gouvernemental and regional policies	<ul style="list-style-type: none"> <li>– Participation to Energy Roadmap policies with the Auvergne Rhône Alpes Region</li> </ul>

	<ul style="list-style-type: none"> <li>– Collaboration at the national level of Energy Transition policies (CSF:biomass, Hydrogen - Comité Stratégique de Filière « Nouveaux Systèmes Energétiques »)</li> <li>– Technical Studies conducted to the benefits of public agencies (ADEME) or regional authorities</li> </ul>
Internationalisation	<ul style="list-style-type: none"> <li>– Joint booth on international fairs</li> <li>– Outbound and inbound missions, missions with partners focusing support to SMEs and StartUps</li> <li>– Launch of a Club Afrique gathering companies, NGO, Local authorities to plan common action to develop the African Market</li> </ul>
Communication	<ul style="list-style-type: none"> <li>– Online information to members (extranet with interactions systems with members) and to the public</li> <li>– Newsletters</li> <li>– Social media activities</li> <li>– Press releases concerning the activities of members</li> <li>– Events organization (seminars, webinars, conferences, etc) 52 units per years</li> </ul>
Training and coaching	<ul style="list-style-type: none"> <li>– Intellectual property (1 session per month over the year) with clusters' partners</li> <li>– Pitch in English with clusters' partners</li> <li>– Support to two Business Schools masters in Grenoble (GEM Business School), and Lyon (EM Business School, ECAM) (Energy Transition)</li> <li>– Involvement in the Campus des Métiers (regional initiative to face the gap of offer and demand within the field of employment)</li> </ul>
Access to private financing sources	<ul style="list-style-type: none"> <li>– Support in R&amp;D financing sources research (financial institutes)</li> <li>– Launch of the Club des partenaires with dedicated offer package elaborated by partners (Banks, crowdfunding platforms, VC...)</li> </ul>

## **MINALOGIC – INNOVATION SERVICES AND BUSINESS SUPPORT**

Minalogic is a global innovation cluster for digital technologies serving France's Auvergne-Rhône-Alpes region. The cluster supports the region's leading innovators by facilitating networking, fostering collaborative R&D, and providing companies with personalized assistance throughout all phases of business growth. The products and services developed by our members address all industries, from ICT and healthcare to energy, advanced manufacturing and mobility. Minalogic's roadmap concentrates on 11 markets considered as strategic for our members: , ICT, Healthcare, Energy & Environment, Advanced manufacturing, Agrifood & Foodtech, Aerospace & Defense, Mobility & Transportation; Finance & Insurance; Smart Cities & Buildings, Trade & distribution.

Minalogic was founded in 2005 and today boasts approximately 470 members, including 400 companies. Our companies are developing components or integrating solutions/systems related to sensors, cameras, communication, IoT and cyber-physical systems, data analytics and artificial intelligence.

Minalogic is a founding member of Silicon Europe, the alliance for innovative electronics & software technologies, led by 12 cluster of 8 European countries, representing 2500 actors of the digital value chain.

Minalogic leads the regional Digital Innovation Hub (DIH) Minasmart, providing partnership opportunities and innovation support to industries to accelerate and facilitate their digitalization.

The following table summarises the services that Minalogic Cluster provides to members on bringing innovation to the market and support to industrialization.

<b>Activities of 'Go-to-Market' support</b>	<b>Minalogic services</b>
Collaborative innovation / co-creation	<ul style="list-style-type: none"> <li>– Project ideation and brainstorming</li> <li>– Thematic digital-oriented innovation workshops and events</li> <li>– Partner search/ technology scouting</li> </ul>

	–
Acceleration of growth	– Business matchmaking (B2B conventions, etc) – Open Innovation Days – Business marketplace – SME/ companies Helpdesk
Access to R&D innovation	– Cascade funding operating – Innovation programme running – Access to R&D platforms and facilities
Organisational development	– Access to competences/HR
Internationalisation and access to third markets	– Joint booth on international fairs –
Marketing and promotion	– Online advertising – Event organization (seminars, webinars, conferences, etc)
Training and coaching	– Pitch preparation and coaching – Job market place
Access to private financing sources	– Support in R&D financing sources research (financial institutes)
Access to public, regional, national, EU and international tenders and funding opportunities	– Proposal and tender assessment – Projects' labelisation – Partner search
Business matchmaking	– Minalogic Business Meetings (MBM) – TechBizDays
Intellectual Property Rights (IPR)	–

#### Focus on one specific service: Open Innovation Days

Open innovation days are open innovation accelerators designed to bring together: a large corporation looking for innovation opportunities in the digital technology field and a curated portfolio of innovative startups & SMEs. The goal is to facilitate business opportunities and partnerships.

An **Open Innovation Day** is curated by Minalogic for a specific **Large Corporation**. Throughout this day-long event, the Large Corporation can meet up to 50 innovative SMEs and start-ups providing solutions addressing their unique needs. For **startups & SMEs**, the Open Innovation Day represents an invaluable opportunity to establish a business relationship with the Large Corporation.

Value proposition for Large Corporations:

- **Efficient networking format:** opportunity to meet a large number of start-ups and SMEs in a single day
- **Targeted sourcing of participants:** start-ups and SMEs are handpicked by Minalogic to address the specific needs of the Large Corporation.
- **High success rate:** an average of 50% of start-ups & SMEs establish a formal business relationship with the Large Corporation after the event

Value proposition for start-ups & SMEs:

- **Relationship building:** access to key decision makers and opportunity to more deeply understand their corporate strategy
- **Business exposure:** format of event is designed to support startups & SMEs by showcasing their unique and innovative solutions to key decision makers (e.g., through pitch and B2B meetings)

The global objective is to help the SME and large corporation business grow by developing new business contracts or technology cooperation agreements.

### **CLEVER – SERVICES ON INNOVATION TO THE MARKET AND SUPPORT TO INDUSTRIALISATION**

CLEVER Cluster is the continuation of the experience of the POLIGHT cluster, founded in 2007, and is located in the Piedmont Region, Italy. It has actually 164 members, including SMEs, large companies, research organizations and other regional ecosystem actors. The mission of CLEVER (Clean Tech and Energy Innovation Cluster) is the technology transfer of innovation in the local green technologies sector, to stimulate and bring it to the global market.

The main objectives of the cluster are the improvement of the innovation potential of members, exploring business opportunities for the results of research activities and the support to the regional institution to orient the innovation programs for the sector. Thanks to the facilities available at Environment Park, technology park and managing organization of the cluster, the members of the cluster also have access to dedicated laboratories and a wider network of actors supporting innovation at regional and EU level.

Furthermore, Environment Park is a founding member of MOVE, EU Strategic Cluster Partnership for internationalization in the sector of ICT and environmental technologies for sustainable transports and mobility. The following table summarises the services that CLEVER Cluster provides to members on bringing innovation to the market and support to industrialization.

<b>Activities of ‘Go-to-Market’ support</b>	<b>CLEVER cluster services</b>
Collaborative innovation / co-creation	<ul style="list-style-type: none"> <li>– Thematic innovation workshops and events</li> <li>– Partner search/ technology scouting</li> </ul>
Acceleration of growth	<ul style="list-style-type: none"> <li>– Business matchmaking (B2B conventions, etc)</li> <li>– SME/ companies Helpdesk</li> </ul>
Access to R&D innovation	<ul style="list-style-type: none"> <li>– Innovation programme running</li> <li>– Access to test platforms and facilities</li> <li>– Provider of tech infrastructure</li> </ul>
Organisational development	<ul style="list-style-type: none"> <li>– Access to competences/HR</li> </ul>
Internationalisation and access to third markets	<ul style="list-style-type: none"> <li>– Joint booth on international fairs</li> <li>– Exploratory missions</li> <li>– International market studies</li> </ul>
Marketing and promotion	<ul style="list-style-type: none"> <li>– Event organization (seminars, webinars, conferences, etc)</li> </ul>
Training and coaching	<ul style="list-style-type: none"> <li>– Legal aspects</li> <li>– Pitch preparation and coaching</li> </ul>
Access to private financing sources	<ul style="list-style-type: none"> <li>– Networking with venture capitalists</li> <li>– Support in R&amp;D financing sources research (financial institutes)</li> </ul>
Access to public, regional, national, EU and international tenders and funding opportunities	<ul style="list-style-type: none"> <li>– Collective information</li> <li>– Individual support</li> <li>– Cascade funding grants</li> </ul>
Business matchmaking	<ul style="list-style-type: none"> <li>– International trade fairs and events</li> <li>– B2B matchmaking</li> <li>– C2C matchmaking</li> </ul>
Intellectual Property Rights (IPR)	<ul style="list-style-type: none"> <li>– Technical and legal advice</li> </ul>

### **TWEED – SERVICES ON INNOVATION TO THE MARKET AND SUPPORT TO INDUSTRIALISATION**

TWEED (Technology of Wallonia Energy, Environment and sustainable Development) play a major role in the business development of «sustainable energy» sectors. Its first mission is to pave the way for the setting up of high quality and industrial-size projects in the fields of production and exploitation of sustainable energy. TWEED gathers more than 145 technological players of the renewable energy sector in Wallonia and Brussels.

Furthermore, Cluster TWEED has conducted different mappings of the Walloon / Brussels players (companies, research centers, universities, ...) active in the many subsectors of the renewable energy sector. The platform <http://www.REWallonia.be> gives access to the mappings: in total, ReWallonia represents more than 400 organizations. ReWallonia is a reference in the sector of renewable energy, and has the ambition to contribute to the development of renewable energy, by acting on the supply and on the demand.

<b>Activities of 'Go-to-Market' support</b>	<b>TWEED cluster services</b>
Collaborative innovation / co-creation	<ul style="list-style-type: none"> <li>– Thematic innovation workshops and events</li> <li>– Reactive and proactive approaches in order to stimulate new projects.</li> <li>– Partner search at regional, national, &amp; international level</li> </ul>
Acceleration of growth	<ul style="list-style-type: none"> <li>– Business matchmaking (B2B conventions, etc)</li> <li>– Business &amp; technology marketplace (ReWallonia.be)</li> <li>– Carrying out industry, technical, market and economic studies on sustainable energy sector.</li> </ul>
Access to R&D innovation	<ul style="list-style-type: none"> <li>– Innovation program via dedicated calls of projects, working groups</li> <li>– Link between R&amp;D players/infrastructure &amp; SME's</li> <li>– Roadmap &amp; value chain analysis</li> </ul>
Organisational development	<ul style="list-style-type: none"> <li>– Access to competences/HR</li> </ul>
Internationalisation and access to third markets	<ul style="list-style-type: none"> <li>– Joint booth on international fairs</li> <li>– Exploratory missions</li> <li>– Official partner for international activities energy with regional export agency</li> </ul>
Marketing and promotion	<ul style="list-style-type: none"> <li>– Event organization (seminars, webinars, conferences, workshops,...)</li> <li>– "Supply Meets Needs" events</li> <li>– Visits of companies &amp; facilities</li> </ul>
Training and coaching	<ul style="list-style-type: none"> <li>– Specific Capacity Building program focus Africa)</li> </ul>
Access to private financing sources	<ul style="list-style-type: none"> <li>– Support in R&amp;D &amp; Investment financing sources research</li> </ul>
Access to public, regional, national, EU and international tenders and funding opportunities	<ul style="list-style-type: none"> <li>– Set-up technical support and management of projects</li> <li>– Collective information &amp; consortium support</li> </ul>
Business matchmaking	<ul style="list-style-type: none"> <li>– B2B matchmaking</li> <li>– C2C matchmaking in order to develop synergies with other green energy clusters</li> </ul>
Intellectual Property Rights (IPR)	<ul style="list-style-type: none"> <li>– IPR analysis (via subcontracting)</li> <li>– Consortium/collaborative agreement</li> </ul>

## FLUX50 – SERVICES ON INNOVATION TO THE MARKET AND SUPPORT TO INDUSTRIALISATION

Flux50, the spearhead cluster for energy in Flanders (BE), was founded in 2017 and is located in Brussels. It is the membership organization that helps Flanders gain international recognition as a Smart Energy Region. Flux50 facilitates cross-sector collaboration between energy, IT and building companies to enhance the competitiveness of the Flemish smart energy industry in the transition towards low carbon systems.

To bring innovative and fully-integrated energy products and – services to the international market, Flux50 sets up and coordinates living labs in five ‘innovator zones’: (1) energy harbors, (2) microgrids, (3) multi-energy solutions at district level, (4) energy cloud platforms and (5) intelligent renovation. Flux50 brings together circa 165 relevant players from industry, academia and government and provides them with project support, networking opportunities and a knowledge-sharing platform. Flux50 is since its creation member of the International Cleantech Network (ICN) - the world’s leading cleantech network consisting of 13 regional clusters from around the world.

The following table summarises the services that Flux50 provides to members on bringing innovation to the market.

Activities of ‘Go-to-Market’ support	Flux50 services
Collaborative innovation / co-creation	<ul style="list-style-type: none"> <li>– Project ideation and brainstorming</li> <li>– Thematic innovation workshops and events</li> <li>– Partner search</li> </ul>
Acceleration of growth	<ul style="list-style-type: none"> <li>– Business matchmaking</li> </ul>
Access to R&D innovation	<ul style="list-style-type: none"> <li>– Flux50 projects match research institutes &amp; universities with the right companies</li> <li>– Research steering board supports the roadmapping/... activities at Flux50</li> </ul>
Organisational development	<ul style="list-style-type: none"> <li>– Roadmapping techno development in Flanders</li> </ul>
Internationalisation and access to third markets	<ul style="list-style-type: none"> <li>– Joint booth on international fairs</li> <li>– Support to find the right partner in third markets, with the support of the International Cleantech network and Flanders Investment &amp; Trade agency (FIT), the European commission prospect missions, ...</li> </ul>
Marketing and promotion	<ul style="list-style-type: none"> <li>– Visibility for innovation project powered by Flux50</li> <li>– Individual visibility through events/newsletters of the company members</li> </ul>
Training and coaching	<ul style="list-style-type: none"> <li>– Support for submitting good project proposal (for funding in Flanders)</li> </ul>
Access to private financing sources	<ul style="list-style-type: none"> <li>– Match corporates with smaller solution providers</li> <li>– Some of the members are financial institutes/banks and fund innovation for the energy transition thanks to the knowledge &amp; networking of the Flux50 community</li> </ul>
Access to public, regional, national, EU and international tenders and funding opportunities	<ul style="list-style-type: none"> <li>– Raising awareness on EU funding</li> <li>– Support and facilitate Partner searches in both directions (external companies looking for partners in Flanders/ Flemish companies looking for EU partners)</li> </ul>
Business matchmaking	<ul style="list-style-type: none"> <li>– International trade fairs and events</li> <li>– B2B matchmaking regionally or nationally</li> <li>– Through the ICN network</li> <li>– Sharing challenges from corporates abroad</li> </ul>
Intellectual Property Rights (IPR)	

## ANNEX 2 – SURVEYS 1 AND 2

### SURVEY 1 – ACTIVITIES OF ‘GO-TO-MARKET’ SUPPORT OFFERED BY MEMBERS OF THE INNOVATION ECOSYSTEM

#### INTRODUCTION

SMARTENERGY project, which involves 6 European clusters (France, Italy, Belgium, Hungary) in **energy and ICT sector**, aims to **support member SMEs** in transnational cooperation, learning, networking and innovation-oriented activities. SMEs will have the opportunity to take part in cross border **short-term exchanges** to identify new partners and market access opportunities, enlarge their network, sharing experiences and increase their knowledge.

#### AIM OF THE SURVEY

This survey aims to collect information regarding the activities of go to market support already offered or under development by the members of the innovation ecosystem, to increase opportunities of cooperation among innovation actors in the field of market access of developed innovation.

#### INSTRUCTIONS FOR THE SURVEY

The survey will take around 8 minutes of your time to complete. You will have to reply to two main sections. The first one consists of general information on your organisation. The second one focuses on information on the type of services that your organisation offers to members/ clients through a multiple choice questionnaire followed by short descriptions of additional information.

#### ORGANISATION TYPE:

- Agency in charge of management of funds
- Cluster
- Incubator/ Accelerator
- Technology transfer organisations
- Financial intermediary
- Start-up support organisation
- Chamber of Commerce and Industry
- University
- EU Strategic Cluster Partnership
- Research organisation
- Other, please specify

.....

#### ORGANISATION SIZE:

- Less than 10 people
- 10-30 people
- 30 – 50 people
- Over 50 people

#### COUNTRY AND REGION

#### ORGANISATION NAME AND EMAIL ADDRESS

#### WHICH ARE THE MAIN BUSINESS SERVICES OFFERED BY YOUR ORGANISATION TO MEMBERS/ CLIENTS?

- COLLABORATIVE INNOVATION/ CO-CREATION**
  - Project ideation and brainstorming
  - Innovation thematic working groups
  - Thematic innovation workshops and events

- Partner search / technology scouting

What kind of specific / innovative tools have you developed to offer this service to your members? Please, provide an example and a short description:

**ACCELERATION OF GROWTH**

- Open innovation
- Business matchmaking (B2B conventions, etc)
- Business and project labelling initiatives
- Investment tickets
- Access to industrialization expertise
- Access to industrialization facilities
- Business marketplace
- SME/ companies helpdesk

What kind of specific / innovative tools have you developed to offer this service to your members? Please, provide an example and short description:

**ACCESS TO R&D INNOVATION**

- Innovation programme running
- Access to R&D platforms and facilities
- Access to test platforms and facilities
- Technical support for scale up
- Provider of tech infrastructure
- Testing and validation

What kind of specific / innovative tools have you developed to offer this service to your members? Please, provide an example and short description:

**ORGANISATIONAL DEVELOPMENT**

- Access to competences / HR
- Staff exchange programme
- Marketplace job offers
- Road mapping techno development
- Diagnoses and transformation plan

What kind of specific / innovative tools have you developed to offer this service to your members? Please, provide an example and short description:

**INTERNATIONALISATION AND ACCESS TO THIRD MARKETS**

- Joint booth on international fairs
- Export advice
- Exploratory missions
- International market studies

What kind of specific / innovative tools have you developed to offer this service to your members? Please, provide an example and short description:

**MARKETING AND PROMOTION**

- Digital marketing
- Online advertising
- Product/ service positioning

- Sales promotion
- Event organization (seminars, webinars, conferences ...)

What kind of specific / innovative tools have you developed to offer this service to your members? Please, provide an example and short description:

**TRAINING AND COACHING**

- Legal aspects
- HR aspects
- Pitch preparation and coaching
- Vocational training (i.e. technical training)
- Other: specify

What kind of specific / innovative tools have you developed to offer this service to your members? Please, provide an example and short description:

**ACCESS TO PRIVATE FINANCING SOURCES**

- Networking with Venture Capitalists (VC)
- Support in R&D financing sources research (financial institutes)
- Crowd-funding campaigns
- Finance engineering (e.g. plan for investment equity, credits, loans, tax advantages, IPR, etc)

What kind of specific / innovative tools have you developed to offer this service to your members? Please, provide an example and short description:

**ACCESS TO PUBLIC, REGIONAL, NATIONAL, EU AND INTERNATIONAL TENDERS AND FUNDING OPPORTUNITIES**

- Collective information
- Individual support
- Cascade funding grants
- Consortia set-up
- Proposal and tender writing
- Partner search

What kind of specific / innovative tools have you developed to offer this service to your members? Please, provide an example and short description:

**BUSINESS MATCHMAKING**

- International trade fairs and events
- C2C matchmaking
- B2B matchmaking

What kind of specific / innovative tools have you developed to offer this service to your members? Please, provide an example and short description:

**INTELLECTUAL PROPERTY RIGHTS (IPR)**

- Trainings
- Technical and legal advice

What kind of specific / innovative tools have you developed to offer this service to your members? Please, provide an example and short description:

**In the coming months, are you expecting to develop new services in order to respond the demands of your present customers or to attract new ones?**

- Yes
- No

**If yes, which ones?**

.....  
.....  
.....

## **SURVEY 2 – SPECIFIC NEEDS OF COMPANIES FOR MARKET OUTREACH OF INNOVATION**

### **INTRODUCTION**

SMARTENERGY project, which involves 6 European clusters in **energy and ICT sector** (Italy, France, Belgium and Hungary), aims to **support member companies** in transnational cooperation, learning, networking and innovation-oriented activities. Companies will have the opportunity to take part in cross border **short-term exchanges**<sup>1</sup> (as from autumn 2020 onwards) to identify new partners and market access opportunities, enlarge their network, sharing experiences and increase their knowledge.

The project includes a preliminary analysis of the needs of companies, focused on challenges and opportunities of cross-sectoral collaboration between energy and ICT technologies, with the aim to better focus the services that clusters and other organisations working in innovation support can offer to better access the market.

### **AIM OF THE SURVEY**

This survey aims to collect/organise the specific needs of companies in terms of market outreach of innovation. The survey aims to verify the innovation management level, the demand for technology transfer, the difficulties to hire skilled staff, the difficulties to access key enabling technologies<sup>2</sup> solutions and funding for the improvement of technological assets and the approach to international networking.

### **INSTRUCTIONS FOR THE SURVEY**

The survey will take around 15 minutes of your time to complete. You will have to reply to questions under four different sections. The first one consists of general information on your company. The second one focuses on innovation management and needs for technology transfer. You will have to give information on your current difficulties to access technology and funding under the third section. Section four focuses on networking and joint cooperation processes.

### **COMPANY SIZE:**

- Start up
- Less than 10 people
- 10-50 people
- 50 – 250 people
- Over 250 people

### **COMPANY SECTOR/ TECHNOLOGY DOMAIN OF APPLICATION:**

- Renewable energy production
- Energy efficiency
- Smart energy and cybersecurity
- Construction industries and real estate development

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<sup>1</sup> By filling in the survey, you will be contacted you when the selection process starts.

<sup>2</sup> Key enabling technologies are investments and technologies that allow European industries to retain competitiveness and capitalize on new markets.

- Smart cities applications
- Smart and energy sustainable buildings
- Energy storage
- Smart grids (for all energy vectors)
- Low carbon mobility
- Energy system integration
- AI and IoT for energy applications
- Other

If other, please specify: .....

**CORPORATE NAME:** .....

**EMAIL ADDRESS:** .....

**COUNTRY AND REGION:** .....

**CLUSTER:** .....

Are you interested in taking part in the ClusterXChange Initiative, accessing the vouchers for the participation in the exchanges/visits to be organized between companies and supporting innovation organizations in the 4 countries (Belgium, France, Italy, Hungary) participating in the SMARTENERGY project?

- Yes
- No
- Maybe

**SECTION 1 – INNOVATION MANAGEMENT LEVEL AND NEEDS FOR TECHNOLOGY TRANSFER**

**1. Is your company nowadays facing new market challenges/opportunities (both at EU and international level) requiring new business approaches?**

- Yes
- No

**If yes, how would you rate your capacity of facing the challenges/opportunities identified for new businesses? – On the EU market**

- Strong
- Fair
- Weak
- No capacity at all

**If yes, how would you rate your capacity of facing the challenges/opportunities identified for new businesses? – On the international market**

- Strong
- Fair
- Weak
- No capacity at all

**2. Which key success factors do you think could strengthen your company’s capacity to introduce new ideas, processes and products in the market? Please, select up to three answers.**

- Capacity to undertake R&D.

- Access to national, regional, international and EU grants.
- Access to testing facilities.
- Access to distribution channels.
- Solid internationalization strategy and access to third markets.
- Effective training capacity for the workforce.
- Matchmaking opportunities
- Other

If other, please specify: .....

**3. Does your company have any kind of collaboration agreement with organizations supporting technology transfer and innovation to market (e.g. innovation agencies, clusters, chambers of commerce and industry, etc)?**

- Yes
- No

If yes, please specify who is your service provider: .....

**4. Does your company perform and/or attend any technology and knowledge transfer activities?**

- Yes
- No

If yes, please specify who manages the process, to whom it is addressed and how often it is executed:

.....

.....

.....

**5. How would you rate your level of innovation needs to reach the market (TRL<sup>3</sup> level)?**

- Basic technology/ innovation/ research (TRL 1-2-3)
- Premarket innovation/ Research to prove feasibility (TRL 3-4)
- Ready to market innovation/ Technology development (TRL 4-5)
- Technology demonstration (TRL – 5-6)
- System/subsystems development (TRL 6-7-8)
- System test, launch and operations (TRL 8-9)

**6. Which innovation management tools (if any) does your company use (e.g. enterprise software for customer service, product assessment, creating new disruptive ideas, sharing business platforms, etc)?**

- Yes
- No

If yes, please specify which one: .....

**SECTION 2 – DIFFICULTIES TO ACCESS TECHNOLOGY AND FUNDING**

**7. What is currently the most relevant challenge your company is facing?**

- Finding customers
- Competition
- Access to finance
- Costs of production
- Availability of skilled staff
- Regulations
- Other

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<sup>3</sup> TRL - Technology readiness level.

Other, please specify: .....

**8. Is access to financing/ funding a key and critical issue for improving your company's technological assets?**

- Yes
- No

If yes, which are the main challenges your company faces in terms of accessing financing and funding for the overall improvement of the company's technological assets? **FOR DEBT FINANCE – BANK LENDING.** Please, select up to three answers.

- Uncertainty
- Lack of credit scoring
- Lack of adequate business plan
- Maturity gap<sup>4</sup>
- Interest rate discrimination<sup>5</sup>
- High costs in borrowing
- Lack of consultancy support
- Lack of steady growth
- Other

Other, please specify: .....

If yes, which are the main challenges your company faces in terms of accessing financing and funding for the overall improvement of the company's technological assets? **FOR EQUITY FINANCE – VENTURE CAPITAL, BUSINESS ANGELS.** Please, select up to three answers.

- Lack of market trust
- Equity gap
- Exit route uncertainties
- Lack of information
- Other

Other, please specify: .....

If yes, which are the main challenges your company faces in terms of accessing financing and funding for the overall improvement of the company's technological assets? **FOR NON-BANK FINANCE.** Please, select up to three answers.

- Incapability to launch crowdfunding.
- Incapability to access national, regional and EU/international grants.
- Incapability to offer special financial arrangements.
- Incapability to target peers for joint lending.
- Other

Other, please specify: .....

**9. What are the main barriers that your company faces in terms of accessing to key technologies to retain competitiveness and capitalize on new markets? Please, select up to three answers.**

- Skill access barriers
- Financial barriers
- Material access barrier
- Knowledge and information access barriers<sup>6</sup>

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<sup>4</sup> It is a measurement of interest rate risk for risk-sensitive assets and liabilities.

<sup>5</sup> Discrimination in interest rates based on external factors.

<sup>6</sup> Lack of knowledge of key enabling technologies and the evolution in the sector of activities of the enterprise.

- Regulatory barriers

**10. Does your company have alternative ways for the improvement of technological assets?**

- Yes
- No

If yes, please specify: .....

**SECTION 3 – NETWORKING AND JOINT COOPERATION PROCESSES**

**11. Does your company participate in any networking activities (local / national / international) conducting to expanding your international market opportunities?**

- Yes
- No

If yes, please list the networking activities attended by your SME and the related results:

.....  
.....  
.....

**12. Does your company have interest in energy and ICT cross-sectoral networking and collaboration?**

- Yes
- No

**If yes, which energy and ICT cross sectoral applications is your company interested in? Please, select up to three answers.**

- Renewable energy production
- Energy efficiency
- Smart energy and cybersecurity
- Construction industries and real estate development
- Smart cities applications
- Smart and energy sustainable buildings
- Energy storage
- Smart grids (for all energy vectors)
- Low carbon mobility
- Energy system integration
- AI and IoT for energy applications
- Other

Other, please specify: .....

**13. Does your company have an international business strategy?**

- Yes
- No

**If yes, what are the main priorities for the short and long-terms? SHORT-TERM**

- Undertaking pre-market consultations.
- Searching for relevant partners in the target market.
- Carrying out market research.
- Developing a business development strategy for market penetration.
- Opening a representation office in a third country for preliminary market prospection.

- Other

Other, please specify: .....

**If yes, what are the main priorities for the short and long-terms? LONG-TERM**

- Full establishment in a third country through opening a branch office.
- Steady profitability in the third market and increase of the overall turnover of the company.
- Other

Other, please specify: .....

**14. Is your company relying on external assistance to develop its internationalization strategy?**

- Yes
- No

If yes, which are your main partners? (ex: Chamber of Commerce and Industry, private consultant, etc)

Please, specify: .....

**If not, how does your company approach the international markets?**

- Through cluster business support
- Joining internationalization alliances (i.e. EU Strategic Cluster Partnerships).
- Attending international fairs and trade shows.
- Other

If you attend international fairs and shows, please specify which ones: .....

Other, please specify: .....

**15. Does your company see an interest to get a cluster certification shared on an European basis to support the visibility of innovative products that have been launched by your company and resulting of R&D projects for which the cluster you are member of played a significant role ?**

*as a matter of example please consider the initiative set up by Tenerrdis (France) in 2015*  
: [www.tenerrdis.fr/en/actualite-en/un-catalogue-des-solutions-energized-by-tenerrdis/](http://www.tenerrdis.fr/en/actualite-en/un-catalogue-des-solutions-energized-by-tenerrdis/)

- Yes
- No
- Maybe