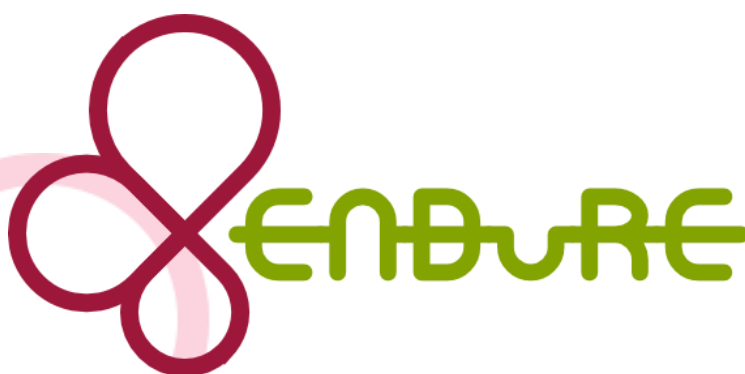


2015

European Network of
Design for Resilient
Entrepreneurship



European Network of Design for Resilient Entrepreneurship



UNIVERSITY OF
SURREY



UNIVERSITÀ DI PISA



ENTREPRENEURSHIP ECOSYSTEM INVESTIGATION

First draft of investigation results elaboration

WP Number 1 - Result R1.2

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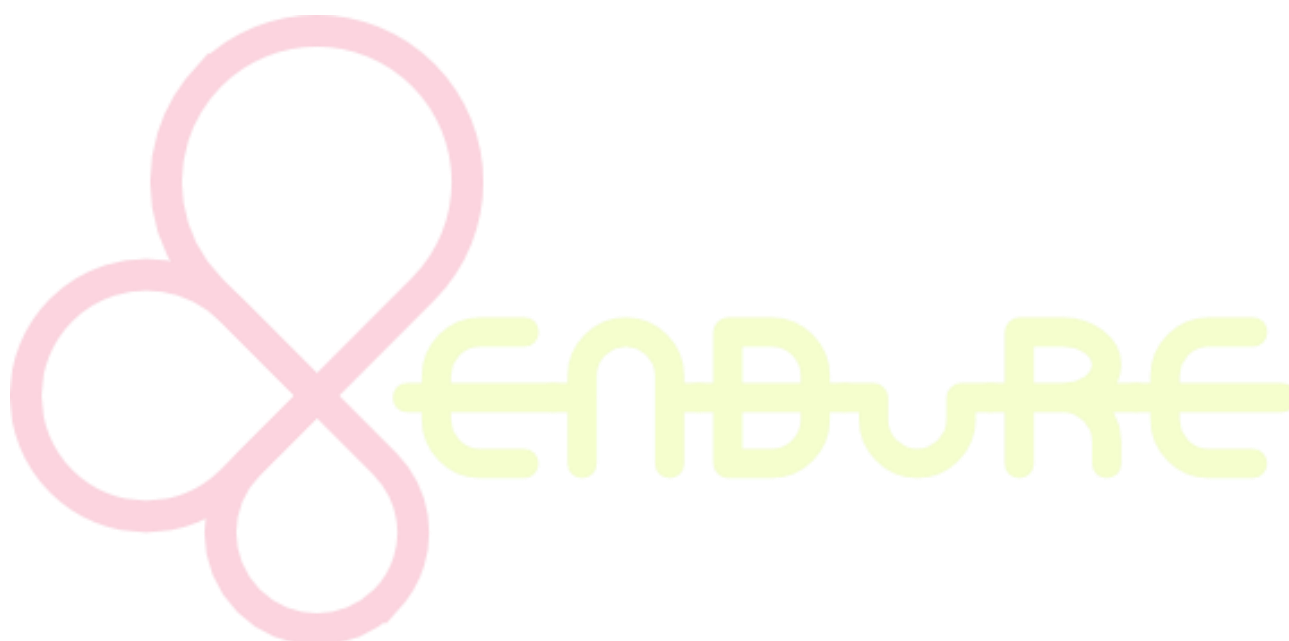


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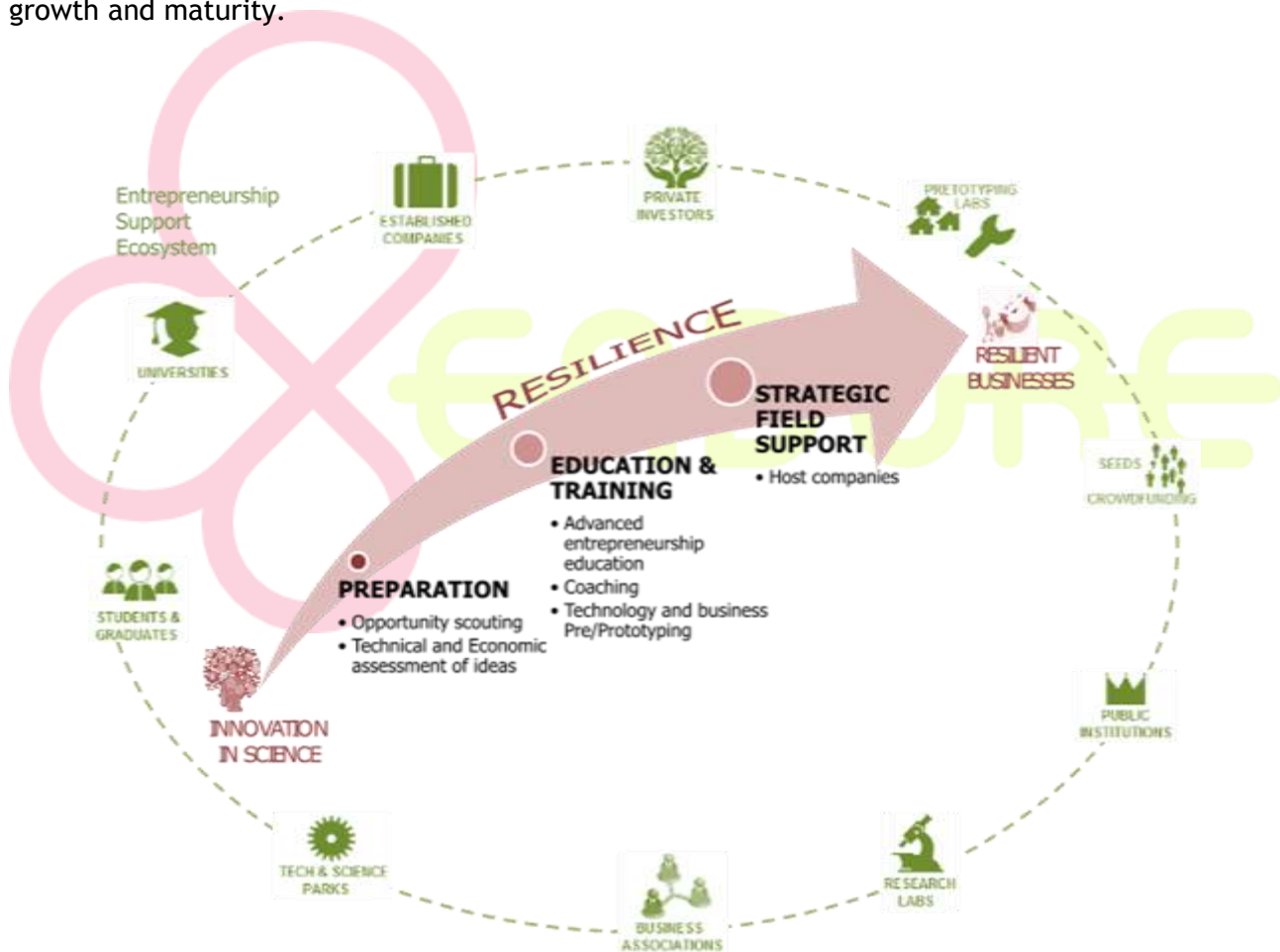
The ENDuRE Project

The ENDuRE Project - European Network of Design for Resilient Entrepreneurship - is an innovative approach to educating and supporting entrepreneurs, aimed at increasing the resilience and competitiveness of European startups. The project will design and develop a holistic framework to transform ideas into technically and economically viable businesses.

Academic institutions and companies will work together to minimise the probability of start-ups failing, help them grow quickly and overcome the 'Valley of Death'.

ENDuRE mixes learning by doing, cross-border collaboration, and strategic support for startups from proven successful companies, in a win-win environment to reinforce the technical and economic resilience of startups.

After a test within a European network of academies and business players, a set of educational and practical tools will guarantee the future reproducibility of the approach. These materials will be developed for specific stakeholder groups, including start-ups at various stages of their growth and maturity.



Project Partners

The Project Partners are three universities and four companies: the University of Pisa (ITA), the University of Surrey (UK), IDEA Entrepreneurship Centre at University of Southern Denmark (DK), iVeridis (UK), Blue Ocean Robotics (DK), Polo Navacchio (ITA) and CEDIT Centre of Entrepreneurial Diffusion of Tuscany (ITA).

The ENDURE Project partners have been involved for many years in educational programmes aimed at supporting startups and innovative successful spin-offs in their countries. However, such programmes focus mainly on problems typical of early stages of the startup creation (i.e. IP protection), leaving unsolved a lot of issues, which characterize the later phases of the company growth.



UNIVERSITÀ DI PISA

The University of Pisa, established in 1343, is committed to promoting and supporting research in every field of knowledge, especially in ICT, Engineering and Physical and Life Sciences, fostering innovation and interdisciplinary research. The University promotes the dissemination and exploitation of their research results, and considers the process of technology transfer one of the key points of its mission.



UNIVERSITY OF
SURREY

The University of Surrey as a member of the 1994 Group of research-intensive universities, has a reputation for its cutting edge thinking and a track record for realizing the practical application of its research. Surrey Satellite Technology Ltd is just one of the entrepreneurial ventures launched from University of Surrey research. The Surrey Research Park is home to international companies, as well as offering business incubation facilities. The Park reflects Surrey's strong links with international business and industry.



IDEA Entrepreneurship Centre is a cross-campus and cross-faculty competence centre at the University of Southern Denmark aimed to promote entrepreneurship education and training.



iVeridis enables the world's leading organizations to globally source the right innovations faster, cheaper and with better results. Their sourcing approach utilizes unique technology and a global supplier network of leading innovative companies, hubs, associations, academic institutions, networks and incubators to access to both in-market and pre-market innovations.



Blue Ocean Robotics is a start-up company founded in February 2013. It's positioned right in the centre of the technological commercial "Valley of Death" with a mission to create a bridge from the academic-based research and development world into the business and market world. Focus is on commercializing robotics R&D.



Polo Navacchio is a Technology Park with incubators active since 2000 and home to more than 60 SMEs. The Pole provides qualified services for the development of high-tech SMEs through an integrated participation of businesses, universities, experts in business management, finance and technologies.



CEDIT - Centre of Entrepreneurial Diffusion of Tuscany - was born thanks to the willingness of Confartigianato Imprese Toscana, Tuscan Association of Crafts and SMEs. CEDIT was created in order to promote entrepreneurship and to support the growth of Small and Medium Enterprises by developing and delivering a constant activity of consultancy, planning and vocational training.

Introduction and Methodology

This investigation was carried out to analyze the Entrepreneurial Ecosystem of each Partner Country, and to deepen the Partners' understanding of the structure of these ecosystems, and the needs expressed by their stakeholders.

The entrepreneurial ecosystem investigation started on **2 February** and ended on **15 May 2015**.

The results of this investigation will be used as the starting point to define the second phase of the ENDuRE project. This phase will consist in developing an educational and training programme aimed at increasing the resilience and competitiveness of European startups.

The ENDuRE Project defines the Entrepreneurial Ecosystem as a set of interconnected entrepreneurial actors, entrepreneurial organizations, institutions and entrepreneurial processes, that formally and informally interact to connect, mediate and govern the performance within the local entrepreneurial environment (Mason & Brown, 2014).

In order to better understand the peculiarities related to local ecosystems, partners coming from the same Country, firstly described the role of each target group involved in the entrepreneurial ecosystem and highlighted the most critical aspects regarding each target group.

In order to avoid misunderstandings and to support partners in carrying out the investigation, common descriptions of the target groups were defined.

TARGET GROUP	Description
Students	Bachelor students, Master students, Graduates* and PhD students
Startuppers	People who created a

	company during the last 48 months (since January 2011)
Faculty Personnel	Post docs, Researchers, Assistant professors, Full professors
Universities	TTOs
Business Incubators, Innovation Poles, Science and Technology Parks	Internal staff
Companies	Company staff (Companies created before January 2011)
Investors	Public and private investors
Fab Labs and Prototyping Labs	Internal Staff
Business/Trade Associations	Education and training staff, new venture creation staff
Public Bodies ¹	Education and training staff, new venture creation staff

Table 1 - Target groups description *Graduates since January 2014.

The samples to be involved in the survey were defined accordingly with the typology of stakeholder taken into account. Table 2 shows the sample size of the target groups to be analyzed within each Country.

TARGET GROUP	SAMPLE (n)
Students	n≥50
Startuppers	n≥25
Faculty Personnel	n≥30
Universities	n≥3
Business Incubators, Innovation Poles, Science and Technology Parks	n≥5
Companies	n≥20
Investors	n≥5
Laboratories for Physical and Electronic Prototyping	n≥2
Business/Trade Associations	n≥5
Public Bodies	n≥5
TOTAL	n≥150

Table 2 - Target group samples

During the investigation, each target group was surveyed using tailored questionnaires focused on the needs of each group. The investigation was conducted online, using Google and Survey Monkey surveys. Respondents were reached by direct e-mail or through social media. The different surveys were distributed accordingly to each target groups, in order to explore both individual and organization characteristics and the needs of each target group. The information on the respondents collected (see tables in the appendix) with the surveys was:

¹ Public bodies refer to national public-sector bodies or bodies governed by private law with a public-service mission providing adequate financial guarantees (European Commission, Directorate A - Coordination of Community actions Regulatory and cross-cutting matters, 2 March, 2003).

- General Information;
- Entrepreneurial Education;
- Collaborations;
- New Business Creation.

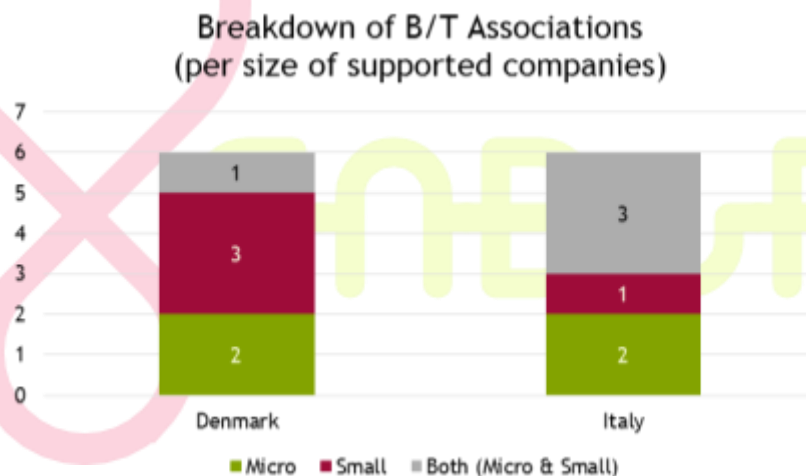
Results

1. Business/Trade Associations

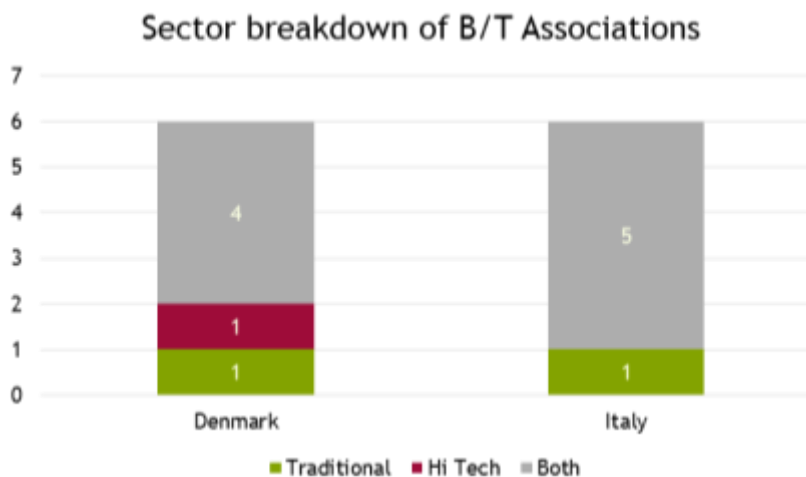
1.1 General information

12 Business/Trade Associations (B/T As) were taken into account for the analysis of the results of the investigation in this target group (6 Danish and 6 Italian). Please note that the sample size for the United Kingdom was too small in this target group and therefore not included in this analysis.

The B/T As from the partner Countries that were involved in the survey mainly support micro, small businesses, or both of them. No B/T As that enroll medium and big companies responded to the questionnaire.

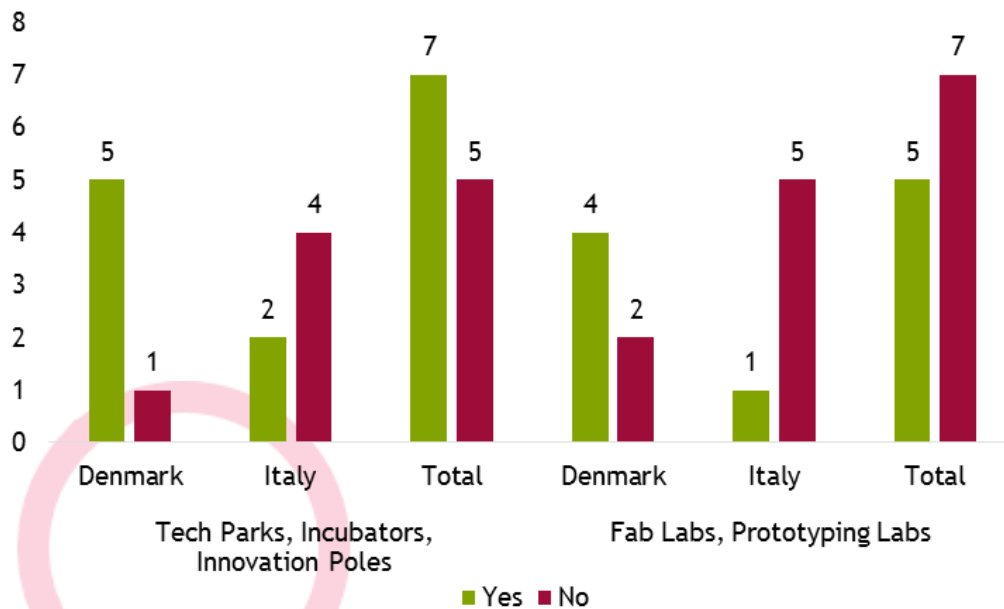


Most of the respondents work in both traditional and hi-tech sectors.



Danish respondents showed a greater propensity towards participating in the equity of other actors within the entrepreneurial ecosystem. For example, Tech Parks and Fab Labs.

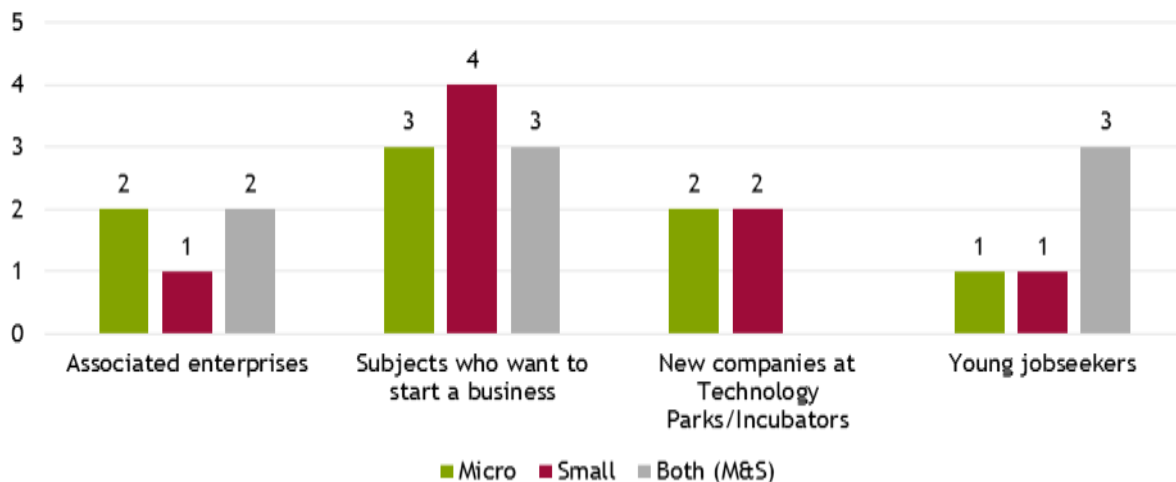
Equity participations of B/T Associations



1.2 Entrepreneurial education

9 of the 12 respondents stated they have an internal programme devoted to new venture creation. All of the respondents indicated they offer some kind of educational programme for entrepreneurs, with all providing at minimum one course per annum for their different stakeholders.

Entrepreneurship courses audiences VS typology of companies enrolled in the B/T Associations



There are no relevant differences across the partner countries about the source of the educational tools used during these courses. Most of the tools are developed by internal staff and in collaboration with other local actors. In some cases B/T As also use commercial tools.

Educational tools source	n.
Internal staff	7
In collaboration with other local subjects	10
Commercial tools	4

Table 3 - Source of the educational tools used in the entrepreneurship courses held by B/T Associations

1.3 Collaborations

Q: Please, indicate the reasons why your association collaborates with the following subjects (Technology Parks/Incubators/Innovation Poles; Fab Labs, Prototyping Labs; Other Business/Trade Associations; Investors; Enterprises; Public Bodies; Universities)

The extent of collaboration between B/T As and the other actors of the entrepreneurial ecosystem varies in meaningful ways among the partner Countries. In particular, differences can be found analyzing respondents who stated to have “no collaborations” with other actors in the entrepreneurial ecosystem.

	Technology Parks Incubators Innovation Poles	Fab Labs	Other B/T As	Investors
Denmark	0%	0%	0%	17%
Italy	17%	50%	17%	67%
Total	8%	25%	8%	41%

Table 4 - “no collaborations” cases among B/T Associations and other actors of the entrepreneurial ecosystem

The survey highlighted that almost a half of the respondents have no collaborations with Investors (41%), in particular, 67% of Italian B/T As which have no collaborations with Investors. Moreover, all Danish B/T As established collaborations with Fab Labs, while a half of Italian B/T As have no relationships with them.

Business/Trade Associations that participated in the survey collaborate with all the above-mentioned subjects for different reasons. Among these, the most common are entrepreneurial training, scouting of business ideas and support for new business creation.

It is interesting to note that compared with Italian B/T As, Danish Associations established stronger collaborations with most of the actors of the entrepreneurial ecosystem in regards to matchmaking activities.

The survey underlined that, regarding Business Plan competition, Italian B/T As have no collaborations with Tech Parks, while Danish B/T As have no collaboration with Investors.

In any case, Investors are the actors who are less involved in the activities of the analyzed B/T As even for those activities that would be interesting for them to participate in, such as business plan competitions and scouting of business Ideas.

Q: How should local authorities facilitate new business creation?

As already underlined by the entrepreneurial courses they organize every year, B/T As consider education and training as an important driver to favor new business creation. To this respect, B/T As (10 out of 12 respondents) highlighted that Public Bodies could contribute to this aim by

increasing training initiatives devoted to new entrepreneurs. Moreover, there are some further ways for Public Bodies to sustain new venture creation in the partner Countries. If call for funding have the same importance regardless the national context, Italian B/T As underline the role of Legislation and tax/contributory facilitations dedicated to startups. Danish respondents emphasize the importance of promotional events about local opportunities and the initiatives to favor the collaboration among actors of the entrepreneurial ecosystem.

1.4 New business creation

New evidence has been emphasized when asking about aspects that could facilitate the new business creation process. In this respect, more than two-thirds of respondents consider the following as “important” or “very important”:

- Entrepreneurial training (100%)
- Mentoring/coaching programmes (85%)
- Networking and partnerships (85%)
- Support for business planning (85%)
- Access to funds and credits (69%)
- Cooperation among actors of the entrepreneurial ecosystem (69%)

If the above-mentioned aspects have the same importance, regardless the peculiarities of the Countries, there are other issues that reflect these peculiarities.

As explained in the following table, there are many differences between the importance that Danish and Italian respondents recognize regarding certain aspects.

New venture creation facilitators	DK	IT
Availability of equipped spaces and qualified services	5	2
Access to Fab Labs and/or University labs	5	2
Universities/Research Centers support	4	2
Connections between established companies and start ups	4	2

Table 5 - Respondents who considers these facilitators as "important" or "very important"

B/T As involved in the survey highlighted that the greatest problems to face in transforming an idea into an actual business are those related to Access to credit (92%), Bureaucratic fulfillment (75%), Lack of managerial skills (59%), and Find qualified workers (50%).

Q: How should local authorities help facilitate new business creation?

As already underlined by the entrepreneurial courses they organize every year, B/T As consider education and training as an important driver to favor new business creation. In this respect, the majority of B/T As (10 out of 12 respondents) highlighted that Public Bodies could also contribute to these by increasing *training initiatives devoted to new entrepreneurs*. It was recognized that there were other drivers in addition to *training initiatives*. Italian B/T As underline the role of *Legislation and tax/contributory facilitations dedicated to start-ups*, while Danish respondents emphasize the importance of *promotional events about local opportunities* and *the initiatives to favor the collaboration among actors of the entrepreneurial ecosystem*.

2. Enterprises

2.1 General information

The responses of 41 companies from Denmark (total 9) and Italy (total 32) were taken into account when compiling this analysis.

The majority (95%) of the 41 respondents are micro or small companies whose number of employees do not exceed 50 people. Among these companies, 10 have no employees devoted to R&D activities, while 24 have up to 10 R&D employees.

Size of the company	n.	%
Micro - less than 10 employees	24	58%
Small - between 11 and 50 employees	15	38%
Medium - between 51 and 250 employees	1	2%
N/A	1	2%

Table 6 - Size of the companies participating in the investigation

The questionnaire was filled by entrepreneurs, managers or administrative officers.

Role within the company	n.	%
Entrepreneur	22	54%
Manager	15	36%
Administrative officer	4	10%

Table 7 - Company staff who filled the questionnaire

2.2 Entrepreneurial education

Less than half of the Entrepreneurs who answered the questionnaire (10 out of 22) had taken part in entrepreneurship courses. Among the other respondents, only two managers and an administrative officer did the same.

The following table shows the breakdown of people who attended entrepreneurial training courses per partner Country.

Role in the company	DK	IT	Tot
Entrepreneur	0	10	10
Manager	1	1	2
Administrative officer	0	1	1

Table 8 - Respondents who attended entrepreneurship courses

Q: Have you attended/are you attending entrepreneurship courses? If yes, what kind?

	n.	%
No	13	32%
Curricular	0	0%
Extra-curricular	2	5%
Seminars	10	24%
Other	1	2%
N/A	18	37%

18 companies (16 of which are Italian) of the sample were invited to participate in entrepreneurship courses organized by other institutions and they were involved in different

ways. Most of the respondents participated in these courses several times and covered different roles.

Role of companies participating in entrepreneurship courses organized by other institutions



Two-thirds of the respondents highlighted that the most important outcomes coming from the participation in an entrepreneurship courses were: Enhancing entrepreneurial know-how acquisition and collecting useful contacts for the development of business and technological partnerships.

Q: How do you think your company could participate in an entrepreneurship course to help startups with any of the following?

	n	%
Collecting useful contacts for the development of business and technological partnerships	25	61%
Developing intellectual property management skills	5	12%
Enhancing entrepreneurial know-how	24	58%
Human Resources scouting	7	17%
Other	1	2%

It is worth noting that the acquisition of intellectual property management skills is perceived as a benefit of entrepreneurial courses, but only by those companies who participated in entrepreneurial training initiatives. Among these, 2 companies own patents and 4 out of 5 have R&D staff whose work could be validated through intellectual property management.

Only 4 respondents believe that entrepreneurial training is not an important driver for the creation of a new business. Three of these have never attended a course on entrepreneurship, but two of them were invited as business experts in entrepreneurial courses organized by other institutions.

Companies were asked to indicate if they participated in business plan competitions and how these were useful for the business development. Only 8 companies participated in these events while 20 did not. Nevertheless, they have the same perception about the usefulness of these events, scoring an average of 3 on a scale of 1 to 5.

2.3 Collaborations

The enterprises who participated in the survey emphasized how most of them have limited collaborations with the other actors of the entrepreneurial ecosystem. In this respect, more than half of them had no collaborations with Investors and Fab Labs. The most common kinds of collaborations refer to R&D with Universities (32%).

Among the companies who collaborated with Fab Labs, 5 out of 18 worked with those Labs for Prototyping, trials and testing activities.

In particular, companies underlined that most of the actors of the entrepreneurial ecosystem did not help them in starting up their business. Among these, Science & Tech Parks, Incubators and Innovation Poles are those which contributed more to the start-up phase of the investigated businesses.

Q: How much the following help your company during its startup phase?

	Technology Parks Incubators Innovation Poles	Investors	Enterprises	Public Bodies	Universities
N/A	26%	30%	33%	33%	26%
Not at all	17%	33%	17%	28%	17%
Low	13%	9%	6%	4%	11%
Medium	11%	13%	17%	15%	22%
High	17%	6%	17%	15%	11%
Very high	13%	6%	6%	2%	6%
Other	2%	2%	2%	2%	6%

It is significant to note that Investors and Universities contributed in a meaningful way to the startup phase of a small number of companies.

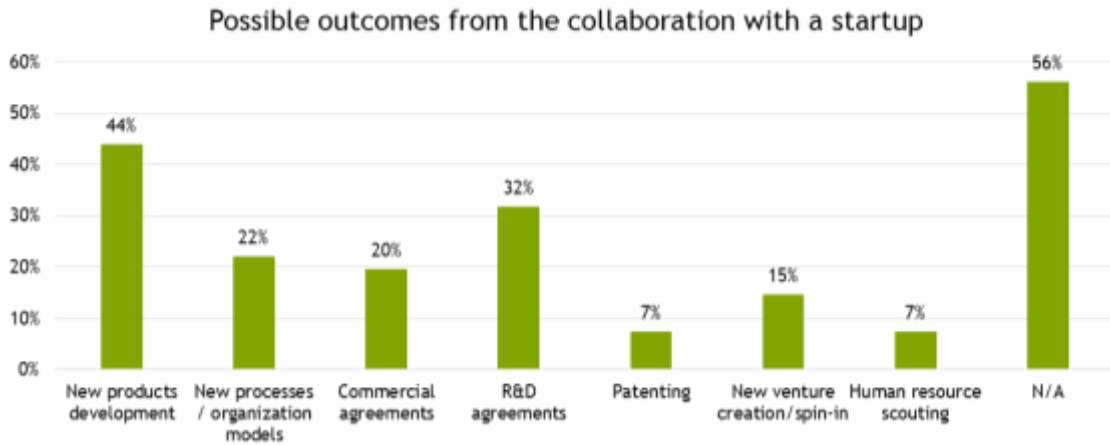
More than a half of respondents highlighted that their companies could benefit in several ways from the collaboration with start-ups.

Q: Do you think your company could benefit from collaborating with a start-up?

	n.	%
Yes	21	51%
No	5	12%
Don't know	9	22%
N/A	6	15%

In this respect, established companies derive value from new business in terms of innovation.

Q: Please indicate which among the following activities you could carry out thanks to collaboration with a start-up.



Q: If your company already collaborates with a start-up, please indicate which among the following result you got thanks to this collaboration

	n.	%
New products development	11	27%
New processes/organization models	3	7%
Commercial agreements	4	10%
R&D agreements	7	17%
New venture creation/spin-in	1	2%
N/A	29	71%

Q: Do you think in-house entrepreneurial training with an established company can help startups? If Yes, when is preferred?

	n.	%
Yes, at early stage	23	56%
Yes, at later stage	5	12%
No	1	2%
I don't know	12	29%

Q: How do you think your company could help startups?



More than a half of respondents consider networking activities, public call for funding and matchmaking events as “important” or “very important” tools to strengthen the collaboration between startups and companies.

2.4 New business creation

Enterprises underlined that there are several initiatives that could positively contribute to the new venture creation process.

More than two third of the respondents answered that the following aspects are important or very important to reach that objective:

- Access to finance (80%)
- Networking and strategic contacts (78%)

It is significant to note that Public and private calls and opportunities are seen as “important” or “very important” by 84% of Italian companies against the 44% of Danish ones.

The above-mentioned facilitators would be helpful when facing issues that could impede the transformation of an idea into business. There are some problems that are perceived as very important across the three partner countries, such as access to credit (78% of the total sample consider access to credit as “important” or “very important” aspect) and access to skilled and qualified workers (41%).

On the other hand, some issues are experienced in different ways according with the peculiarities of each single country. Indeed, Italian companies highlighted the critical role of bureaucracy (81%) and high costs for patenting (47%), while Danish enterprises care most about business planning activities (44%).

3. Fab Labs, Prototyping Labs

3.1 General information

The responses collected among Fab Labs and Prototyping Labs are 4; 2 from Italy and 2 from Denmark.

The Fab Labs surveyed in two cases (1 Danish and 1 Italian) declared to be linked to University, and are two are also those which were generated from spin-offs.

Three respondents highlighted that they supported at least the development of one idea, in particular two respondents stated to have provided support for the development of at least five new projects.

When analyzing the support Fab Labs provide to the design of prototypes of new products to launch on the market only a single Italian Fab Lab realized this activity.

Respondents underlined how it is not very common for them to establish formalized supply agreements with companies, and practitioners. Only one Fab Lab has experienced this kind of collaboration.

3.2 Entrepreneurial education

Only 2 out of 4 respondents answered positively to the question “Has the Lab ever taken part in initiatives focused on new venture creation?”. In particular, Italian Fab Labs have provided support

to ideas generated within entrepreneurial courses, while only a single Danish Fab Lab collaborated with a project coming from training initiatives for new business creation.

With regard to the typology of support provided by the Fab Labs, all of them assist projects during the prototyping phase, 3 out of 4 during the product design phase and half of them support their “customer” through crowd thinking activity.

3.3 Collaborations

Fab Labs that took part in the survey highlighted they established some kinds of collaborations with other actors in the entrepreneurial ecosystem.

Participation in entrepreneurial training initiatives is the reason why two respondents collaborated with both Technology Parks and Universities.

Fab Labs which are linked to Universities benefit from this type of collaboration in terms of access of laboratories and other spaces. In this respect, and to develop joint communication initiatives, some collaborations have been established between different Fab Labs.

Prototyping, trials and testing is the main reason of collaborations between Fab Labs and other actors in the ecosystem and only Public bodies are not involved in this particular activity. It is interesting to note that Fab Labs participating in the investigation do not collaborate with other Fab Labs for prototyping, trials and testing.

Despite some interesting data about the most common collaborations that emerged from the investigation, it is important to point out that at least half of the respondents have no collaborations with several actors in the entrepreneurial ecosystem.

However, the situation differs between the two countries under analysis; while Italian Fab Labs collaborate with all other players in the ecosystem, Danish ones provided no evidence about collaborations neither with other Fab Labs nor Investors.

	Other Fab Labs	B/T Associations	Investors	Enterprises
No collaborations	2	2	3	2

Table 9 - “no collaborations” cases among Fab Labs and other actors of the entrepreneurial ecosystem

At the same time, as far as the importance given to collaborations is concerned, 3 respondents consider the collaboration with students particularly relevant.

Q: How does the laboratory strengthen the relationships with Companies and Startups?

	Companies	Startups
Word of mouth	2	3
Events and business fairs	1	2
Through University	1	1
Marketing campaigns	0	1
Companies direct request	0	2

Responses to these questions underlined how Fab Labs have not developed structured marketing strategies, and “word of mouth” is the main way to intercept potential customers.

This situation has been reflected also by the overview on the reasons why Fab Labs established collaborations with other actors in the entrepreneurial ecosystem. Indeed, only in one case have Fab Labs stated an established collaboration focused on market development or communication initiatives.

4. Faculty Personnel

4.1 General information

Responses from 48 faculty personnel were collected for this investigation. Most of the respondents work in the Universities from the ENDuRE consortium, namely the University of Pisa and the University of Southern Denmark.

Department	DK	IT	Total
Agriculture and veterinary	0	2	2
Humanities	1	2	3
Engineering	0	11	11
Business/Economics, law and social science	15	6	21
Medicine and pharmacy	0	1	1
Computer science, mathematics, physics and natural science	0	9	9
Other	1	0	1
Total	17	31	48

Table 10 - Breakdown of faculties affiliation department per Country

Table 11 is a summary breakdown of the types of roles of the respondents in their respective universities.

Role	DK	IT	Total
Post-doc	1	3	4
Assistant Professor	5	6	11
Associate Professor	5	13	18
Full Professor	1	8	9
Other	5	1	6

Table 11 - Breakdown of faculties role per Country

4.2 Entrepreneurial education

54% of respondents positively responded to the question “Have you taught (or do you still teach) in courses for entrepreneurship?”

Note that all of 17 Danish respondents answered positively to this question, against 29% of Italian respondents.

	DK	IT	Total
Yes	17	9	26
No	0	22	22

Table 12 - Number of faculties who taught or teach in entrepreneurship courses

The typology of entrepreneurship courses in which respondents currently teach (or have taught) differs between Denmark and Italy. 8 Italian faculty personnel indicated they are involved in extracurricular courses (8 respondents), against 2 in curricular courses.

Amongst the 25 Danish respondents in this category, 16 work teach (or have taught) in curricular courses, against 9 in extra-curricular courses.

This data might reflect the particularities of the national ecosystems and stem from differences between the faculties involved in this investigation.

As highlighted in the following table, 21 out of the 48 respondents are affiliated at the Business/Economics, law and social science department of their university. Note that all 17 of the Danish respondents work in this department of their university.

Department	Faculties teaching in entrepreneurial courses	
	Yes	No
Agriculture and veterinary	0	2
Humanities	1	2
Engineering	4	7
Business/Economics, law and social science	18	3
Medicine and pharmacy	0	1
Computer science, mathematics, physics and natural science	2	7
Other	1	0

Table 13 - Breakdown of faculties who taught or teach in entrepreneurship courses per department

Business plan competitions are increasing their importance in the creation of new businesses, despite this among the respondents, faculties who took part in these events are still few in number (11 out of 48 respondents). Nine of these are involved in entrepreneurship courses as teachers and 6 of them also either funded or worked in a startup.

Only 2 faculties who participated in business plan competitions are not directly involved in the new venture creation process as entrepreneurs or trainers.

In any case, respondents believe that business plan competitions are useful for startups. In this regard, they attribute to this kind of events a degree of usefulness of about 4 in a scale from 1 to 5.

4.3 Collaborations

Q: Please indicate with which of the following subjects you have had the opportunity to cooperate and why (Technology Parks/Incubators/Innovation Poles; Fab Labs, Prototyping Labs; Business/Trade Associations; Investors; Enterprises; Public Bodies; Universities)

As summarised in table 14, there are varying levels of collaboration between the faculty personnel respondents and the different actors in the entrepreneurial ecosystem.

	Tech Parks Incubators Innovation Poles	Fab Labs	Investors	Enterprises	B/T Associations
No collaborations	35%	75%	58%	44%	52%

Table 14 - "no collaborations" cases among faculty personnel and other actors of the entrepreneurial ecosystem

The rate of collaboration with the different actors in the entrepreneurial ecosystem is higher for faculty personnel who teach (or have taught) in entrepreneurship courses than for those who do not.

	Tech Parks Incubators Innovation Poles	Fab Labs	Investors	Enterprises	B/T Associations
No collaborations	11%	69%	35%	19%	27%

Table 15 - "no collaborations" cases among faculty personnel teaching in entrepreneurship courses and other actors of the entrepreneurial ecosystem

Similarly, the rate of collaboration with the different actors in the entrepreneurial ecosystem is higher for faculty personnel who founded or worked in startups than for those have not.

	Tech Parks Incubators Innovation Poles	Fab Labs	Investors	Enterprises	B/T Associations
No collaborations	20%	70%	40%	25%	35%

Table 16 - "no collaborations" cases among faculty personnel who founded or worked in a startup and other actors of the entrepreneurial ecosystem

Overall the collaboration between faculty personnel and Fab Labs is low while it is higher with other actors of the entrepreneurial ecosystem. It is evident that increased collaboration is occurs for faculty personnel directly involved in the creation of new ventures. In particular, faculty personnel that collaborate with Science/Tech Parks and Universities in entrepreneurial training. More than 75% of Danish respondents who teach in entrepreneurial courses collaborate with Universities, and around 60% of them have previously worked with Science/Tech Parks. In Italy, these figures are slightly lower (66% and 55% respectively).

This helps to better understand the structure of entrepreneurial training activities at national/international level and identifies which actors seem the most committed with regards to entrepreneurial training activities.

4.4 New business creation

The number of faculties who founded or worked in a startup is pretty high (42% of respondents) and their role in University is reported in the following table.

Q: Have you ever founded or worked in a startup?

	Yes	No
Post-doc	3	1
Assistant Professor	2	9
Associate Professor	6	12
Full Professor	3	6
Other	5	1
Total	19	29

18 out of 26 faculties who taught or teach in entrepreneurship courses have founded or worked in a startup. Among the remaining 8, 6 are those affiliated to a department of Business, economics, law and social science.

Faculties who registered a patent are 11 and 4 of these already started a business, while 8 of those who have not filed any patents, have founded or worked in a startup up to now.

		Business Start-up	
		Yes	No
Patent Ownership	Yes	4	7
	No	8	9
	N/A	11	16

Table 17 - Number of faculties who founded or worked in a startup VS faculties owning patents

5. Investors

5.1 General information

The 17 investors reached during the investigation in the three partner Countries differ each other for the typologies of activities they realize.

	Business Angel	Venture Capitalist	Crowdfunding	Microcredit
Denmark	4	2	0	0
Italy	2	1	1	1
United Kingdom	5	3	0	0

Table 18 - Breakdown of investors per Country

The kinds of businesses addressed by the investors vary according to the typologies of the characteristics of the investors themselves.

	Micro business	Small business	Medium business
Denmark	6	4	1
Italy	5	1	0
United Kingdom	4	5	3

Table 19 - Typology of companies funded by the respondents

Sector of investment	Stage of investment					
	Seed		Early Stage		Later Stage	
	n.	%	n.	%	n.	%
Hi-Tech	6	35%	6	35%	1	6%
Not Hi-Tech	0	0%	2	12%	1	6%
Both Hi-Tech and Not Hi-Tech	6	35%	8	47%	5	29%
NO	5	29%	1	6%	10	59%

Table 20 - Breakdown of sector and stage of investment

5.2 Collaborations

Investors that took part in the survey highlighted that there are several kinds of collaborations with the other actors of the entrepreneurial ecosystem.

Most of these collaborations are related to scouting and assessment of business ideas, call for funding, and new business creation educational programmes. Moreover, some investors emphasized to own a share in the equity of other actors within the entrepreneurial ecosystem such as, Technology Parks/Incubators/Innovation Poles and other investors. More than a half of the respondents do not have collaborations with Fab Labs and Public Bodies.

In particular, most of the respondents (76%) underlined their collaboration with Technology Parks, Incubators and Innovation Poles in order to identify new business ideas. This kind of collaboration is very common in all the Country taken into account. To note that if in Denmark (50%) and United Kingdom (83%) is pretty common that investors collaborate each other to identify new business ideas, this does not happen in Italy.

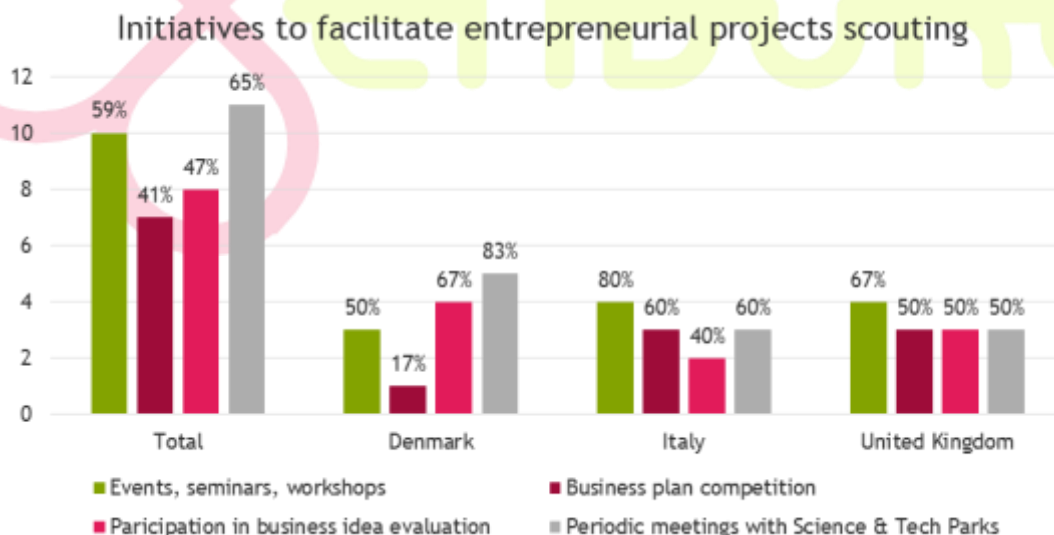
Several investors among the participants in the investigation, are involved in Entrepreneurial training initiatives. To this regard, Danish and Italians respondents emphasized their collaboration with Tech Parks and Universities, while none of British investors do the same. Moreover, if Italian investors (60%) collaborate with Business/Trade Association about entrepreneurial courses, few Danish (17%) and no British ones have established the same kind of relationship.

Other interesting information emerge from call for funding and collaborations with Tech Parks and Universities. If Italian (60%) and British (33%) Investors underlined the collaboration with Tech Parks, Danish Investors do not establish this kind or relationship. On the other hand, while Italian investors do not collaborate with Universities, British and Danish ones established with these some collaborations.

5.3 New business creation

Identifying good ideas to invest in is a crucial activity for investors all across the Europe. As explained above, respondents highlighted they collaborate with different actors to find successful entrepreneurial projects.

Q: What are the initiatives that could facilitate scouting for entrepreneurial projects on which to invest?



Q: Which among the following do you think is the more effective to evaluate a business idea?

	n.	%
Business plan	8	47%
Attitudinal interview	5	29%
Other	4	23%



Attitudinal interviews could be important also to evaluate the entrepreneurial team that is going to develop a certain idea. To this respect, Investors involved in the survey emphasized the role of some characteristics of the team that need to be analyzed.

The following chart shows the 5 most important aspects (in decreasing order of importance) to be assessed when evaluating an entrepreneurial team.

1. Motivations
2. Industry experience
3. Investing own money
4. Education
5. Start-up experience

Moreover, more than a half of the respondents underlined the importance that the members of a team got knowledge and skills related to entrepreneurial mindset, product design, production process and prototyping, business development, and marketing and communication.

6. Public Bodies

6.1 General information

As far as Public Bodies are concerned, the responses examined in this report are 12 and are distributed as follows.

Country	n.
Denmark	7
Italy	5

Table 21 - Breakdown of respondents per Country

All the Italian Public Bodies that participated to the survey from Italy operate in the Tuscany Region with 3 different departments, namely Education and Training, Infrastructures for the Economic Development and Technology Transfer. Beside these there are the innovation departments of two municipalities: one from the Province of Pisa (Cascina) and one from the Province of Leghorn (Rosignano).

Danish public institutions, instead come from various parts of the country. Two of these are Administrative Regions, one from the center and one from the south. Then there are two municipalities (Esbjerg and Svendeborg) from center (west coast) and south. A voluntary-based network for business, authorities and institutions from southwest Denmark, one business innovation center from central Denmark, and finally a cluster for innovation and business development in healthcare operating at national level.

Q: Does your institution own an equity shares in any of the following?

	Technology Parks Incubators Innovation Poles	Investment funds	Universities	Enterprises
DK	2	1	1	2
IT	3	0	1	2
Total	5	1	2	4

Public institutions who owned an equity share of Tech Parks are enough satisfied (3,4 on a scale from 1 to 5) about the support these provided in terms of equipped spaces, cost savings, visibility, networking, consulting services and entrepreneurial training.

Both the Public bodies participating in the equity of Universities sustain that the latter do not provide adequate support for new business creation. In particular they underlined the poor links with Tech Parks and Incubators, the lack of resources for technology transfer and new business creation, the limited possibilities to allow new businesses to access university labs, and the sporadic relationship between universities and business world. These issues are those emerging also from the analysis of all the responses collected among Public bodies during the investigation.

6.2 Collaborations

Public bodies that took part in the survey highlighted that there are several kinds of collaborations with the other actors of the entrepreneurial ecosystem.

Most of these collaborations are related to communication and promotional initiatives and to development of strategies and policies.

In the first case, collaborations with Parks/Incubators (64%), Trade Associations and other Public Bodies (57%), Enterprises and Universities (50%) are particularly relevant.

With regard to the activities concerning the development of strategies and policies, the most significant collaborations are with other Public Bodies (64%) and TSP/Incubators (50 %).

If we analyze the answers with regards to the countries of origin, though, we can see some differences: Public Bodies in Denmark have also placed special emphasis on partnerships implemented with the Tech Parks for the creation of training programmes for young entrepreneurs (71 %).

It is important to underline the difference between Italy and Denmark with reference to collaborations with the Investors; while all the Italian respondents declared they do not cooperate with the latter, only 29 % of Danish Public Bodies said so.

Generally speaking, partnerships with Fab Labs, Trade Associations and Enterprises are considered satisfactory, while those with Parks and Investors are neither satisfactory nor unsatisfactory.

6.3 New business creation

New business creation is seen as an important factor by all of the respondents who participated in the survey. Moreover, some Public Bodies among these own equity shares in institutions that are part of the entrepreneurship ecosystem.

Q: Does your institution own equity shares in any of the following entities?

	Tech Parks Incubators Innovation Poles	Universities	Investment funds	Enterprises
Yes	5	2	1	4
No	8	11	12	9

Public bodies involved in the survey support new venture creation through different initiatives.

Q: How does your institution/department support the creation of new businesses?

	n.	%
Calls for funding	5	38%
Information events on local opportunities	12	92%
Equipped areas	2	15%
Training/internships	6	46%
Regulatory path and facilitations for startups	5	38%
Dedicated resources provided to local subjects	2	15%
Other	2	15%

It is worth underlining that, while all respondents agree that the support activities through information events are fundamental, there are substantial differences between Italy and Denmark on other issues.

Public bodies support for new business creation



The following initiatives are considered useful by the Public institutions participating in the survey to stimulate entrepreneurship at local level.

Initiatives	n.	%
Creation of co-working spaces	3	23%
Financial resources for scouting of innovative ideas	8	60%
Periodic communication campaigns	8	60%
New markets development through public procurement	4	30%

Table 22 - Useful initiatives to stimulate new business creation at local level

Italian public bodies experience some criticalities to foster the new business creation process. To this regard, all the respondents highlighted how the human resources devoted to this particular activity are scarce and does not possess the necessary skills about entrepreneurship.

Furthermore, from an ecosystem perspective, interviewees underlined how a greater integration and collaboration between local actors would be important to foster new business creation.

In any case, Public bodies collaborate with other actors within the entrepreneurial ecosystem in several ways to develop initiatives focused on entrepreneurship.

Entrepreneurial training, calls for funding and definition of policy and strategies are the main activities that public bodies realize in collaboration with Universities, Business Associations, Enterprises and Tech Parks. Public Bodies have very poor relationships with Investors and Fab Labs.

7. Technology Parks, Business Incubators, Innovation Poles

7.1 General Information

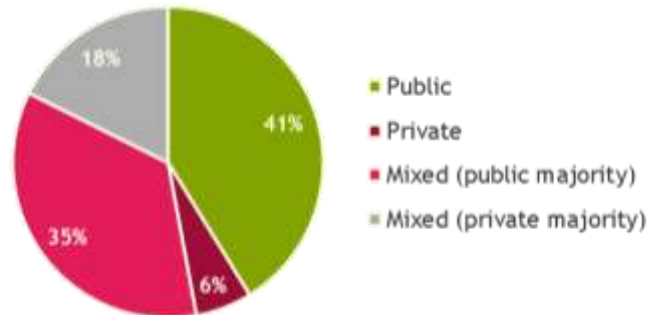
The total answers received from the Countries involved in the investigation are 17, distributed as follows.

Country	n.
Denmark	6
Italy	9
United Kingdom	2
Total	17

Table 23 - Breakdown of respondents per Country

Public institutions own (the whole equity or the majority of it) most of the Parks involved in the investigation.

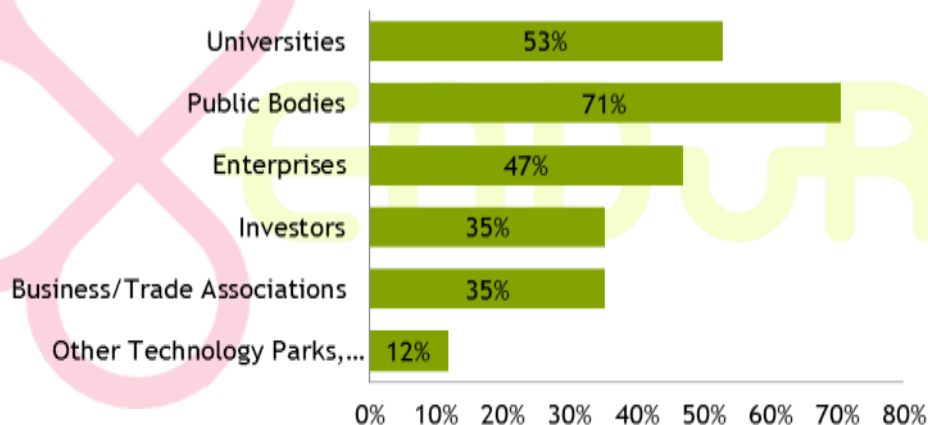
Shareholder structure of Tech Parks, Incubators and Innovation Poles



In 41% of cases, the Park/Incubator participates in the capital of other companies, while there is little shareholding in Fab Labs/Prototyping Labs:

*Q: Do the following subjects take part in the equity of your Organization?
(Other Technology Parks/Incubators/Innovation Poles, Business/Trade Association, Investors, Enterprises, Public Bodies, Universities)*

Participations of other actors in the equity of the Tech Parks

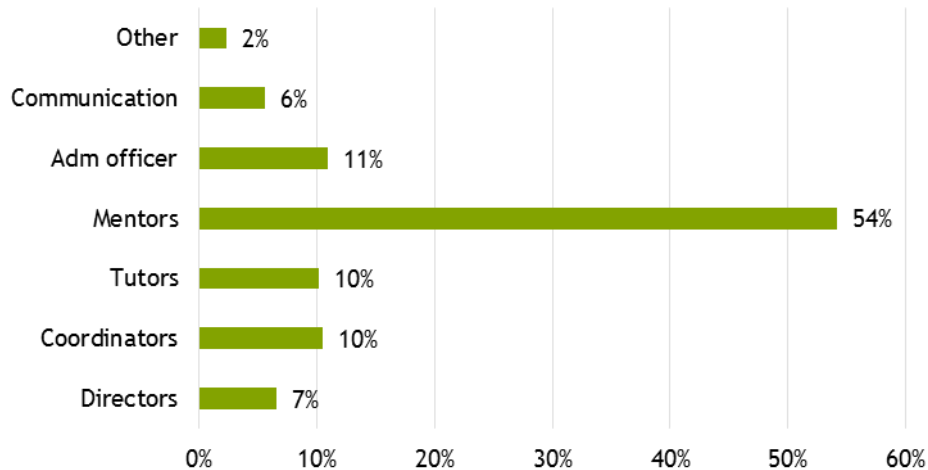


As already highlighted Public bodies have a relevant role in the shareholding structure of the Tech Parks, indeed in 71% of the cases taken into consideration, the Parks are participated by Public Bodies and in 53% by Universities. The participation of other Parks or Incubators is very low instead (12 %).

As far as internal organization is concerned, all the subjects interviewed usually have a Manager and a communication officer.

It is particularly interesting to note that there is a high number of mentors and it depends from the difference between Italy and Denmark/Great Britain in terms of staff structures of the Tech Parks. Indeed, while mentors represent 12% of the total number of employees in Italy, this percentage rises to 51% in Denmark and 78 % in Great Britain.

Internal staff structure of Tech Parks



As far as the UK is concerned, only one Park has a total of 100 mentors, while in Denmark 2 Parks (about 6 respondents) reach over 50 mentors. On the other hand, Italian Parks have few mentors in their staff (2 mentors at most) and 6 out of 9 Parks do not have mentors at all, while all the 6 Danish Parks have a mentor at least.

The majority of the respondents host companies operating in different sectors, with a predominance of ICT, Health and Renewable Energy. Only two Italian Parks are focused on a single sector: Health and Clean Energy.

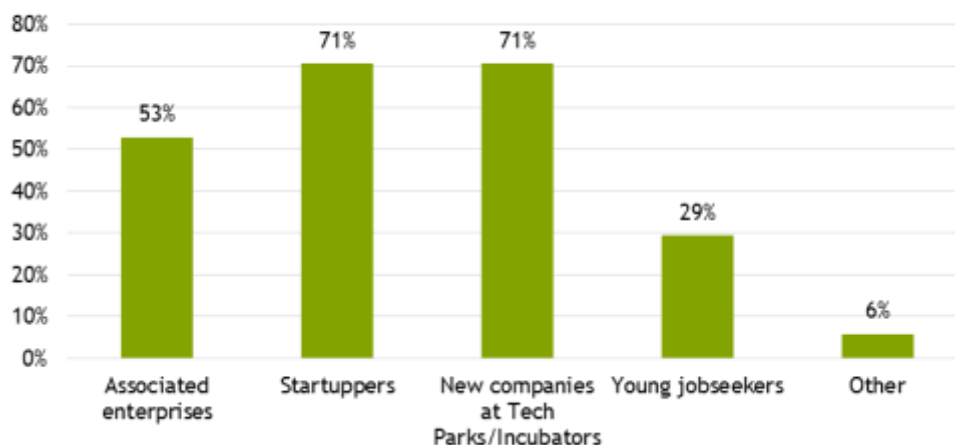
7.2 Entrepreneurial education

Q: How often does your entity organize courses/seminars on entrepreneurship/business creation?

In 76% of cases considered, courses and seminars are organized several times a year and this is a clear confirmation of the entrepreneurial training is considered very important to sustain new business creation. Only a Danish respondent stated that it have never organized this kind of courses.

Courses are mainly addressed to startupper and new companies, but also extend to associated companies.

Audience of entrepreneurship courses at Tech Parks



The most important topics of the courses organized by Tech Parks, Incubators and Innovation Poles participating in the investigation are business development (82%), intellectual property (71%) and marketing (65 %).



In most of cases tools used during training courses come are developed by Tech Parks themselves or in collaborations with other actors, in particular Universities (59%) this result is valid also as far as single Countries are concerned.

7.3 Collaborations

Q: Did your association collaborate with some of the following subjects and why? (Other Technology Park/Incubators/Innovation Poles, Fab Labs/Prototyping Labs, Investors, Enterprises, Public Bodies Universities)

All the Parks interviewed generally collaborate with the above-mentioned subjects, especially on specific topics such as entrepreneurial training, business competition events, scouting of business ideas, support for new business creation (with regard to collaborations with other Parks/Incubators) and business ideas evaluation as far as to collaborations with Companies and Universities are concerned.

If we analyze the answers from the three partner countries, though, the distribution is very different. While in Italy 88.9% of respondents collaborated with other Parks/Incubators for entrepreneurial training initiatives, this percentage drops to 33 % in Denmark. The situation is reversed in the case of partnerships for conducting business matchmaking (Italy: 33%, Denmark: 83%).

Business competitions are quite common among Tech Parks, Incubators and Innovation Poles, indeed only 1 Park did not established any collaboration because of this kind of activity.

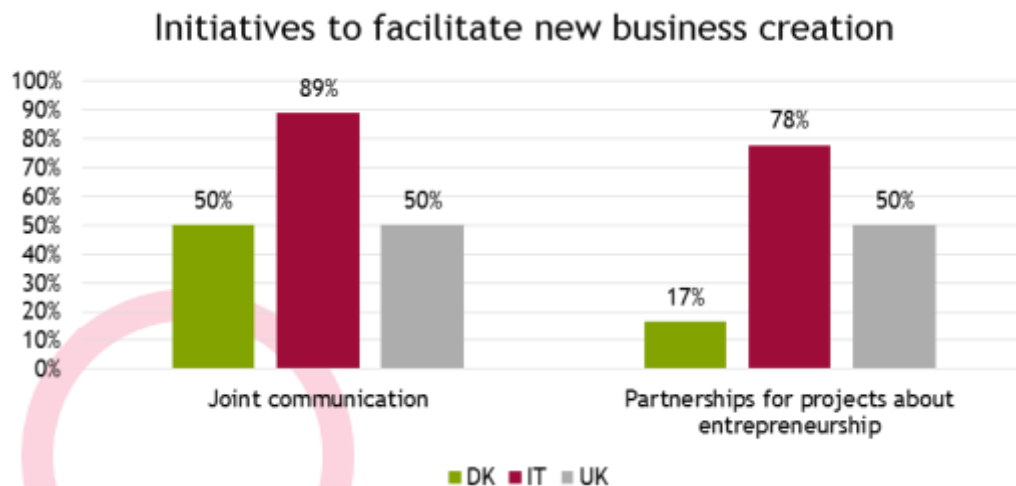
This particular kind of events generally involve several actors within the entrepreneurial ecosystem, but as far as Tech Parks are concerned, partnerships created to realize business competitions are mainly with other Tech Parks, Investors, Public bodies and Universities. To note that if Italian (67%) and British Parks (50%) strongly collaborate with Public bodies, Danish Parks do not established relationship with these actors.

Overall, Fab Labs are the actors with which Tech Parks collaborate less, with a percentage of 35% of “no collaborations”.

Generally speaking, partnerships and collaborations have proved to be very satisfactory, especially those with other Tech Parks, Incubators and Innovation Poles.

7.4 New business creation

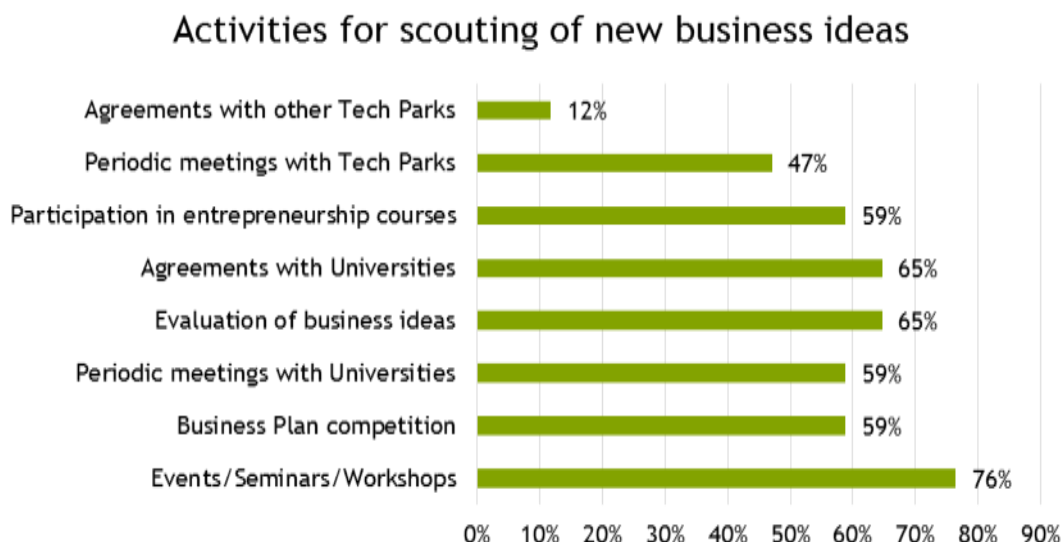
When trying to identify the activities which could facilitate new business creation, the majority of the respondents stressed the importance of joint communication activities and the development of projects focused on entrepreneurship. This results are even more evident in the Italian sample where 89% of respondents consider the use of joint communication activities essential to facilitate the creation of new business.



Scouting of business ideas is a crucial activity for Tech Parks, Incubators and Innovation Poles, to this respect, it is interesting to note that the most frequent collaborations are, in general, with Universities and other Parks/Incubators, whereas partnerships with Fab Labs are marginal. This does not happen in United Kingdom where collaborations with Universities and Parks are less relevant than those with Companies, Investors and Business/Trade Associations.

The essential activities implemented to facilitate the scouting of new ideas are mainly related to the organization of events/seminars/workshops, to the participation in committees for business idea evaluation and to formalized agreements with Universities. Overall, little importance is given to the defining of agreements with other Parks/Incubators.

The results of the survey are similar even if the single Countries are taken into consideration.



Q: Among the following tools to evaluate a business idea, which are the ones that your organization considers more effective?

	DK		IT		UK		Total	
	n.	%	n.	%	n.	%	n.	%
Business Plan	1	17%	8	89%	0	0%	9	53%
Attitudinal interview	2	33%	4	44%	1	50%	7	41%
Business model	3	50%	2	22%	1	50%	6	35%
Other	1	17%	1	11%	0	0%	2	12%

It is interesting to note that in this case there are substantial differences between the three countries examined. In fact, while in Italy 89% of respondents think the business plan is the most important tool for the evaluation of the idea, in Denmark this percentage drops to 16% and gets to 0 in the UK. Danish and British respondents consider the processing of a business model much more reliable.

Also for Tech Parks, Incubators and Innovation Poles, the evaluation of the project team is of fundamental importance and there are particular skills that startups might possess.

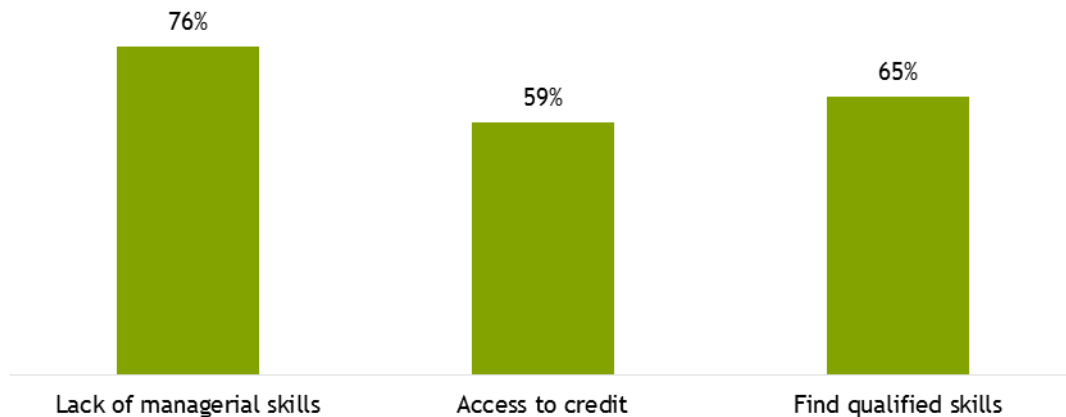
In general, the development of knowledge and marketing and communication skills is the aspect that is considered to be the most important, together with the administrative and managerial ones. If we analyze the single Countries, though, we see that while in Denmark and Italy the results are quite similar, in the UK the governance management is the only major issue.

The following chart shows the aspects that more than half of the respondents consider “important” or “very important” to facilitate new business creation process.



As far as the factors to turn the idea into business are concerned, the survey revealed that over half of the respondents recognize the criticalities due to the some particular aspects.

Problems to be faced when starting a new business



As it is possible to understand by the matching with the previous question, the latter can be solved by fostering the above mentioned facilitators.

8. Startups

8.1 General information

The startups that participated in the investigation are 92 and there are 14 women (15%) among them. Their average age is about 35 years old and the following table better explains this.

Age	n.	%
20-24	9	10%
25-29	21	23%
30-34	23	25%
35-39	10	11%
40-44	9	10%
45-49	12	13%
50-54	3	3%
55-59	5	5%

Table 24 - Breakdown of respondents per age

Respondents come from several European Countries and not only from those involved in the project consortium.

Country	n.
Denmark	22
France	2
Germany	7
Ireland	1
Italy	29
Netherlands	8
United Kingdom	23

Table 25 - Breakdown of respondents per Country

Responses coming from Countries that are not part of the consortium have been considered together in the group "Other EU".

8.2 Entrepreneurial education

Entrepreneurial education looks to be very common among startupper, indeed only 23 out of 92 did not attend any courses about entrepreneurship.

Startupper attending entrepreneurial training activities took part in different kinds of courses.

Typology of course	DK	IT	OTHER-EU	UK	Total
	n.	n.	n.	n.	n.
Curricular	7	0	4	2	13
Extra-curricular	6	12	11	5	34
Seminars	11	10	9	9	39
Other	5	0	5	2	12

Table 26 - Breakdown of startupper per Country and per typology of entrepreneurship courses they attended

To note that there are no curricular courses attended by Italian startupper and this data allow to figure out how the number of this kind of courses about entrepreneurship is rare in Italy.

Startupper explained that the most important benefit they would obtain from the participation in entrepreneurship courses are related to acquisition of entrepreneurial know-how, collection of contacts for the development of the business and technological partnerships and human resources scouting.

	n.	%
Collecting useful contacts for the development of business and technological partnerships	57	62%
Developing intellectual property management skills	25	27%
Enhancing entrepreneurial know-how	52	56%
Human Resources scouting	40	43%

Table 27 - Benefits startupper would obtain from attending entrepreneurial courses

Q: Has your startup taken part in entrepreneurship courses?

	n.	%
Yes	57	62%
No	33	35%
N/A	2	2%

Q: If YES, in which of the following roles?

	n.	%
Learner	38	67%
Teacher	12	21%
Business Expert	16	28%
Other	1	2%

24 respondents underlined they participated in entrepreneurial courses, including 21% as teachers and 28% as business experts.

8.3 Collaborations

More than half of the Italian Startupper involved in the survey have few collaborations with the other actors within the entrepreneurial ecosystem.

Q: If you collaborate with the following subjects to start your business, please indicate the reasons of collaboration

	Tech Parks Incubators Innovation Poles	Fab Labs	Investors	Other Enterprises	Public bodies	Universities
No collaborations	21%	35%	30%	31%	31%	31%
N/A	24%	46%	39%	36%	41%	26%

Table 28 - "no collaborations" cases among Students and other actors of the entrepreneurial ecosystem

Collaborations established with Tech Parks, Incubators, Innovation Poles and Universities are the most common and are related to business planning support, research and development, and entrepreneurial training. Startuppers worked with Fab Labs (15%) about prototyping, trials and testing activities, but also Universities frequently collaborate with startups (23%) to realize these activities.

Twenty nine startuppers stated that Investors own equity shares in their company, but only twelve indicated that they received financial support from Investors themselves. On the other hand, there are five respondents who received financial support from investors even if the latter did not own an equity share of the startups.

Financial support to startuppers is very interesting issue that emerge from the investigation because it is useful to understand the kind of support and services provided by the actors of different entrepreneurial ecosystem across Europe.

To this regard, it is interesting to note that Tech Parks, Incubators and Innovation Poles have some peculiarities. In particular, they are the stakeholders with which startuppers have more collaborations about financial support (20%), followed by investors and business/trade associations. If Italian respondents have no collaborations like these (3%) other European respondents highlighted the important role played by Tech Parks, Incubators and Innovation Poles to provide financial support to startuppers. To this respect, Danish (27%), British (30%) and other European respondents (28%) collaborate with this stakeholders in a most meaningful way.

In order to strengthen collaborations between startups and companies, respondents emphasized the importance of the following aspects by considering them as "important" or "very important".

- Networking (63%)
- Facilities (eg. Incubators, Technology Parks) (48%)
- Training for startups (46%)

More than half of the respondents believe that having a period of training in an established company would be helpful for their startup.

Q: Do you think in-house entrepreneurial training with an established company could help your startup? If Yes, when is preferred?

	n.	%
Yes, at early stage	41	45%
Yes, at later stage	16	17%
I don't know	14	15%

No	14	15%
N/A	7	8%

Q: Training from an established company, in which of the following, could help your startup?

	n.	%
Acquisition of managerial and/or entrepreneurial skills	18	20%
Business development	44	48%
Development of commercial collaborations	42	46%
Development of technical collaborations	30	33%
Product development	19	21%
Other	3	3%
N/A	17	18%

8.4 New business creation

Startuppers were asked to identify the most important facilitators that could sustain the creation of new business. Even if the development stages are very different, these “new entrepreneurs” underlined the relevance of the same issues highlighted by companies participating in the survey.

- Networks and strategic contacts (76%)
- Access to finance (68%)
- Access to strategic partners (62%)

These results do not vary a lot across the respondents, but Danish and other European startuppers (not Italian and British) recognize a great importance to coaching and mentoring programmees (77 and 56%).

The above mentioned facilitators would contribute to solve the problems that startuppers care most. In particular, high percentage of respondents stated that the following are “big problems” or “very big problems”.

- Bureaucracy (47%)
- Access to credit (41%)
- Access to skilled and qualified workers (39%)

In addition, Danish startuppers highlighted the limited possibilities to find facilities at concessional rates (45%).

9. Students

9.1 General information

A large majority of the respondents (254) used to study or are studying in Universities that are directly linked to the ENDuRE project, namely University of Pisa (182), University of Southern Denmark (25) and University of Surrey (25). All come from the partner Countries.

DK		IT		UK		Total	
n.	%	n.	%	n.	%	n.	%

Bachelor Student	12	31%	0	0%	1	3%	13	5%
Master Student	24	61%	76	41%	15	52%	115	45%
Graduate	2	5%	86	46%	3	10%	91	36%
PhD Student	1	3%	24	13%	10	35%	35	14%
Total	39	15%	186	73%	29	12%	254	100%

Table 29 - Breakdown of respondents per Country and Academic degree

Relatives of 72 students among the respondents are entrepreneurs, in particular the parents of 43 of these are entrepreneurs.

9.2 Entrepreneurial education

Around 43% (108 over 254) of the students who took part in this investigation attended at least an entrepreneurship course.

Q: Have you attended/are you attending entrepreneurship courses? If yes, what kind?

	n.	%
Curricular	62	24%
Extra-curricular	39	15%
Seminars	40	16%
Other	7	3%
No	146	57%

32 students attended several entrepreneurship courses.

Curricular courses are most common in Denmark, while the Italy and the UK have a more even spread of typologies of training (e.g. extra-curricular).

	DK		IT		UK	
	n.	%	n.	%	n.	%
Curricular	22	56%	32	17%	8	28%
Extra-curricular	9	23%	22	12%	8	28%
Seminars	15	38%	18	10%	7	24%
Other	2	5%	5	3%	0	0%
No	11	28%	123	66%	12	41%

Table 30 - Breakdown of typology of courses attended by students per partner Country

The following table distinguishes students whose relatives are entrepreneurs and those who do not have entrepreneurs in their family accordingly to the typology of course they attended.

	Is any of your relatives an entrepreneur?		Is any of your parents an entrepreneur?	
	YES	NO	YES	NO
Curricular	15	26	9	6
Extra-curricular	4	14	2	2
Seminars	6	7	4	2
Other	2	2	1	1
Multiple*	12	20	10	2
No	33	112	17	16
Total	72	181	43	29
	29%	71%	60%	40%

Table 31 - Breakdown of students whose relatives are entrepreneurs and typology of entrepreneurial courses they attended

*students who attended more than one kind of entrepreneurial courses.

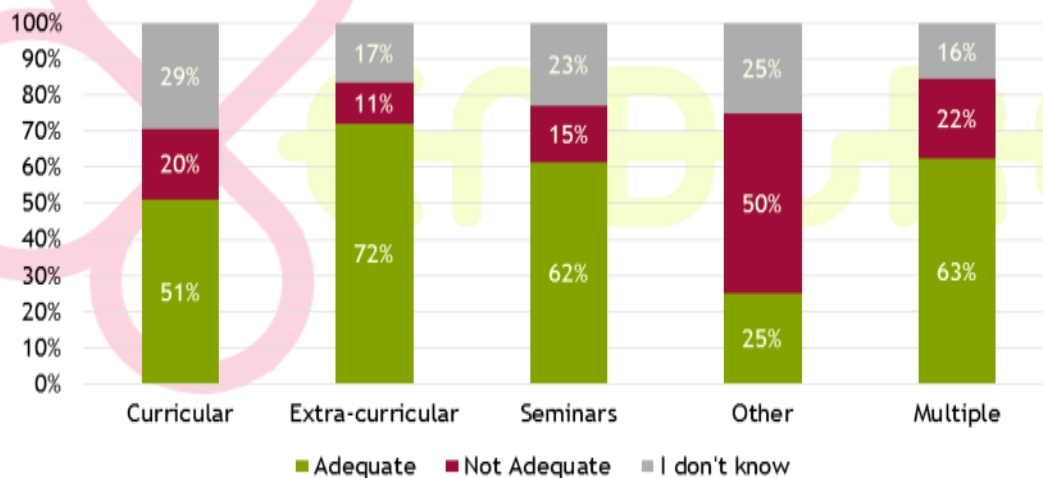
Among the 108 who attended entrepreneurship courses, 39 students have a relative who is an entrepreneur, in particular the parents of 26 of these are entrepreneurs.

More than a half of the students who attended entrepreneurship courses, answered that tools and materials covered in entrepreneurship courses were useful.

Q: Do you think tools and materials covered in entrepreneurship courses are useful?

Courses	YES	NO	I don't know
Curricular	21	8	12
Extra-curricular	13	2	3
Seminars	8	2	3
Other	1	2	1
Multiple	20	7	5
Total	63	21	24
	58%	20%	22%

Entrepreneurship education tools adequacy



Q: Do you believe that training and education in entrepreneurship is an important factor for the creation of startups?

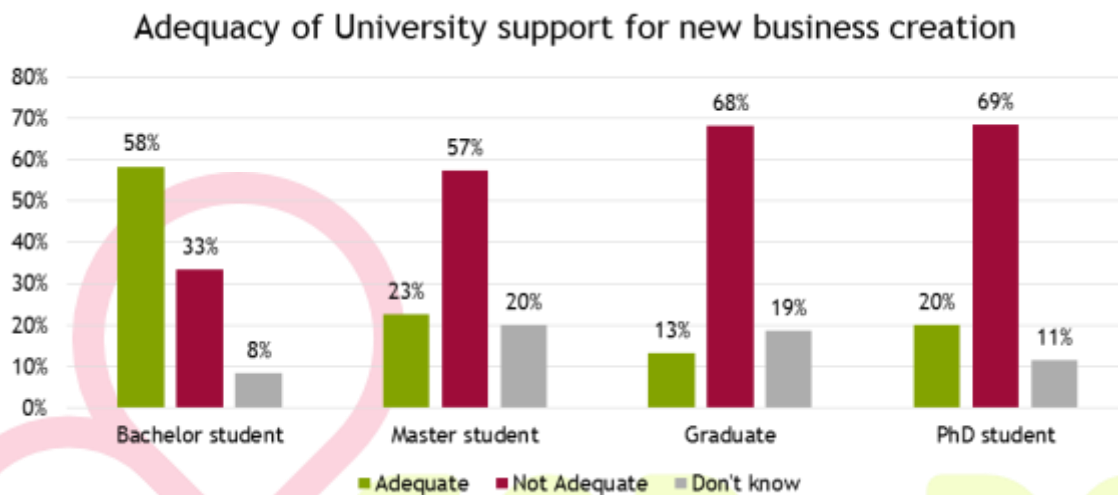
	Entrepreneurship trained students		Entrepreneurship untrained students	
	n.	%	n.	%
Yes	95	88%	114	79%
No	9	8%	7	5%
Don't know	4	4%	24	17%

Students who attended entrepreneurial courses are more aware about the importance of entrepreneurial training to create a startup.

9.3 Collaborations

Q: Do you think universities provide adequate support for the creation of startups?

	YES	NO	Don't know
Bachelor student	7	4	1
Master student	26	66	23
Graduate	12	62	17
PhD student	7	24	4
Total	52	156	45
	20%	61%	18%

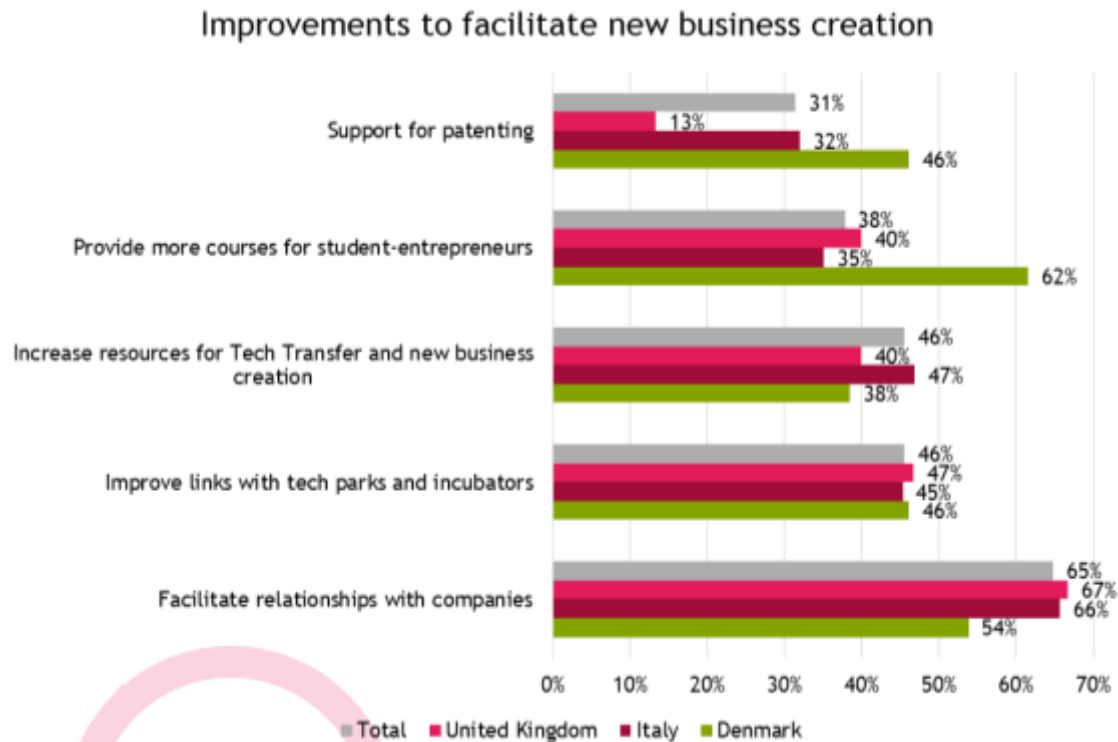


The following table highlights the differences in terms of adequacy of the support provided by the Universities taken into account. More than two-thirds of Italian students believe that University do not provide adequate support about new business creation. Negative feedback in this regard come also from British students with more than a half answering “no”. On the other hand Danish students underlined how University provides adequate support for new business creation.

	DK	IT	UK
Yes	49%	13%	31%
No	33%	69%	52%
I don't know	15%	18%	17%

Table 32 - Breakdown of students per Country and perceived adequacy of University support for new business creation

Students who answered negatively to this question indicated which could be the more important improvements to be done by Universities to ease new business creation process.



Beside Universities, Students established sporadic collaborations with the other actors of the entrepreneurial ecosystem. In particular respondents underlined the collaborations established with Tech Parks, Business/Trade Associations, Companies and Public Bodies. These collaborations concerned Internship, Thesis, and Project works.

In any case, most of the respondents had “no collaborations” with the stakeholders taken into account.

	Tech Parks Incubators Innovation Poles	Fab Labs	B/T Associations	Investors	Enterprises	Public Bodies
No collaborations	75%	85%	79%	83%	66%	67%

Table 33 - “no collaborations” cases among Students and other actors of the entrepreneurial ecosystem

9.4 New business creation

More than two thirds of respondents stated to be interested to create or to work in a startup without meaningful differences between respondents coming from the three partner Countries.

Q: Would you like to work in or create your own startup?

	n.	%
Yes	178	70%
No	19	7%
Don't know	56	22%
N/A	1	1%

There are no differences in terms of propensity to join or create a startup between students who attended entrepreneurial courses and those who did not. It is interesting to note that students that did not attend entrepreneurial training have greater doubts regarding the possibility to create or work in a startup.

	YES	NO	Don't know
Entrepreneurship trained students	90	5	13
Entrepreneurship untrained students	88	14	43
Total	178	19	56

Table 34 - Students' propensity to start a business VS entrepreneurial education

The following table shows intentions to start up new businesses do not vary that much between students whose relatives (e.g. parents) are entrepreneurs and those that do not have entrepreneurs in their family. As for the students who attended entrepreneurship courses, there is a decrease in the number of respondents who do not know if they would like to create or work in a startup.

Q: Would you like to work in or create your own startup?

	YES		NO		Don't know	
	n.	%	n.	%	n.	%
Student whose relatives are entrepreneurs*	54 (34)	75%	7 (3)	10%	11 (6)	15%
Student without entrepreneurs in the family	124	68%	12	7%	45	25%

*in brackets the number of students whose parents are entrepreneurs.

The propensity to start a new business increases during the University career of students. Indeed, 80% of PhD students are interested to start a business, against 66% of Master students. Bachelor students are very few but they look very interested in starting up a business.

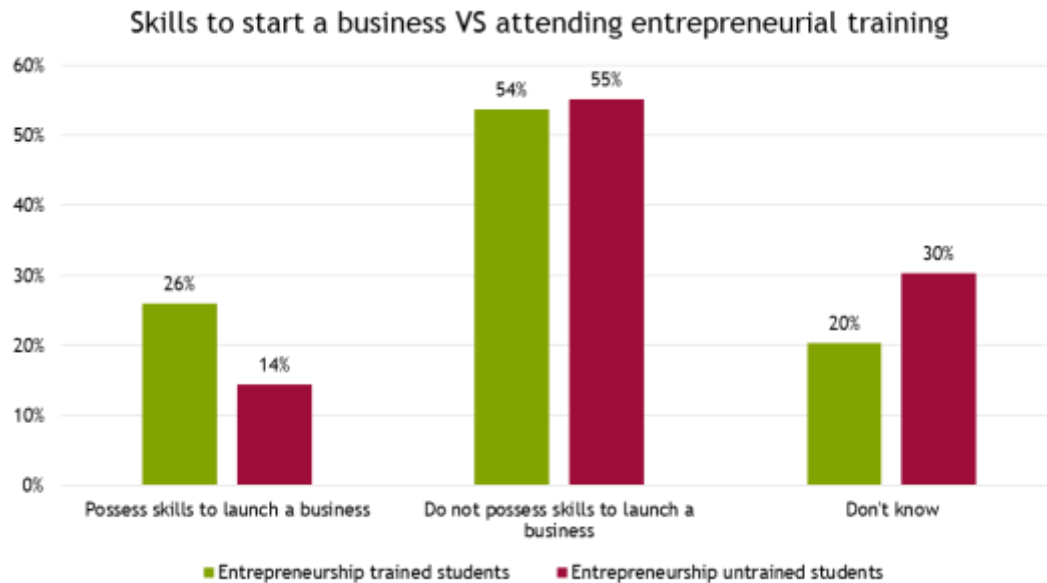
Q: Would you like to work in or create your own startup?

	Yes		No		Don't know		Total
	n.	%	n.	%	n.	%	
Bachelor student	10	83%	0	0%	2	17%	12
Master student	76	66%	10	9%	29	25%	115
Graduate	64	70%	6	7%	21	23%	91
PhD student	28	80%	3	9%	4	11%	35
Total	178		19		56		253

About 54% of students answered to not have the necessary skills to launch a new business while the 26% do not know if they possess these skills or not.

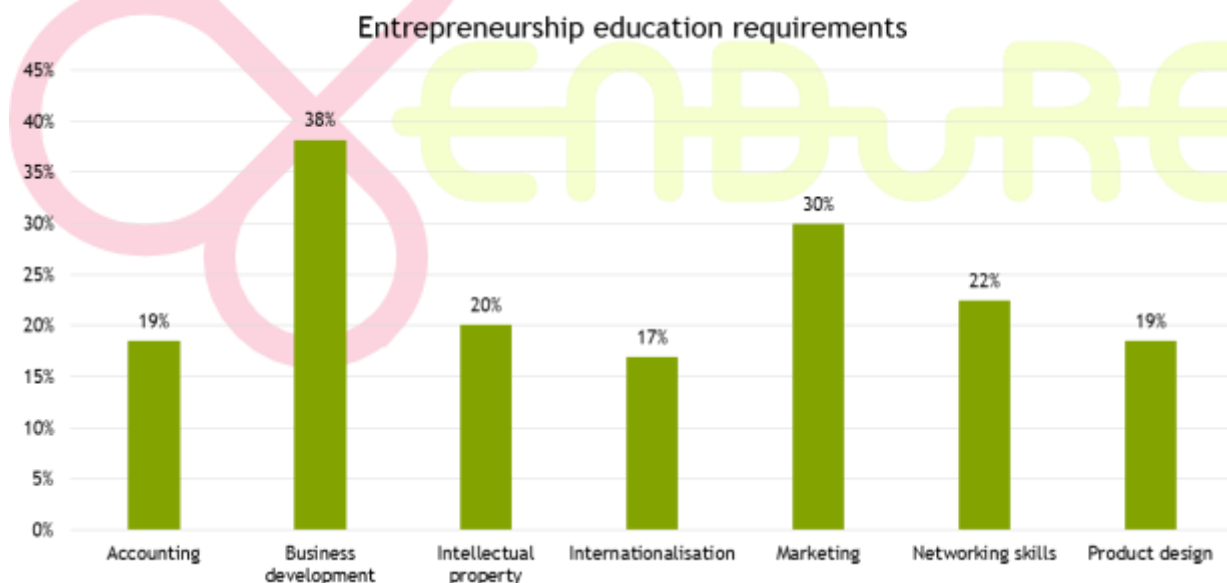
Q: Do you think you possess all the necessary skills to launch a startup?

	YES		NO		Don't know		Total
	n.	%	n.	%	n.	%	n.
Students who attended entrepreneurship courses	28	26%	58	54%	22	20%	108
Students who did not attend entrepreneurship courses	21	15%	80	55%	44	30%	145



Q: What course do you think would be useful for students looking to work in or create a startup?

The following chart highlights the most important topics that students believe are needed to know to properly understand how to start a business. Beside these, Danish students give great importance to Entrepreneurship (26%) and Communication (23%).



These results are similar to those for students who took part in entrepreneurship courses, however the latter highlighted a greater requirement for networking skills and training in product design.

	%
Accounting	23%
Intellectual property	22%
Internationalisation	17%
Marketing	31%

Networking skills	31%
Product design	25%

Table 35 - Most important topics for entrepreneurial training emphasized by Students who attended entrepreneurship courses

83% of students who participated in business plan competitions stated that these are “useful” or “very useful” exercise to better understand business world.

10. Universities

10.1 General information

The six Universities reached during the investigation are located in Denmark (3) and Italy (3) and have a total of students exceeding 120.000.

In these universities there are 26.5 people working into the technology transfer office. It is interesting to note how Danish Universities have an average of 5.5 people devoted to the activities related to research valorization and new business creation, while Italian Universities employ only 3.5 people in this particular department. For example, University of Pisa have 54.000 students and only 5 people devoted to tech transfer, while the University of Southern Denmark have 7.5 people employed even if the number of students enrolled in the University is less than a half (25.000) of the University of Pisa.

During the survey were asked general questions and have seen a situation basically similar in the two countries.

	DK	IT
University owns an Incubator/Service Center	1	0
University takes part in the equity of local Incubators	1	1
University takes part in the equity of entrepreneurial initiatives and/or spin-offs	1	1
University has a Spin-off committee	0	3
University has a Patent committee	2	3
University has a Fab Lab	1	1
University created a dedicate fund for new business creation	0	1

Table 36 - Breakdown of University peculiarities per Country

The only difference noted is related to the spin off committee; in Italy all universities have a committee that evaluates business ideas resulting from research while Danish universities do not.

10.2 Entrepreneurial education

All the respondents stated to organize entrepreneurial training initiatives in their University. The following table explains the typologies of courses held within the Universities.

	n.
Curricular	3
Extra-curricular	4
Seminars	3

Table 37 - Typologies of entrepreneurship courses organized by respondents

The tools used in these courses were developed by academic staff (5) or in collaboration with other organizations (3).

10.3 Collaborations

Universities that took part in the survey highlighted that there are several kinds of collaborations with the other actors of the entrepreneurial ecosystem.

Essentially, actors considered most suitable for collaboration on issues related to the creation of new business other Universities, Enterprises, Investors and Public Bodies. Collaborations with the Fab Labs are not particularly developed, if not for the activities of Prototyping, trials and testing.

	Business competition and other events	Research contracts and collaborations	Prototyping, trials and testing	Communication initiatives	Access to technological clusters/networks
Tech Parks	3	2	1	2	4
Fab Labs	0	1	4	0	1
B/T As	2	2	0	2	2
Investors	3	1	0	1	1
Companies	1	5	5	1	2
Public Bodies	3	1	1	5	5
Universities	5	4	2	3	2

Table 38 - Typologies of collaborations between Universities and other actors of the entrepreneurial ecosystem

Universities collaborate with each other to realize entrepreneurial training initiatives. In a few cases Tech Parks, Investors and Public Bodies are also involved in these activities. Despite this, two Universities are directly related to Fab Labs, the latter not taking part in these kind of courses.

More than half of the Universities participating in the survey emphasize the satisfaction for collaborating with Parks and Companies.

Respondent's collaboration with most of the other actors in the entrepreneurial ecosystem, these relationships can be strengthened. The main way in which Universities believe this could be done is through the realization of partnerships related to projects about entrepreneurship and new venture creation. Beside this, periodic meetings and the involvement of University staff would be useful to interact more with Tech Parks and Public institutions.

10.4 New business creation

Universities taken into account in the investigation consider the following actions as most important to facilitate the creation of new businesses from the valorization of research results.

- Availability of additional financial resources
- Periodic meeting with investors
- Continuous collaborations with Incubators
- Access to advisory qualified services
- University regulations to favor of academic startups.

Conclusions

Entrepreneurial Education

Entrepreneurial education and training seems to be a fundamental component of the entrepreneurial ecosystems analyzed during the present investigation. Indeed, all the target groups taken into account, participate in the education process to help start-uppers and people who want to create a new business to learn the basics of entrepreneurship and to acquire the skills they need to compete in the market.

In particular, Business/Trade Associations, Tech Parks, Universities regularly organize entrepreneurship courses devoted to start-uppers, young jobseekers and established companies. Overall, courses are held once a year and most of the organizations which manage them underlined they collaborate with all the actors within the entrepreneurial ecosystems. Even Fab Labs, despite they born recently, are starting to be involved in entrepreneurial training initiatives bringing their knowledge and supporting innovative ideas development.

As emerged from the investigation, there are some differences in terms of typology of entrepreneurial courses organized in each Country. To this regard responses from companies, faculty, students and start-uppers highlighted that, while in Denmark and United Kingdom both curricular and extracurricular courses are widespread, in Italy curricular ones are very rare.

Among the faculties who participated in the investigation, most of those teaching entrepreneurial courses have experienced the entrepreneurial environment as start-uppers or entrepreneurs themselves. This is of great importance to provide students and start-uppers with real feedback about the business world. Moreover, most of the faculties who teach or have taught in entrepreneurship courses are affiliated in Business and economics, law and social sciences or engineering departments.

The tools covered during the entrepreneurial courses led by the organizations interviewed were developed by internal staff or thanks to the collaboration with other actors of the entrepreneurial ecosystem such as Business/Trade Associations, Tech Parks, and Universities. Tools developed by researchers and professors are also used during entrepreneurial courses.

Companies and startups frequently take part in entrepreneurship courses, having different roles within these initiatives. Indeed, if most of the companies participated as business experts or teachers, start-uppers would usually attend entrepreneurial training as learners. In some cases, start-uppers participate in courses also as business experts or teachers.

Taking part in entrepreneurial courses is perceived by start-uppers and company staff as an opportunity to acquire entrepreneurial skills, and to create a network that could facilitate the development of the business ideas.

The great importance of entrepreneurial education initiatives is underlined by the investors interviewed. In particular, they highlighted the skills that start-uppers might acquire to success on the market. The most important were those related to entrepreneurial mindset, product design, production process and prototyping, business development, and marketing and communication.

Collaborations

Collaborations are of crucial importance within every system and to this regard, the entrepreneurial ecosystem does not differ from the others.

As already underlined, entrepreneurship education and training initiatives involve all the actors of the entrepreneurial ecosystem. Beside these, some other typologies of cooperation involve several actors working in creating new ventures.

In particular, stakeholders participating in the entrepreneurial ecosystem frequently collaborate in order to provide support for new business creation, to favor scouting of new business ideas and matchmaking events, to develop research collaborations, and to organize business plan competitions.

The role of each actor within this landscape vary according with the peculiarities of each actor itself, but there are some actors that appear to be a junction among different actors of the whole ecosystem. Indeed, most of the Tech Parks and Business/Trade Associations participating in the investigation have collaborated with most of the other stakeholders.

On the other hand, Fab Labs are those which have established less collaboration within the ecosystem. This is probably due to their recent creation, and the particular kind of activity they do. Moreover, in most of the cases, Fab Labs use word of mouth as way to communicate their activities and it would be a limit for those which did not established yet a well structure network of relationships.

Moreover, people taken into account during the investigation (faculties and students) have established particular collaborations with all the actors of the ecosystem.

If faculties have numerous collaboration with the actors of the ecosystem and they collaborate with them about activities similar to the above-mentioned, students collaborate less with these actors and the typology of collaboration is quite peculiar. Indeed, students established collaborations concerning internships, project works and thesis.

ENDuRE project aims at fostering collaborations between startups and established companies in order to allow new companies to properly understand how to success in the market. Startuppers and Enterprises underlined that a period of in-house training in established companies would be very helpful for startups to better develop their business model. In particular, this kind of collaboration is perceived as more useful if it is established at early stage of the startup life. Moreover, established companies and startups agreed on the benefits that startups would get out of this training, namely: business development, development of commercial and technical collaborations, and acquisition of managerial and entrepreneurial skills. On the other hand, enterprises underlined that they could benefit from collaboration with startups in other ways, in particular through new products development and R&D agreements.

New Business Creation

The identification of new business ideas is a crucial aspect for some actors of the ecosystem such as Investors and Tech Parks. They carry out this project by using different methodologies mainly based on the evaluation of Business Plans and Business Models and attitudinal interview.

To this extent, investors underlined that skills related to entrepreneurial mindset, product design, production process and prototyping, business development, and marketing and

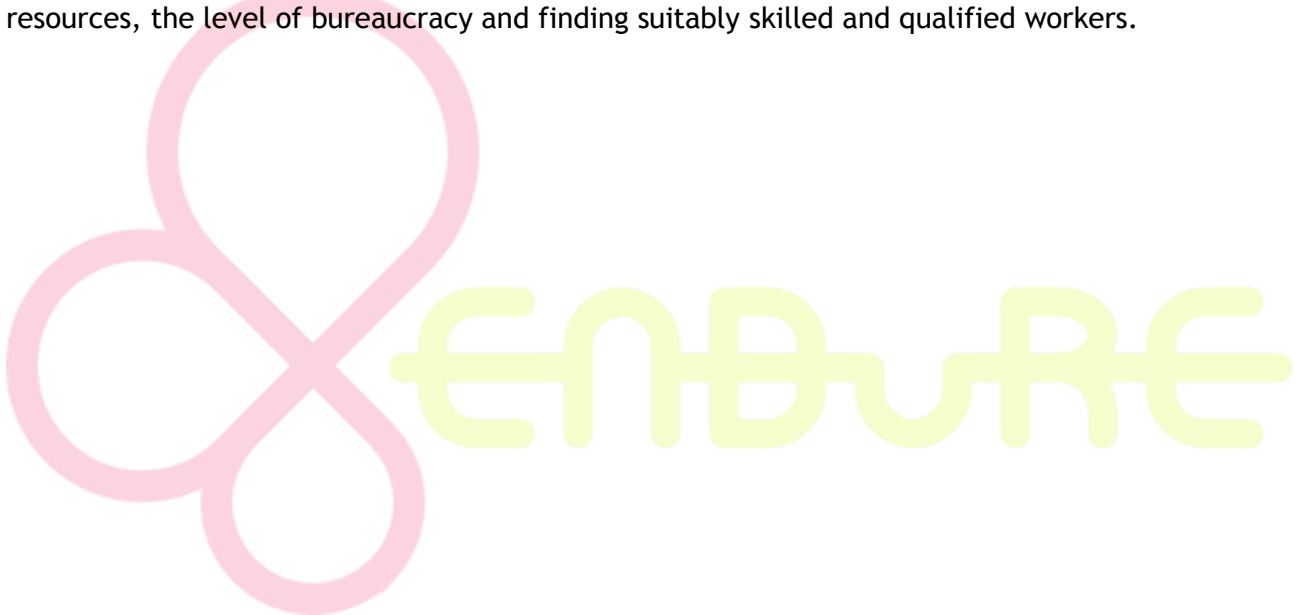
communication are those a team should possess to obtain a positive evaluation of the business ideas.

Each target group emphasized some particular aspects that could favor or impede the process leading to new venture creation. These issues vary meaningfully according with the role of each actor in the ecosystem.

If entrepreneurial training, support for new business creation, and networking were already taken into account in the previous paragraphs, there are some other aspects that appear to be important to facilitate the new venture creation process.

In particular, the possibility to access to finance is perceived as crucial to foster new business creation, moreover several actors underlined that a greater cooperation among them would be helpful to make the process more effective. Respondents underlined that other key elements to sustain the development of new business are mentoring and coaching programmes.

Beside these facilitators, the most critical issues that could impede the transformation of an idea into business emerged. These problems are concerned with having access to financial resources, the level of bureaucracy and finding suitably skilled and qualified workers.



Appendix

The following tables highlight the number of email requests for filling in the questionnaire sent by each partner. They are divided per target groups and staff who participated in the investigation. Moreover, the tables emphasize the response rates reached by partners during the investigation execution.

Denmark

Target group	Sample to reach	Partner	Number of questionnaires submitted	Number of responses received	Response rate (n. responses / n. mail)
Business/Trade Associations	5	IDEA	8	6	75,0%
Enterprises	20	BLUE OCEAN	9	1	11,1%
		IDEA	106	6	5,7%
Fab Labs	2	BLUE OCEAN	9	2	22,2%
Faculty Personnel	30	BLUE OCEAN	4	0	0,0%
		IDEA	38	17	44,7%
Investors	5	IDEA	5	6	120,0%
Public Bodies	5	BLUE OCEAN	1	0	0,0%
		IDEA	5	7	140,0%
Startuppers	25	BLUE OCEAN	8	0	0,0%
		IDEA	45	25	55,6%
Students	50	IDEA	133	41	30,8%
Tech Parks, Incubators, Innovation Poles	5	BLUE OCEAN	1	0	0,0%
		IDEA	8	6	75,0%
Universities	3	IDEA	11	3	27,3%
		TOTAL	391	120	30,7%

Table 39 - Overview of responses collected by Danish partners

Italy

Target group	Sample to reach	Partner	Number of questionnaires submitted	Number of responses received	Response rate (n. responses / n. mail)
Business/Trade Associations	5	CEDIT	50	6	12,0%
		UNIFI	1	0	0,0%
Enterprises	20	CEDIT	230	13	5,6%
		NAVACCHIO	936	28	3,0%
Fab Labs	2	NAVACCHIO	1	1	100,0%
		UNIFI	18	1	5,6%
Faculty Personnel	30	UNIFI	500	31	6,2%
Investors	5	NAVACCHIO	5	2	40,0%
		UNIFI	31	3	9,7%
Public Bodies	5	CEDIT	7	4	57,1%

Startuppers	25	UNIFI	2	1	50,0%
		NAVACCHIO	53	11	20,7%
		UNIFI	300	15	5,0%
		CEDIT	10	1	10,0%
Students	50	UNIFI	20000	185	0,9%
Tech Parks, Incubators, Innovation Poles	5	NAVACCHIO	91	9	9,9%
		UNIFI	1	0	0,0%
Universities	3	UNIFI	200	3	1,5%
		TOTAL	22283	314	1,4%

Table 40 - Overview of responses collected by Italian partners

United Kingdom

Target group	Sample to reach	Partner	Number of questionnaires submitted	Number of responses received	Response rate (n. responses / n. mail)
Business/Trade Associations	5	IVERIDIS	30	1	3,3%
		SURREY	11	3	27,3%
Enterprises	20	IVERIDIS	40	4	10,0%
		SURREY	11	5	45,4%
Fab Labs	2	IVERIDIS	20	0	0,0%
Faculty Personnel	30	IVERIDIS	100	2	2,0%
		SURREY	2300	5	0,2%
Investors	5	IVERIDIS	30	6	20,0%
Public Bodies	5	IVERIDIS	30	2	6,7%
		SURREY	2	0	0,0%
Startuppers	25	IVERIDIS	1800	37	2,1%
		SURREY	110	8	7,3%
Students	50	IVERIDIS	160	0	0,0%
		SURREY	14000	33	0,2%
Tech Parks, Incubators, Innovation Poles	5	IVERIDIS	350	1	0,3%
		SURREY	1	1	100,0%
Universities	3	IVERIDIS	30	0	0,0%
		SURREY	14	0	0,0%
		TOTAL	19037	108	0,6%

Table 41 - Overview of responses collected by British partners