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<Consultation & Survey on c-b Pre-incubation Strategy>

Project Beneficiary 1

Alexander Innovation Zone SA



By

IDIMON CONSULTANTS

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CONTENTS

1. Introduction.....	8
2.Criteria for evaluation	80
3.The Champions at International Level	84
SETsquared, UK	84
I3P, Italy	85
1871 – Chicago’s Technology & Entrepreneurship Centre, USA	86
Y Combinator, USA.....	87
Seedcamp, UK	87
Polihub, Italy	88
Axel Springer Plug & Play (Germany).....	89
SeedRocket (Spain)	89
I5invest (Austria).....	89
Telenet Kickstart (Belgium).....	89
JIC Starcube (Czech Republic)	90
Accelerace (Denmark).....	90
Startup Wise Guys (Estonia)	90
The Family (French).....	90
Rockstart (Netherlands).....	90
Lisbon Challenge (Portugal)	90
4. Startup Events	92
Hackathon	92
Startup Weekend	92
Startup Riots	93
Startup Weekend	93
5. Lean Startup methodology.....	95
6. d.School methodology	97
7.Disciplined Entrepreneur (DE24).....	99
8.Breakthrough Incubator	102
9. Living Labs	104
10. Startup hubs in Europe.....	106
German startup system	107
11. Pre-incubation in Europe	110
12. Startups in Greece & Bulgaria	113
Greek startup ecosystem	113
Bulgarian startup ecosystem	114
13. The Champions at Greece	116
i4G - Incubation for Growth SA - info@i4g.gr.....	116
PATRAS SCIENCE PARK- info@psp.org.gr	116

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OK!THESS - www.okthess.gr	121
TECHNOPOLIS THESSALONIKI ICT BUSINESS PARK - www.technopolis.gr	122
IQBILITY - http://www.iqbility.com	122
14. Benchmarking Analysis per Best Practice	123
15. Multi-criteria Analysis per Best Practice	131
16. Aggregated Final Ranking of Best Practices	135
17. Discussion	137
18. Conclusions	140
19. References	142

Abbreviations

B2B – Business to business

B2C – Business to consumer

CBC – Cross border Cooperation

COCA – Cost of Customer Acquisition

DMU – Decision Making Unit

EU – European Union

GDP – Gross Domestic Product

GEM – Global Entrepreneurship Monitor

ICT – Information and Communication Technologies

IPA – Instrument for Pre-Accession

KPI – Key Performance Indicator

LTV – Life Time Value

MNC – Multi National Company

MBP – Minimum Viable Product

MVBP – Minimum Viable Business Product

SEE – South East Europe

SME – Small and Medium Enterprises

TEA – Total Early-Stage Entrepreneurial Activity

1. Introduction

The objective of this deliverable is to produce a report based on empirical research, which aims to gain a deeper understanding of the behavior of the potential entrepreneur towards the idea of establishing and operating a pre-heating structure in the reference area.

The main objective of the survey was to gain thorough knowledge about the profile of potential entrepreneurs in the region. Furthermore, it aims to identify the critical parameters that will change negative stereotypes and create positive attitudes towards entrepreneurship in a pre-warming environment.

- ⇒ The empirical research conducted was based on the following research methodologies:
- ⇒ Semi-structured questionnaires between agencies, businesses and students
- ⇒ In-depth interviews between experts and experienced executives
- ⇒ Special Focus Groups (Focus Group)

The analysis of the deliverable includes the recording, analysis and evaluation of the findings per unit of empirical research and concludes with the presentation of the conclusions and policy recommendations.

QUESTIONNAIRES

In the context of the empirical research, I designed a semi-structured questionnaire which was addressed to institutions and companies. More detailed questionnaires were collected from people with the following characteristics:

- ⇒ Innovative local businesses
- ⇒ Export local businesses
- ⇒ Researchers and academics
- ⇒ Bodies representing private companies
- ⇒ Scientific Associations
- ⇒ Entrepreneurship consultants
- ⇒ Management Authorities
- ⇒ Local and regional authorities
- ⇒ Representatives of civil society

The following steps preceded the preparation of the questionnaire:

- ⇒ Identify and specialize the research goal.
- ⇒ Selection of the data collection method.
- ⇒ Understanding the characteristics of the respondents.

Identifying and specializing the research goal were concepts that should be defined first. As the formulation of the questions was based on them. The choice of collection method is also crucial for the design of the questionnaire. The questionnaire was designed in such a way that it could be completed by the respondent himself, without the intervention of a researcher. For this reason, emphasis was placed on the technical perfection of the questionnaire and on the provision of explanatory explanations in the questionnaire. Finally, the characteristics of the surveyed population were taken into account in the design of the questionnaires, in the formulation of the questions and in the use of the appropriate words.

To create the questionnaire, the following characteristics were taken into account in order for it to be a successful and correct research:

- ⇒ Completeness
- ⇒ Clarity
- ⇒ Coherence
- ⇒ Appropriate structure.
- ⇒ Include control questions.
- ⇒ Be as short as possible.
- ⇒ Be technically perfect.
- ⇒ Include basic instructions and conceptual explanations.
- ⇒ To be able to process coding and computer processing.

Completeness refers precisely to the need to cover all aspects of the research feature. Clarity refers not only to the content of the information but also to the person who has to give the answers. Coherence refers to the need for an organic connection between the individual questions. The appropriate structure of the questionnaire, ie the order in which the question groups will be placed, is also of great importance in increasing the degree of audience response. The control questions are

asked precisely to check the correctness of the answers to basic questions. To be effective, the questionnaire was chosen to be short. The completeness of the questionnaire from a technical point of view also significantly affects the degree to which the public responds for two main reasons. Initially, the quality of the paper, the printing, etc., creates a favorable predisposition for the seriousness of the research, with the result that they show more interest and make a greater effort for complete and correct answers. Finally, special areas have been provided in each open-ended question for the coding of each answer, so that it can be entered, in the form of a number, into the Computer for further processing.

There were two types of questions: open-ended questions and closed-ended questions (with further subcategories). In open-ended questions, the respondent could express his / her opinion freely and without restrictions. Closed questions included:

- ⇒ Qualification Questions (eg from not at all to too much)
- ⇒ Ranking questions (eg order of priority)
- ⇒ Graduated Scale Questions (1 to 5)
- ⇒ Multiple Selection Questions (eg over one option)

The order in which the questions were arranged in the questionnaire was:

1. Identity data questions (status, sheet, age, education, region) are collected at the beginning, so that the first impression formed by the respondent is positive.
2. Easy questions at the beginning, suitable to sensitize and arouse interest in the respondent.
3. The general questions were preceded by the experts so that the questionnaire had a relevant and logical aspect so that the respondent did not feel derailed.

Regarding the formulation of the questions concerning the vocabulary and phraseology of the questionnaire:

- ⇒ The questions followed the rules of grammar and syntax.
- ⇒ The questions were formulated clearly and in such a way that they were understood by all users.
- ⇒ The questions did not contain technical terms, idioms, rare words and difficult.
- ⇒ In terms of content, the questions were simple and comprehensive.

QUESTIONNAIRE - Stakeholders

This questionnaire is part of a joint research effort of the Alexander Innovation Zone, Aristotle University of Thessaloniki, University in Greece and the National & World Economy and the National Company Industrial Zone in Bulgaria, to create of a cross-border innovation system that supports business ideas through business pre-incubation structures to be set up in both countries. The CO-WORKING project is funded by the INTERREG Greece-Bulgaria Program.

IMPORTANT! The information provided in the questionnaire is completely confidential and will be used exclusively for research purposes.

0 PERSONAL INFORMATION

Select the property that describes you		Sex
Elected in Local Government		Man
Representative of Chamber / Business Association		Woman
Academic / Researcher		Age
Entrepreneurship Consultant		<31
Businessman		31-40
xxxxx		41-50
xxxxx		51-60
Other (describe)		61-70
Area in which you live		>70
Thessaloniki		Education
Kardjali		Primary
XXX		Secondary
XXX		Graduate
		Postgraduate
		PhD

Pre-Incubation Structure: In the present study, the term pre-incubation refers to a structure that aims to support innovative and promising business ideas that have not yet been transformed into a business in the form of a tax start. The aim of this structure is to minimize the risks of business risk by providing for a sufficient period the appropriate space and equipment, as well as training, mentoring and coaching services.

Thank you very much for your valuable contribution!

1. EVALUATION OF THE BUSINESS ENVIRONMENT

Q.1 Evaluate from 1 to 5 the level of the following characteristics of the area in relation to the business environment:

1 = very low / bad, 2 = low / bad, 3 = moderate, 4 = high / good, 5 = very high / good

Quality of cross-border business infrastructure (e.g. crossing points, roads)	
Strong economic base in the high-tech industry	
Strong economic base in the capital-intensive industry	
Strong economic base in the labor-intensive industry	
Strong economic base in trade and services	
Rapidly growing small businesses	
Cross-border cooperation in tourism issues	
Cross-border cooperation on environmental protection issues	
Cross-border cooperation in business cooperation	
Cross-border cooperation between educational institutions	
Organization of joint cross-border exhibition activities	
Development of joint cross-border projects in the field of culture and arts	
Level of cross-border commercial activity	
Promotion and protection of cultural heritage and natural resources	
Agricultural sector level as a source of cross-border exports	
Manufacturing level as a source of cross-border exports	
Level of private investment in the area	
Interconnection of the academic sector and research with the primary sector	
Linking academia and research with industry	
Adaptability of small and medium enterprises to technological changes	
Quality of the human workforce	
Quality of social infrastructure (schools, hospitals, cultural centers, etc.)	
Business environment for creating new businesses	
Tax environment	
Political stability	
Corruption and Crime	

Degree of business extroversion	
Effectiveness of regional self-government	
Effectiveness of local government	
Efficiency of public services	
Existence of entrepreneurship support bodies in the region	
Effectiveness of entrepreneurship support bodies	
Other (please describe)	

Q.2 Evaluate from 1 to 5 the degree to which the following data are an opportunity or a threat for the further development of entrepreneurship in the region:

1 = great threat, 2 = threat, 3 = neutral impact, 4 = opportunity, 5 = great opportunity

Amount of European funding related to entrepreneurship	
Use of European funding related to entrepreneurship	
Collaboration for the creation and development of integrated tourism products	
Cooperation in the production of high quality agricultural / livestock products	
Collaboration to create a strong image (brand identity) for the region	
Collaboration to improve business support services	
Export of low cost products to international markets	
Export of high cost and high quality products to international markets	
Investments in new technologies	
Investments in traditional industrial sectors	
Utilization of economic migrants for the development of entrepreneurship	
Foreign investments that seek low cost	
Adaptation to the international environment	
The international business climate	
Decentralization to many actors in entrepreneurship policies	
Concentration on a few actors in entrepreneurship policies	
Other (please describe)	

Q.3 Select from the list below the eight (8) industries (NACE 08) that you consider to have the greatest potential for the area, ranking from 1 to 8

Plant and animal production	
Forestry and logging	
Fisheries and aquaculture	
Coal and lignite mining	
Food industry	
Distillery	
Manufacture of clothing	
Leather and leather goods industry	
Wood industry	
Production of chemicals and products	
Manufacture of metal products	
Manufacture of electrical equipment	
Manufacture of machinery and equipment	
Manufacture of motor vehicles	
Furniture construction	
Power supply	
Waste collection, treatment and disposal, material recovery	
Construction of buildings	
Wholesale	
Retail	
Warehousing and transportation support activities	
Accommodation	
Catering service activities	
Publishing activities	
Telecommunications	
Computer programming activities	
Financial services activities	
Real estate management	
Legal and accounting activities	

Architectural and engineering activities	
Scientific research and development	
Advertising and market research	
Veterinary activities	
Rental and leasing activities	
Activities of travel agencies	
Office administrative activities, secretarial support	
Education	
Human health activities	
Creative activities, arts and entertainment	
Athletic activities	

2. BUSINESS ENVIRONMENT IMPROVEMENT POLICIES

Q.4 Select from the list below the eight (8) most important policy measures to improve the start-up environment of a start-up company with a ranking from 1 to 8

Greater flexibility in interpreting procedural requirements	
Training of the staff of the competent services	
Simplification of public service requirements and removal of restrictions	
Clear definition of the substantive content of each environmental permit	
Reducing the complexity of design and decision levels	
Simplification of building permit procedures	
Preparing a licensing manual for entrepreneurs	
Standardization of technical specifications of goods and services according to international standards	
Public consultation before the implementation of regional development programs	
Development of an incentive system that will encourage entrepreneurs	
Simplification and information on work and insurance issues	
Collaboration between research and academic institutions and companies	
Develop an incentive system to encourage research and development (R&D)	
Simplification of bureaucratic procedures in state academic and research institutions	
Promoting the commercialization of research results	
Development of incentive system for companies that create jobs	

Scholarships for talented students in the field of entrepreneurship	
Incentives for encouraging joint ventures between companies and research organizations	
Support for the development of entrepreneurship in universities	
Organization and financing of a training and business support system	
Joint postgraduate programs and academic exchanges between institutions	
Contribution of public bodies in the transfer of technology in the business sector	
Networking between regional authorities and local entrepreneurs	
Introduction of a system for monitoring economic trends in the region	
Activation of cross-border networks	
Other (please describe)	

Q.5 Evaluate from 1 to 5 the degree to which the following policy measures contribute to the improvement of the financing environment of a start-up company in the region:

1 = not at all, 2 = little, 3 = moderate, 4 = to a significant degree, 5 = to a very large degree

Ensuring a sufficient number & amount of financing programs	
Ensuring flexibility in the implementation of financing programs	
Ensuring access to the banking system and lending	
Support for entrepreneurs providing consulting services	
Ensuring access to business opportunity information	
Creating financial support networks (eg business angels etc)	
Generation of guarantee funds (eg venture capitals)	
Increase in government spending on R&D	
Handbooks of good practice for entrepreneurs on forms of financing	
Providing financial support in the initial stage of business development	
Participation of entrepreneurs in international exhibitions, conferences and seminars	
Matching entrepreneurs with innovative solutions and potential investors	
Mapping opportunities for global value chains	
Development of a financial incentive system for start-ups	
Other (please describe)	

Q.6 Rate from 1 to 5 the degree to which the following potential business pre-incubation initiatives are important in the area:

1 = not at all, 2 = little, 3 = moderate, 4 = to a significant degree, 5 = to a very large degree

Informing potential entrepreneurs about the benefits of pre-incubation	
Training and counseling actions	
Creation of a platform for the transfer of know-how in the context of pre-incubation	
Creating an online forum in the context of pre-incubation	
Creation of a business accelerator in the context of pre-incubation	
Establishment of expert groups for independent evaluation of innovative ideas	
Creating a network of mentors for advice and practical guidance	
Creation of a network of experts in pre-incubation issues	
Creation of a natural pre-incubation structure	
Other (please describe)	

Q.7 Select from the list below the three (3) most important principles of the EU "Small Business Act" Initiative, ranking from 1 to 3

Favorable environment in family businesses and rewarding entrepreneurship	
Bankrupt honest businessmen will soon have a second chance	
Design according to the "Think Small First" principle	
Ability for public administrations to meet the needs of SMEs	
Public authorities meet the needs of SMEs	
Facilitate SMEs' access to finance and develop a legal and business environment that supports timely payments in commercial transactions	
Supporting SMEs to make the most of the opportunities offered by the single market	
Promoting the upgrading of skills in SMEs and in all forms of innovation	
Encourage SMEs to turn environmental challenges into opportunities	
Encourage and support SMEs to benefit from market growth	

Q.8 Prioritize from 1 to 5 the most important priority areas of the RIS strategy 2014-2020 Western Macedonia

Energy production and lignite	
Furs and production of leather goods	
Agriculture, food and beverages	
Metalwork	
Tourism with emphasis on cultural and natural resources	

Q.9 Where do you think most of the new business ideas in your area come from? Prioritize from 1 to 3 the most important

Mainly from the companies themselves	
Mainly from investors outside the region	

Mainly from university research	
Mostly from young people	
Mainly from the unemployed	
I don't know	
Other (please describe)	

Q.10 What is the most important target group in the area for a pre-incubation structure? In case of many choices, rank from 1 to 3

Mostly students	
Mostly the unemployed	
Mainly the employees	
I don't know	
Other (please describe)	

Findings

Profile of the research

From the information derived by the graphs below, it can be concluded that mainly women participated in the sample (75.0%), the educational level of the research participants was primarily postgraduates (50.0%) and secondarily PhD holders (40.0%). The majority of the respondents belong to the age group between 51-60 years old (40.0%) and the sample consist of Entrepreneurs (35.0%), business advisors (30.0%), academic/ researchers (25.0%) and a small percentage of Representatives of Chambers/ Business Unions (10.0%).

Figure 1: Gender

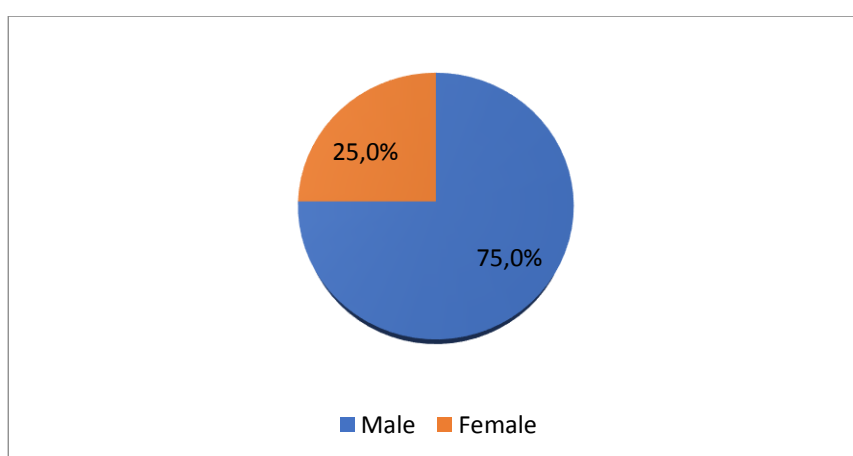


Figure 2: Education

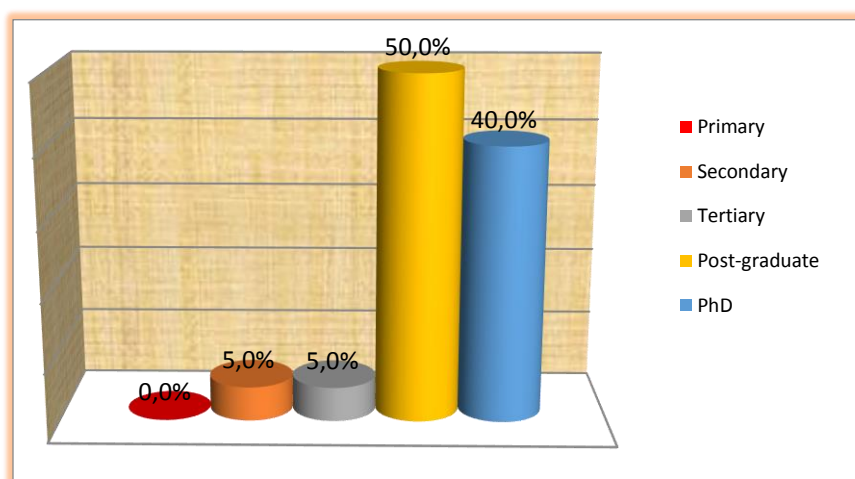


Figure 3: Status

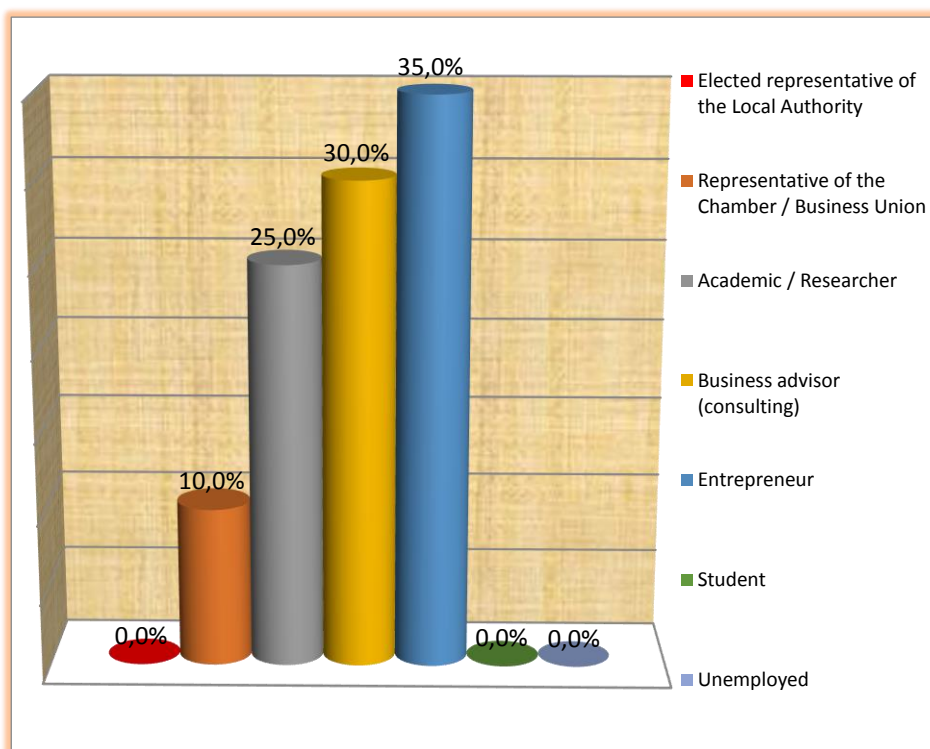
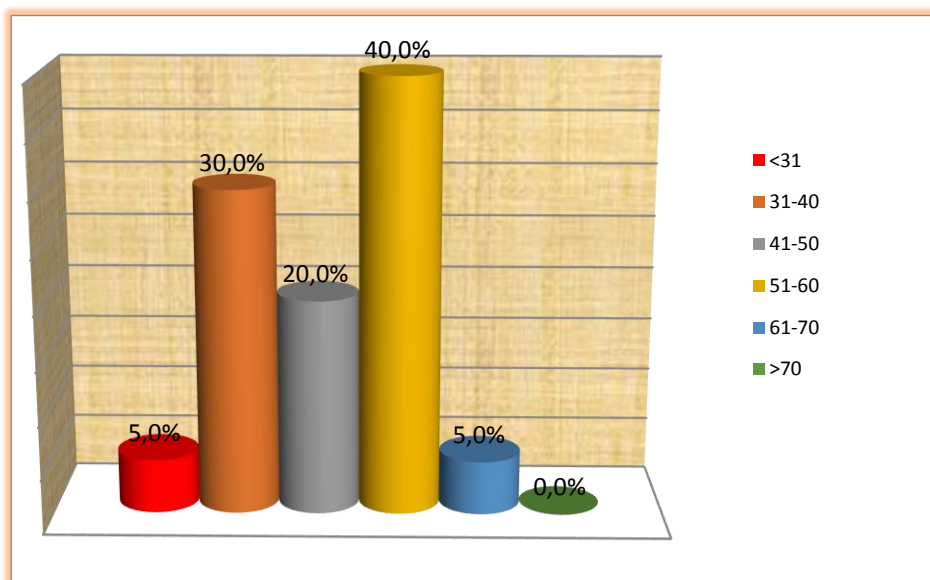


Figure 4: Age



Assessment of the Business Environment

In Tables 1 to 5 and Graphs 6 to 37, the results of the assessment of the characteristics of the area in relation to the business environment are presented.

Table 1: Evaluate the level of the following area's characteristics in relation to the business environment (1)

	Very low very bad (1)	Low Bad (2)	Medium (3)	High Good (4)	Very high Very good (5)	Total
Quality of cross-border infrastructures for businesses (e.g. crossing points, roads)						
Greece	0	5	8	6	1	20
Strong economic basis in the high tech industry						
Greece	2	7	5	6	0	20
Strong economic basis in the capital intensive industry						
Greece	1	8	7	4	0	20
Strong economic basis in the labor intensive industry						
Greece	1	6	8	4	0	19
Strong economic basis in commerce and services						
Greece	0	0	10	9	0	19
Rapidly developing small businesses						
Greece	3	5	9	2	1	20

Figure 6: Quality of cross-border infrastructures for businesses (e.g. crossing points, roads)

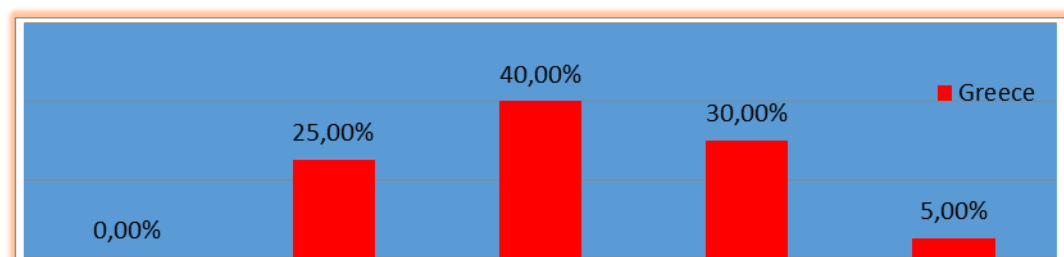
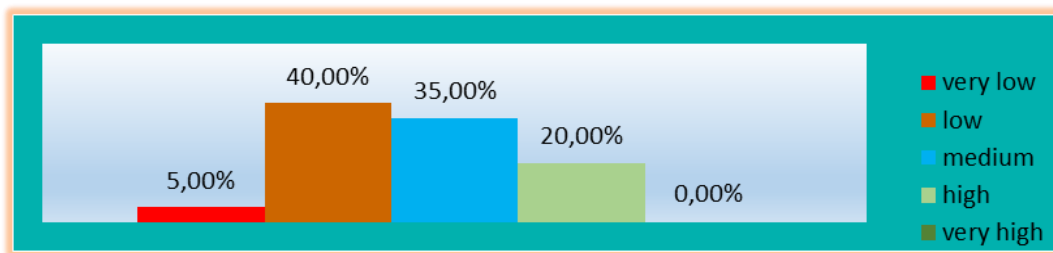


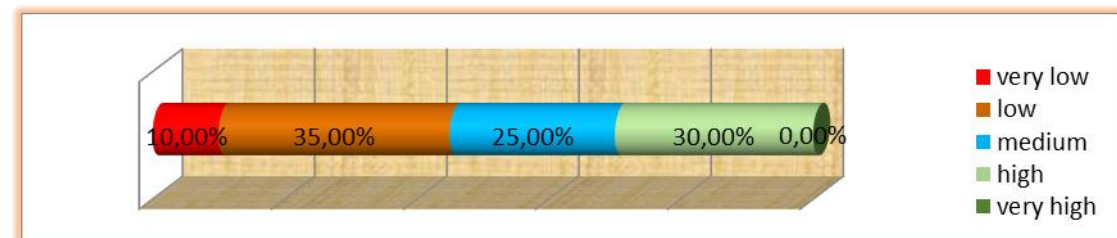
Figure 6 shows that the level of business infrastructure is moderate, so there is room for significant improvements in this area.

Figure 7: Strong economic basis in the capital-intensive industry



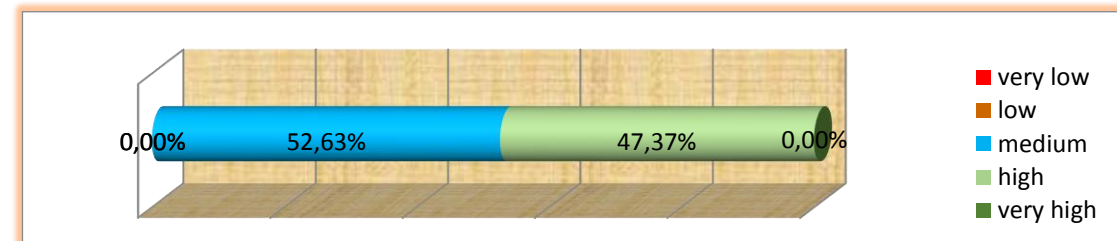
At the same time, according to the data in Graph 7, it becomes clear that the financial burden in the labor-intensive industry is very low, which is an inhibiting factor for the development of entrepreneurship on this basis.

Figure 8: Strong economic basis in the high tech industry



Relatively similar is the picture (Graph 8) regarding the high-tech industry, where the situation is not as negative, but in no case does it constitute a positive starting point for entrepreneurship.

Figure 9: Strong economic basis in labor-intensive industry



The picture (Graph 9) remains strongly negative also regarding the capital-intensive industry, which shows the lack of interest and possibility for capital-type investments.

Figure 10: Strong economic basis in commerce and services

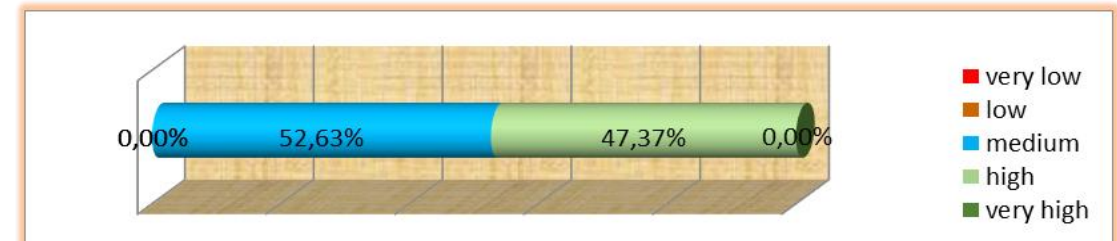
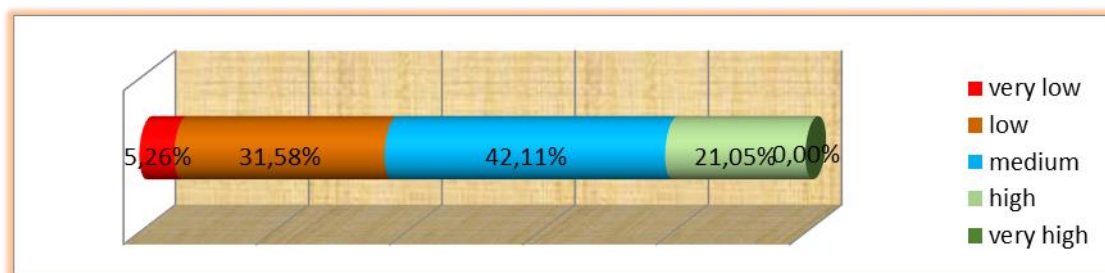


Figure 11: Rapidly developing small businesses

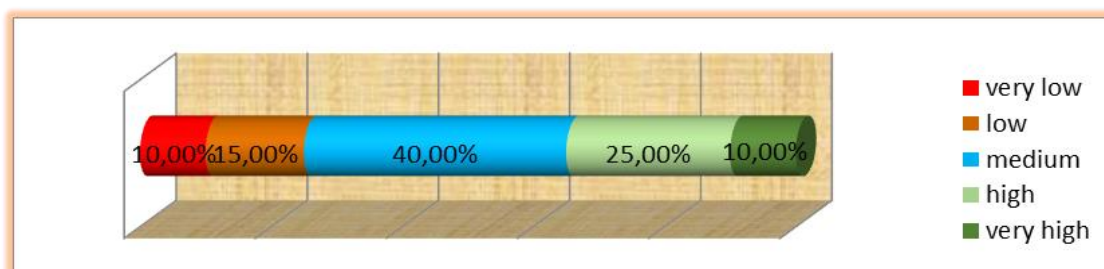


The data in Figure 11 also shows that the area cannot in any case be characterized as an area that hosts fast-growing businesses, a fact that should be taken into account in any planning.

Table 2: Evaluate the level of the following area's characteristics in relation to the business environment (2)

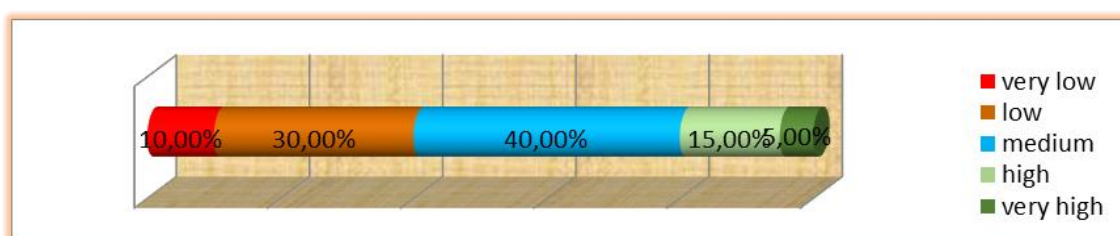
	Very low very bad (1)	Low Bad (2)	Medium (3)	High Good (4)	Very high Very good (5)	Total
Cross-border cooperation in issues related to tourism						
Greece	2	3	8	5	2	20
Cross-border cooperation in issues related to environmental protection						
Greece	2	6	8	3	1	20
Cross-border cooperation in issues related to business collaboration						
Greece	2	3	9	5	0	19
Cross-border cooperation between educational institutions						
Greece	1	5	8	5	1	20
Organizing of common cross-border trade exhibition activities						
Greece	4	5	6	2	2	19
Level of cross-border trading activity						
Greece	0	2	8	9	0	19

Figure 12: Cross-border cooperation in issues related to tourism



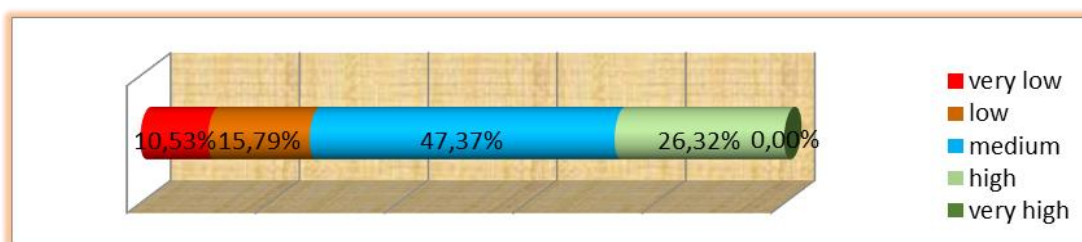
Graph 12 captures the degree of cross-border cooperation in tourism matters. The results show that this cooperation is moderate and shows significant room for improvement.

Figure 13: Cross-border cooperation in issues related to environmental protection



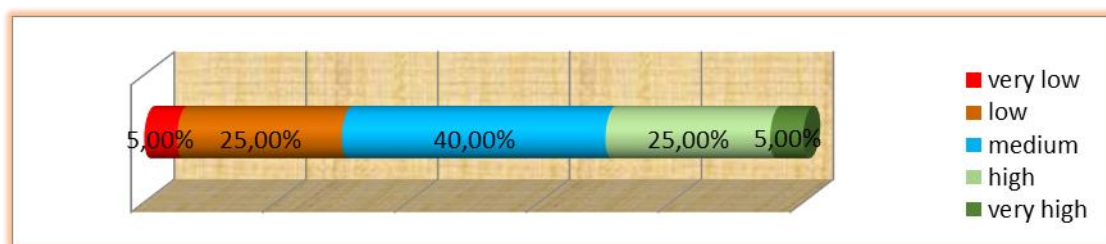
The level of cross-border cooperation in environmental protection issues seems to be correspondingly low, as shown in Graph 13.

Figure 14: Cross-border cooperation in issues related to business collaboration



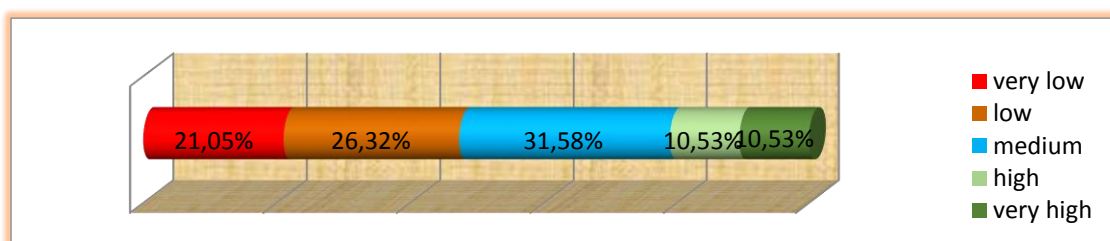
The image of Graph 12 is also confirmed in Graph 14 where the low level of cooperation in matters of business cooperation is clearly visible.

Figure 15: Cross-border cooperation between educational institutions



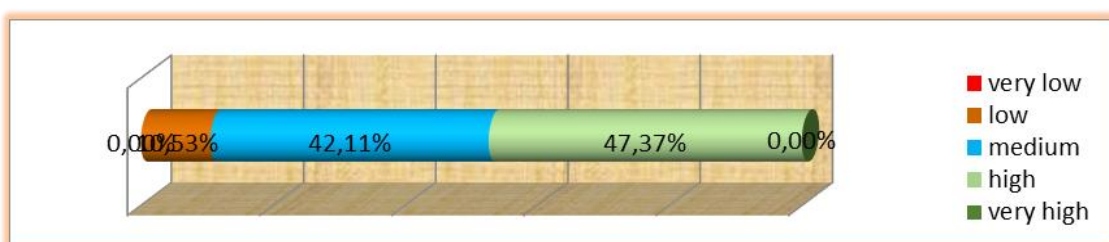
The negative picture acquires more pronounced characteristics when one examines (Graph 15) the level of cross-border cooperation between educational institutions, where no appreciable willingness to cooperate is evident.

Figure 16: Organizing of common cross-border trade exhibition activities



Also, there does not seem to be any interest in the joint organization of cross-border exhibition activities (Graph 16), which shows the different agendas of each side in promoting their products and services.

Figure 17: Level of cross-border trading activity

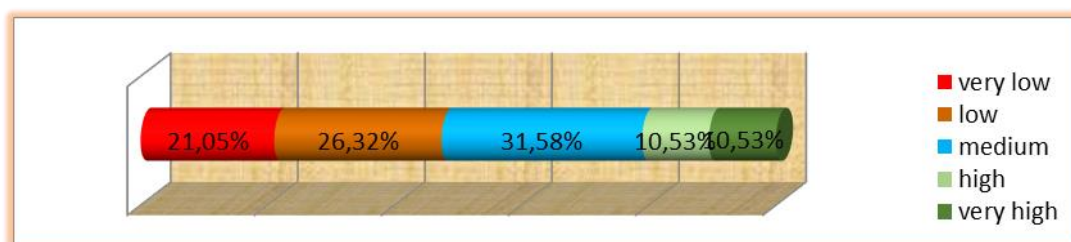


Corresponding to the picture in exhibition activities and business cooperation, is also the picture of the level of cross-border trade, where the performance is particularly low.

Table 3: Evaluate the level of the following area's characteristics in relation to the business environment (3)

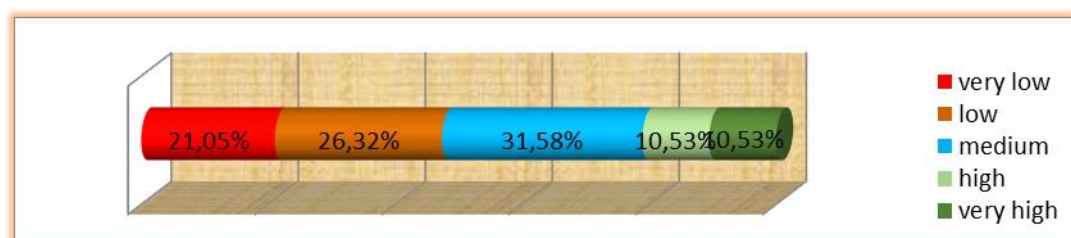
	Very low very bad (1)	Low Bad (2)	Medium (3)	High Good (4)	Very high Very good (5)	Total
Promotion and protection of cultural heritage and natural resources						
Greece	1	8	5	3	2	19
Level of the agricultural sector as a generator of cross-border exports						
Greece	2	5	5	5	2	19
Level of manufacturing sector as a generator of cross-border exports						
Greece	2	7	7	1	2	19
Level of private investment in the area						
Greece	1	3	12	4	0	20
Linkages between the academia/research and the primary sector						
Greece	2	8	9	0	1	20
Linkages between the academia/research and the industry						
Greece	2	6	11	0	1	20

Figure 18: Promotion and protection of cultural heritage and natural resources



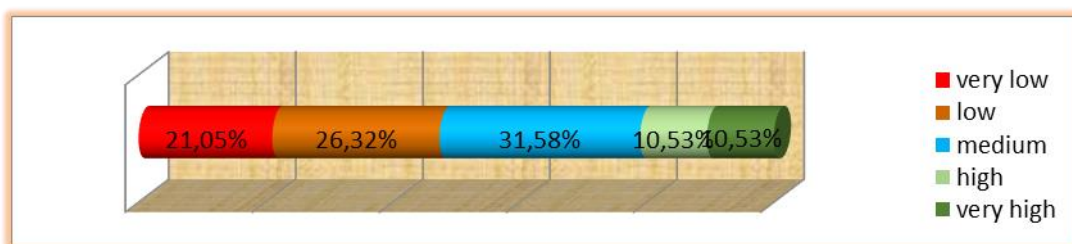
A key asset of the reference area, that of cultural heritage and natural resources, appears (Figure 18) to be under-promoted. This issue should obviously be the subject of further analysis and evaluation.

Figure 19: Level of the agricultural sector as a generator of cross-border exports



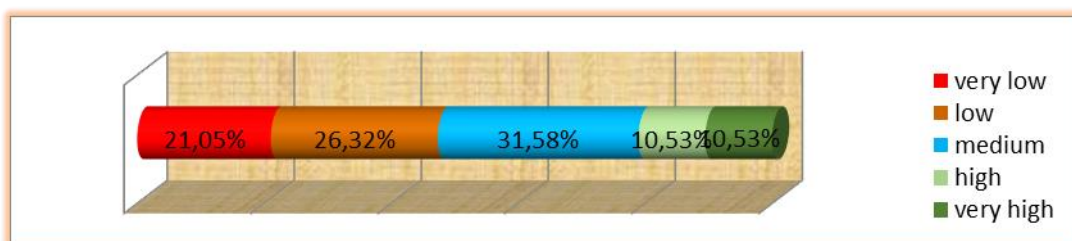
If an encouraging message can be extracted from the level of the agricultural sector as a source of cross-border exports where a particular dynamic is visible (Graph 19) alongside the weaknesses of the production model in this sector.

Figure 20: Level of manufacturing sector as a generator of cross-border exports



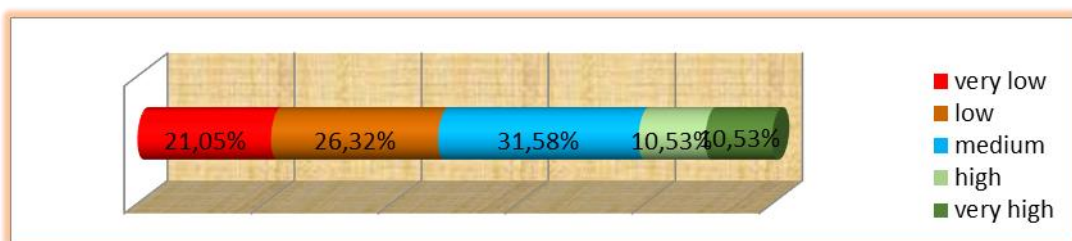
Graph 19 shows that the level of private investment in the region is particularly low, which is also the Achilles heel of the business environment in the region.

Figure 22: Level of private investment in the area



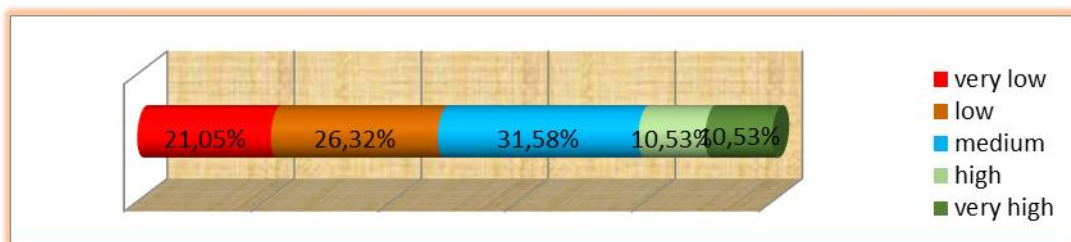
Graph 22 shows the results of the interconnection of the academic sector of research with the primary sector, in which the low degree of interconnection becomes apparent.

Figure 23: Linkages between the academia/research and the primary sector



Graph 23 shows the results of the interconnection of the academic sector of research with the primary sector, in which the low degree of interconnection becomes apparent.

Figure 24: Linkages between the academia/research and the industry

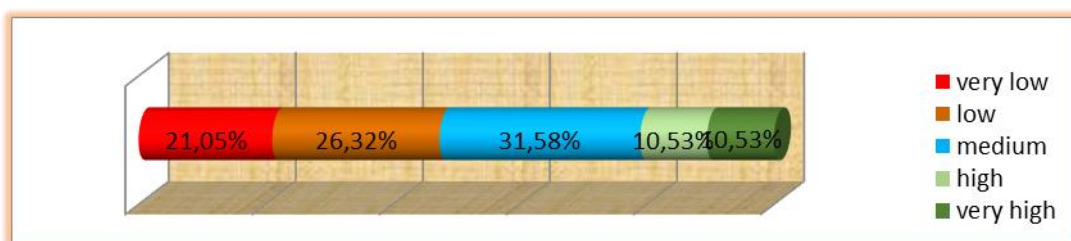


Correspondingly, the degree of interconnection of the academic sector and research with the industry sector is particularly low according to the findings shown in Graph 23.

Table 4: Evaluate the level of the following area's characteristics in relation to the business environment (4)

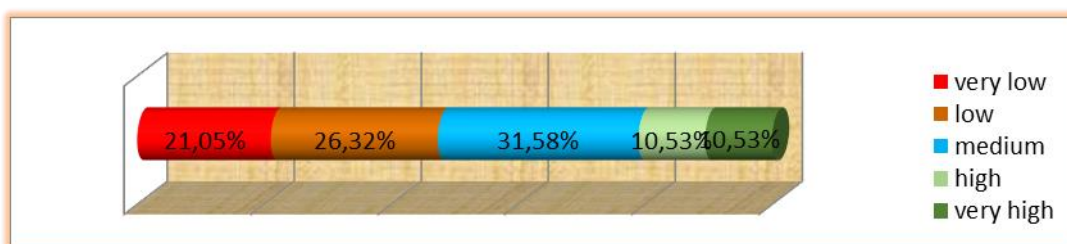
	Very low very bad (1)	Low Bad (2)	Medium (3)	High Good (4)	Very high Very good (5)	Total
Adaptability of the SMEs to technological changes						
Greece	2	4	8	5	1	20
Quality of human labor force						
Greece	1	0	5	10	3	19
Quality of social infrastructures (schools, hospitals, cultural centers etc.)						
Greece	0	7	9	3	1	20
Business environment for the creation of new businesses						
Greece	2	4	11	1	1	19
Taxation framework						
Greece	4	9	2	1	3	19
Political stability						
Greece	1	4	5	6	3	19

Figure 25: Adaptability of the SMEs to technological changes



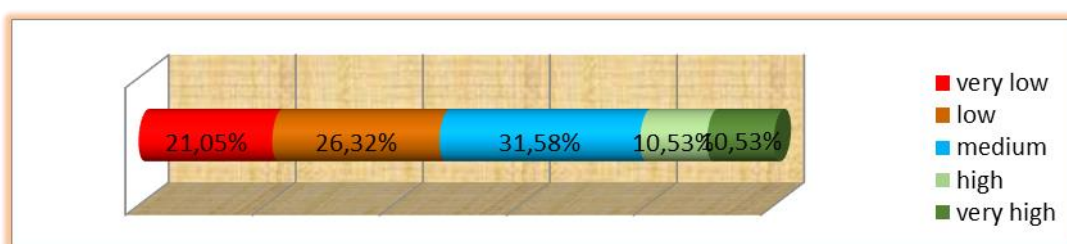
The results of Graph 25 show that the adaptability of small and medium enterprises to technological changes is quite moderate, which should be taken into account in the design of innovation strategies.

Figure 26: Quality of human labor force



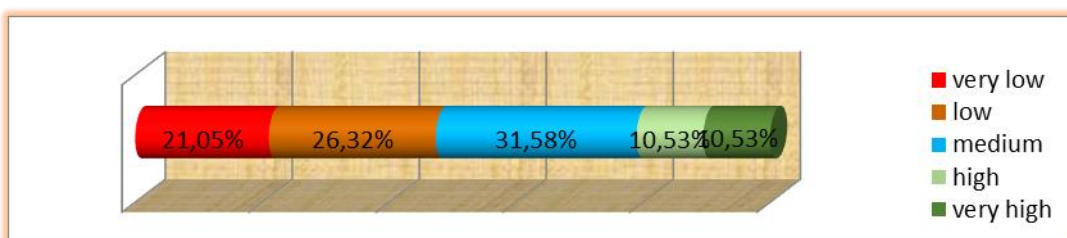
The quality of human resources (Graph 26) moves at rather moderate levels, which demonstrates the need for retraining in new skills and strengthening existing skills.

Figure 27: Quality of social infrastructures (schools, hospitals, cultural centers etc.)



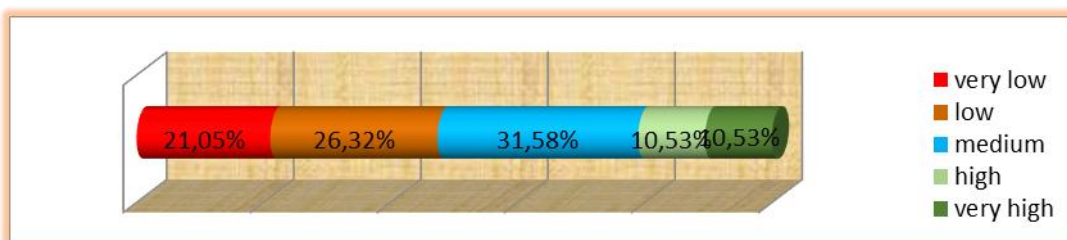
The level of social infrastructure is similarly moderate, as shown in Graph 27.

Figure 28: Business environment for the creation of new businesses



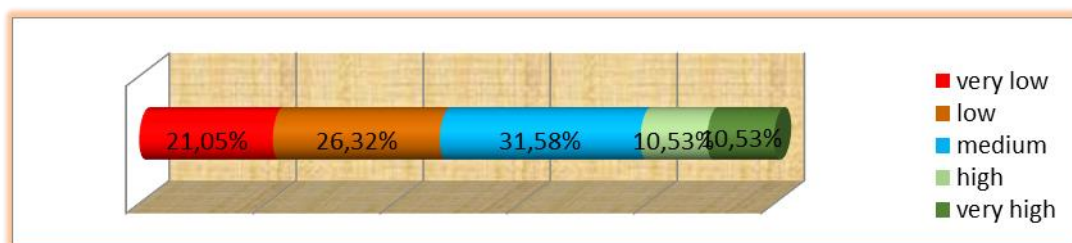
The business environment for the creation of new businesses, as shown in Graph 28, seems to be very negative. This finding is of decisive importance and should be taken seriously into any planning to improve the business climate.

Figure 29: Taxation framework



It is clear from the data in Graph 29, that the existing tax environment is an important factor inhibiting entrepreneurship at the present time.

Figure 30: Political stability



The issue of political stability, although it is not judged to be decisive as an obstacle (Graph 30), nevertheless does not seem to favor the business climate.

Table 5: Evaluate the level of the following area's characteristics in relation to the business environment (5)

	Very low very bad (1)	Low Bad (2)	Medium (3)	High Good (4)	Very high Very good (5)	Total
Corruption & Criminality						
Greece	3	6	5	3	2	19
Degree of businesses' extroversion						
Greece	0	6	5	7	1	19
Effectiveness of regional authorities						
Greece	3	6	8	1	2	20
Effectiveness of local authorities						
Greece	3	6	8	2	1	20
Effectiveness of public services						
Greece	2	7	9	1	1	20
Existence of bodies supporting entrepreneurship in the area						
Greece	0	6	9	5	0	20
Effectiveness of bodies supporting entrepreneurship						
Greece	1	7	7	4	0	19

Figure 31: Corruption & Criminality

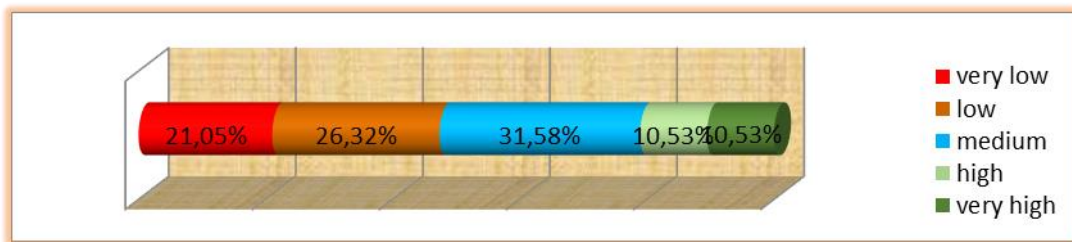
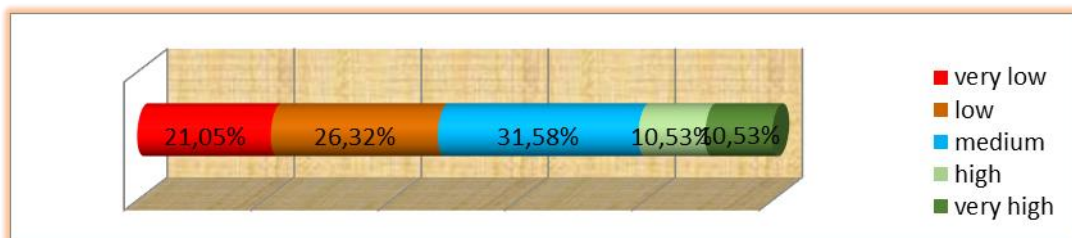


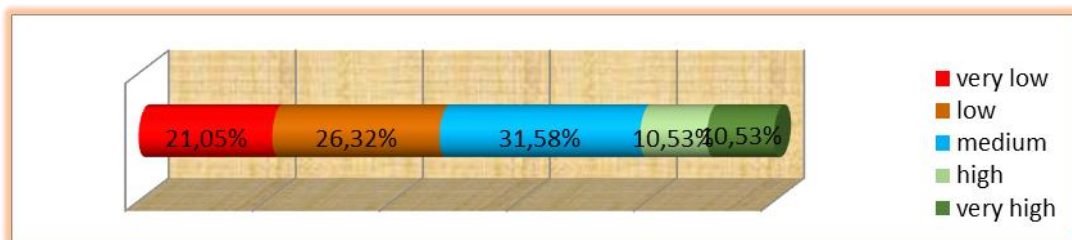
Figure 31 shows the very high degree to which corruption and crime negatively affect the business climate. It becomes clear that this parameter is considered very important to be addressed in any strategy to drastically improve the business climate.

Figure 32: Degree of businesses' extroversion



The results in Figure 32 show that a moderate degree of business extroversion despite the fact of tradition in the fur industry.

Figure 33: Effectiveness of regional authorities



Graphs 34 and 37 show the findings regarding the existence and effectiveness of entrepreneurship support agencies in the region. Of interest is the finding that while support agencies are perceived to be few, the effectiveness of at least the existing ones is evaluated more positively.

Figure 34: Effectiveness of local authorities

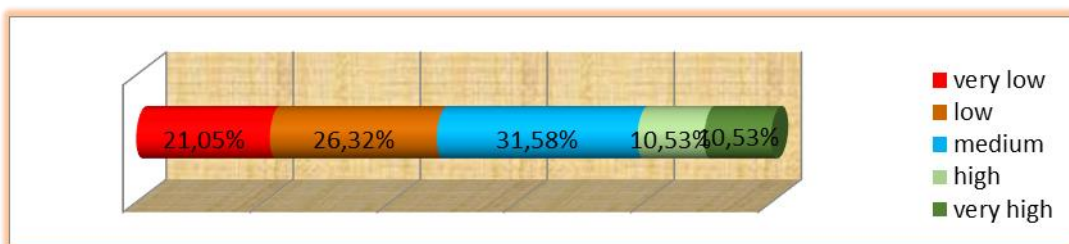


Figure 35: Effectiveness of public services

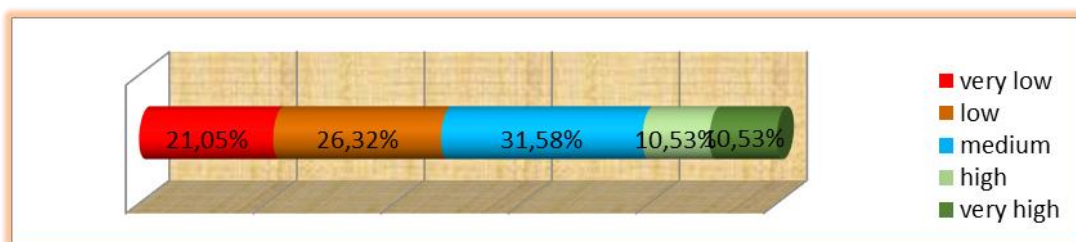


Figure 36: Existence of bodies supporting entrepreneurship in the area

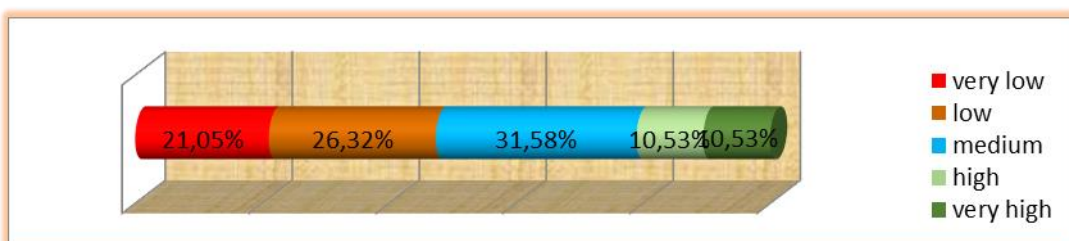


Figure 37: Effectiveness of bodies supporting entrepreneurship

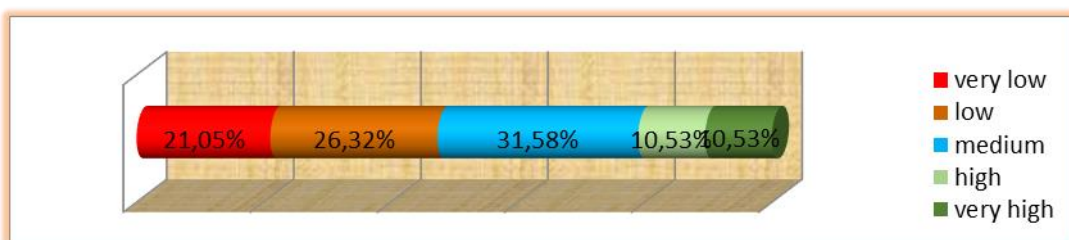
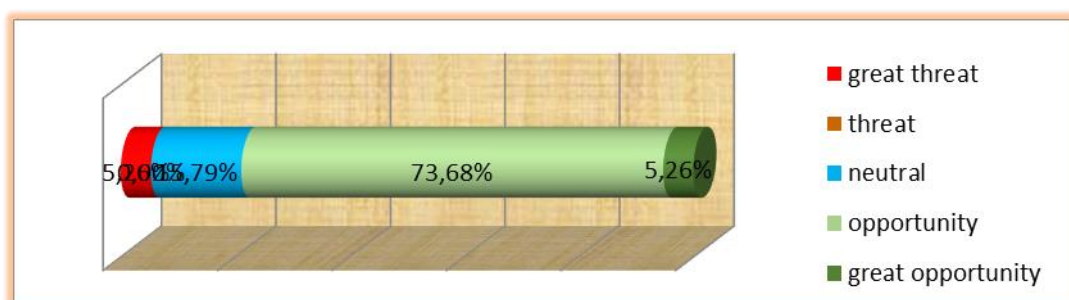


Table 6: Evaluate to what degree each of the following conditions is considered an opportunity or a threat for developing further the entrepreneurship in the area? (1)

	Great Threat (1)	Threat (2)	Neutral (3)	Opportunity (4)	Great Opportunity (5)	Total
Level of European funding concerning entrepreneurship						
Greece	1	0	3	14	1	19
Usage of European funding concerning entrepreneurship						
Greece	0	0	3	10	0	13
Cooperation towards creating and developing integrated touristic products						

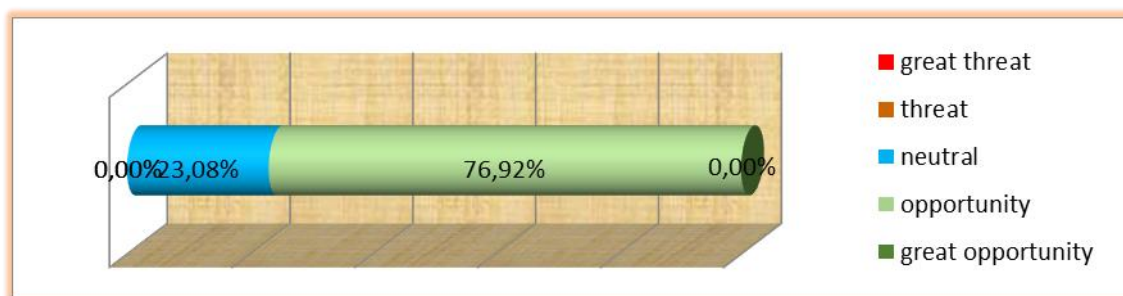
Greece	0	1	1	10	0	12
Cooperation in the production of high-quality agricultural products						
Greece	0	4	1	9	0	14
Cooperation towards creating a strong image (brand identity) of the area						
Greece	0	1	5	11	0	17
Cooperation towards improving the services for business support						
Greece	0	1	5	12	0	18

Figure 38: Level of European funding concerning entrepreneurship



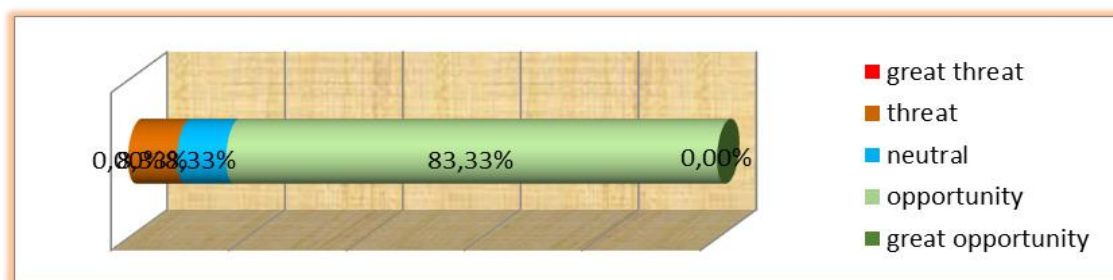
The use of European funding is also perceived as a great opportunity, when obviously this use is in the right direction, strengthening entrepreneurship in practice.

Figure 39: Usage of European funding concerning entrepreneurship



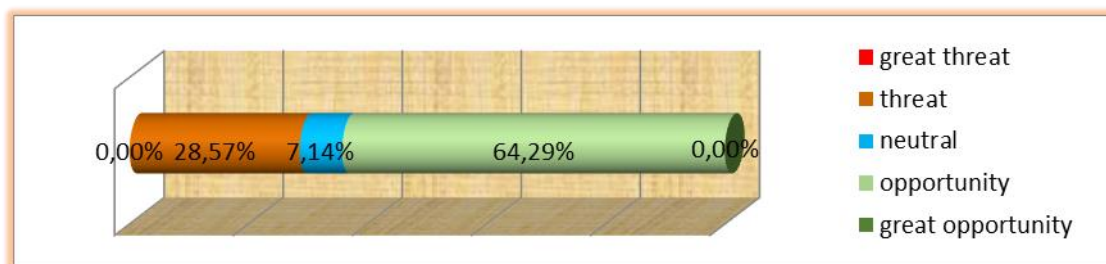
Cooperation for the creation and development of integrated tourism products (Graph 39) is perceived as a factor with a rather neutral impact.

Figure 39: Cooperation towards creating and developing integrated touristic products



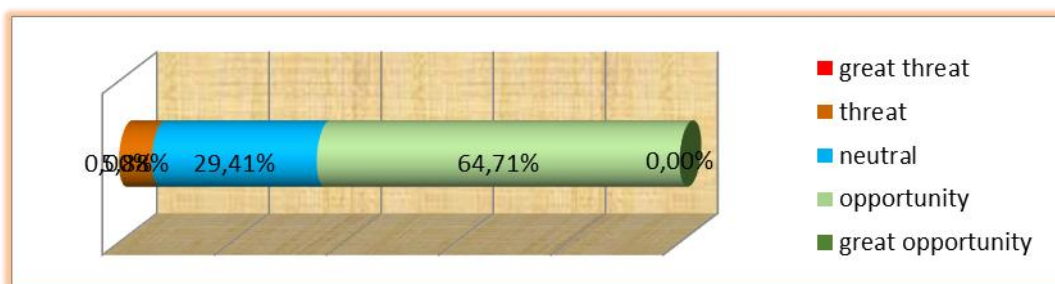
Cooperation for the creation and development of integrated tourism products (Graph 39) is perceived as a factor with a rather as opportunity.

Figure 40: Cooperation in the production of high-quality agricultural products



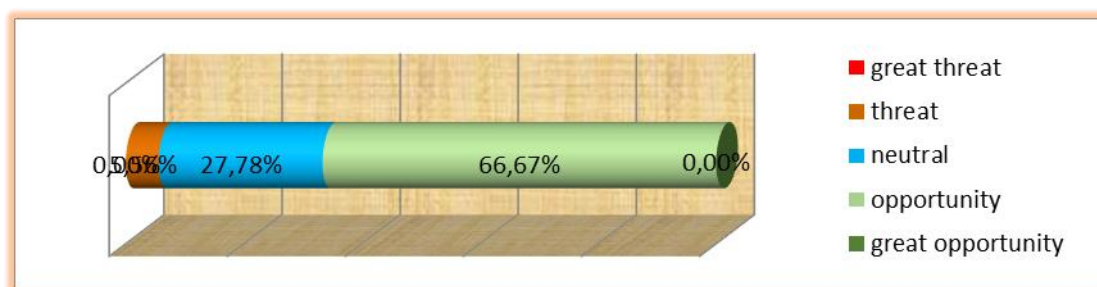
Contrary to the previous Graphs, in Graph 40, it becomes clear that cooperation in the production of high quality agricultural/livestock products is an important opportunity for the majority of respondents, which also shows the production specialization of the region.

Figure 41: Cooperation towards creating a strong image (brand identity) of the area



Regarding the collaboration to create a strong image for the region the findings as depicted in Figure 41, depict a rather divided picture of perceptions, which shows that the necessity for a strong image of the region has not yet matured enough.

Figure 42: Cooperation towards improving the services for business support

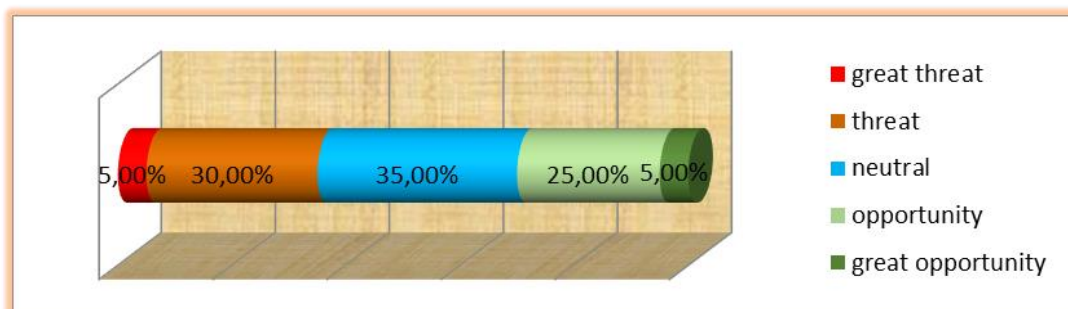


On the contrary, cooperation to improve business support services (Graph 42), seems to have matured as a necessity and is seen as an opportunity.

Table 7: Evaluate to what degree each of the following conditions is considered an opportunity or a threat for developing further the entrepreneurship in the area? (2)

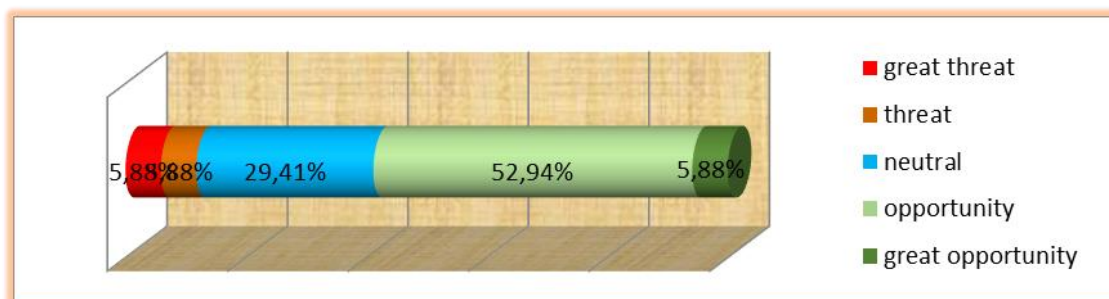
	Great Threat (1)	Threat (2)	Neutral (3)	Opportunity (4)	Great Opportunity (5)	Total
Exporting low-cost products to international markets						
Greece	1	6	7	5	1	20
Exporting high-cost and high-quality products to international markets						
Greece	1	1	5	9	1	17
Investing in new technologies sectors						
Greece	0	4	1	10	0	15
Investing in traditional industrial sectors						
Greece	0	4	9	5	0	18
Foreign investments seeking low cost						
Greece	1	3	9	5	1	19

Figure 43: Exporting low-cost products to international markets



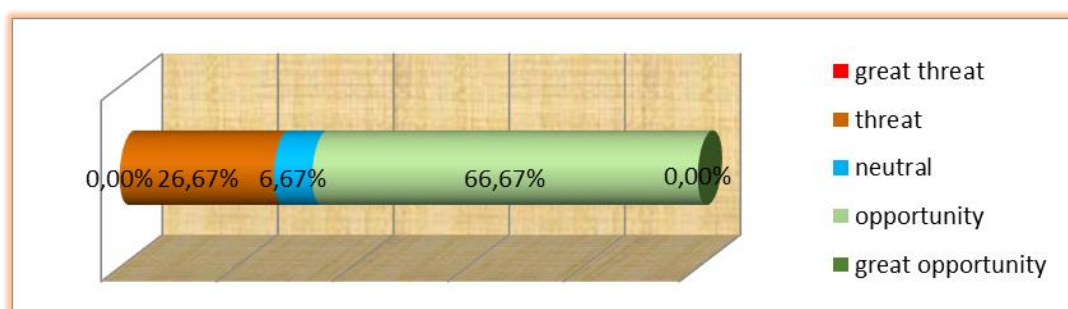
It is clear that the export of low-cost products to international markets is seen as an opportunity according to the data captured in Graph 43.

Figure 44: Exporting high-cost and high-quality products to international markets



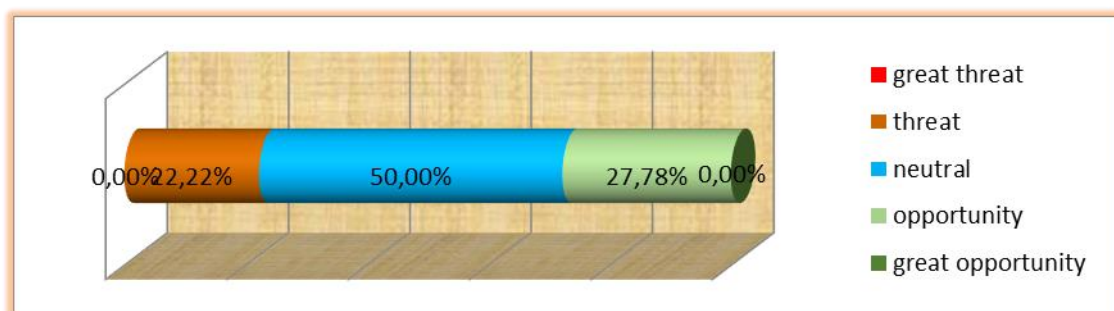
Contrary to the previous Graph, exporting high-cost and high-quality products to international markets is not viewed as an opportunity to the same degree, which needs further investigation if this is due to a realistic weighting of actual market data or fears of failure.

Figure 45: Investing in new technologies sectors



Investments in new technology areas are clearly seen as an opportunity (Graph 45), yet there are many who believe it will have a neutral impact.

Figure 46: Investing in traditional industrial sectors



Investments in traditional industrial sectors, on the contrary, are not perceived as opportunities that can give me added value to local entrepreneurship.

Figure 47: Foreign investments seeking low cost

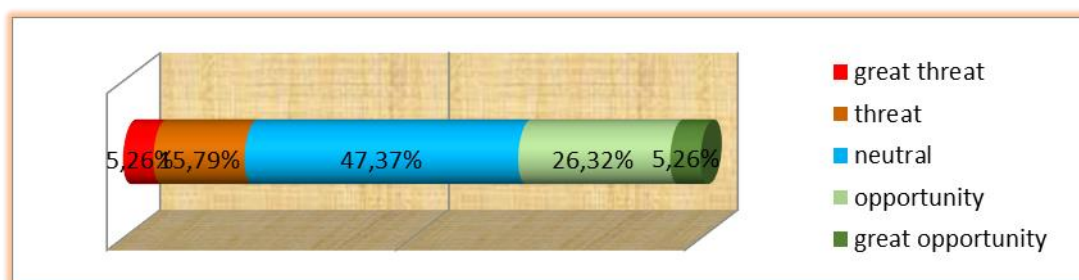


Table 8: Evaluate to what degree each of the following conditions is considered an opportunity or a threat for developing further the entrepreneurship in the area? (3)

	Great Threat (1)	Threat (2)	Neutral (3)	Opportunity (4)	Great Opportunity (5)	Total
Adaptability to the globalized environment						
Greece	1	6	5	7	1	20
The international business climate						
Greece	0	3	5	11	0	19
Concentration of the policies related to entrepreneurship into the hands of a few stakeholders						
Greece	1	2	3	11	3	20
Decentralization of the policies related to entrepreneurship						
Greece	1	2	8	7	1	19

Figure 48: Adaptability to the globalized environment

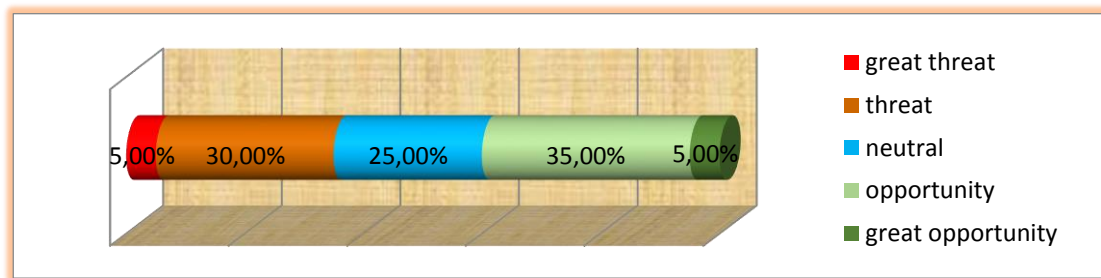
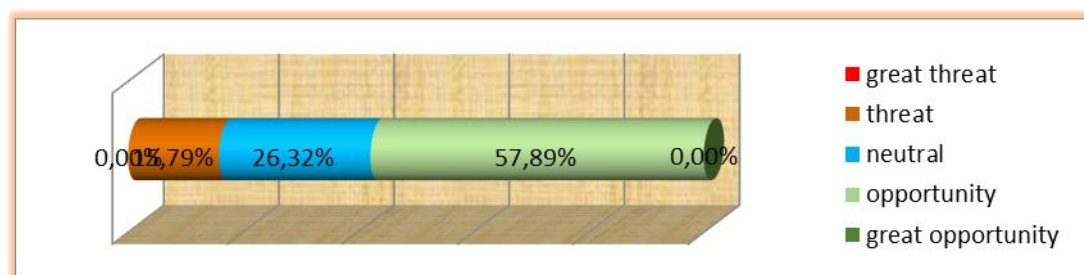


Figure 49: The international business climate



It is interesting that adapting to the internationalized environment is perceived as a threat rather than an opportunity, showing that the local economic system is not sufficiently ready to adapt to the highly competitive environment, nor to the international business climate, according to the data in Graphs 48 and 49.

Figure 50: Concentration of the policies related to entrepreneurship into the hands of a few stakeholders

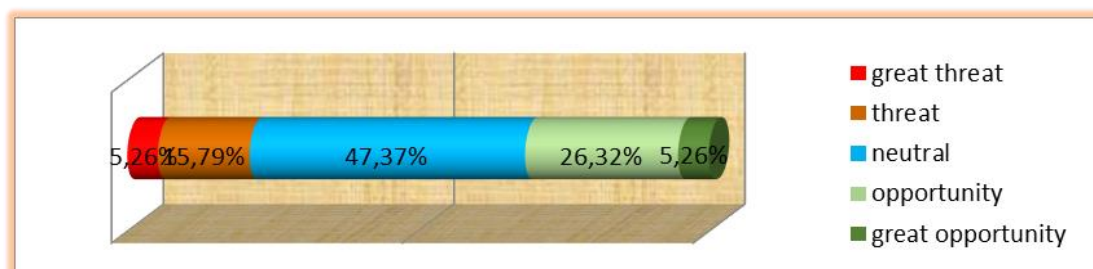
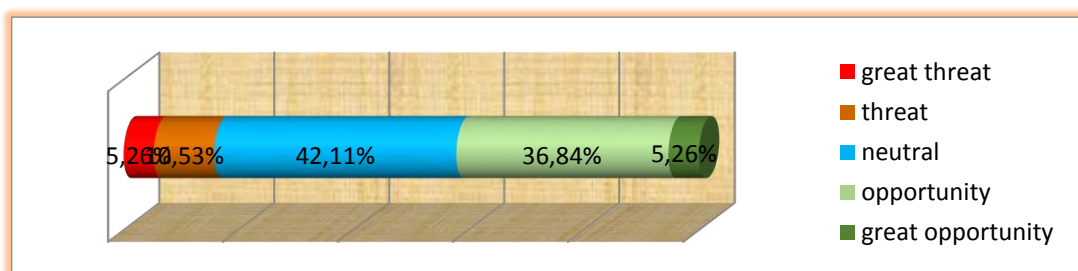


Figure 51: Decentralization of the policies related to entrepreneurship



Investigating whether entrepreneurship concentration or decentralization is an opportunity or a threat, Figure 50 shows that concentration has a rather neutral impact while decentralization is perceived more as a threat to entrepreneurship.

Table 9: From the list below select the eight (8) sectors of the economy (NACE) that you consider to have the greatest potential for the region, ranking them from 1 to 8.

	1	2	3	4	5	6	7	8	Total Score
Food and beverage service activities	9	3	0	4	0	1	1	0	18
Mining of coal and lignite	0	2	3	2	2	0	0	2	11
Crop and animal production	2	4	1	0	1	0	0	1	9
Waste collection, treatment and disposal activities; materials recovery	1	1	2	1	2	0	2	0	9
Transporting and storage	1	2	1	2	0	1	1	1	9
Accommodation	1	1	2	1	1	0	0	1	7
Scientific research and development	1	0	1	1	2	1	1	0	7
Education	0	0	1	1	4	1	0	0	7
Human health activities	1	0	0	0	0	3	2	1	7
Retail trade	1	0	0	1	0	0	1	1	4
Computer programming & consultancy	0	0	3	0	0	0	0	1	4
Financial service activities	0	1	0	1	1	0	0	1	4
Real estate activities	0	0	2	0	0	0	0	0	4
Fishing and aquaculture	1	1	0	0	0	1	0	0	3
Wholesale trade	0	0	0	0	0	1	0	0	1

Investigating policies to improve the business environment at the next stage, respondents were asked to select the eight most important industries with the greatest potential for the region. The processing results are presented in Table 9, with the food and agri-food sector taking the first place by a margin from the others.

Table 10: Choose from the list below the eight (8) most important policy measures to improve the environment of a start-up with a hierarchy from 1 to 8 (1)

	1	2	3	4	5	6	7	8	Average Score
--	---	---	---	---	---	---	---	---	---------------

Training the staff of the competent agencies	1	3	0	2	2	1	3	0	12
Creation of an incentive system that will encourage entrepreneurs	3	4	4	0	0	0	1	0	12
Simplification of bureaucratic procedures in academic and research institutions	1	3	1	2	1	2	1	1	12
Incentives to encourage consortia of companies with research institutions	1	3	1	2	1	2	1	1	12
Promotion of the commercialization of research and development results	0	0	1	1	2	2	2	3	11
Networking between regional authorities and local entrepreneurs	0	1	1	2	2	2	0	3	11
Collaboration between research & academic institutions and businesses	1	2	2	2	1	2	0	0	10
Reduce the complexity of planning and decision levels	0	0	3	1	1	0	2	1	8
Creation of a system of incentives that encourage research and development (R&D)	3	0	0	0	2	1	1	1	8
Development of an incentive system for businesses that create jobs	3	0	0	0	2	1	1	1	8
Greater flexibility in the interpretation of procedural requirements	2	0	1	1	1	1	0	1	7
Simplification of the public service requirements and lift of the restrictions	1	2	2	2	0	0	0	0	7
Preparation of a licensing manual for entrepreneurs	1	3	0	0	0	1	1	1	7

In the next question, the respondents were asked to choose the eight most important policy measures to improve the environment for establishing a start-up business. The results shown in Table 10 highlight the importance of qualified human resources, the creation of meaningful incentives, the simplification of requirements and the flexibility of public services, dealing with bureaucracy.

Table 11: Choose from the list below the eight (8) most important policy measures to improve the environment of a start-up with a hierarchy from 1 to 8 (2)

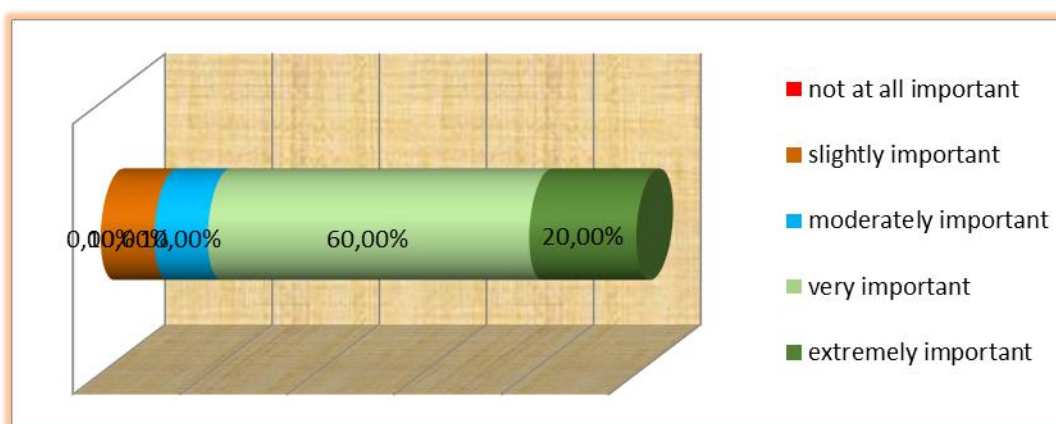
	1	2	3	4	5	6	7	8	Average Score
Organization and financing of training and support system for businesses	1	0	1	0	1	1	1	2	7
Simplification of the procedures for issuing building permits	1	0	2	0	0	1	1	0	5
Scholarships for talented students in the field of entrepreneurship	1	0	1	1	0	0	0	1	4
Support for the development of entrepreneurship in universities	0	0	0	0	1	0	3	0	4
Standardization of technical specifications of goods and services in accordance with international standards	0	0	0	0	1	0	1	1	3
Joint postgraduate programs and academic exchanges between institutions	0	0	0	0	2	0	0	1	3
Contribution of public bodies to technology transfer to the business sector	1	0	0	0	0	1	0	0	2
Weak network of business support organizations	0	0	0	0	0	0	0	0	0
Clear definition of the essential requirements of each environmental permit	0	0	0	0	0	0	0	0	0
Public consultation before implementing regional development programs	0	0	0	0	0	0	0	0	0
Simplification and information on labour and insurance issues	0	0	0	0	0	0	0	0	0
Introduction of a system for monitoring the economic trends in the region	0	0	0	0	0	0	0	0	0
Enabling cross-border networks	0	0	0	0	0	0	0	0	0

The question that Tables 11, 12 and 13 and Graphs 52 to 69 focus on is the extent to which a range of policy measures contribute or not to improving the financing environment for a start-up in the region.

Table 12: Evaluate the extent to which the following policy measures help to improve the start-up business financing environment in the region (1)

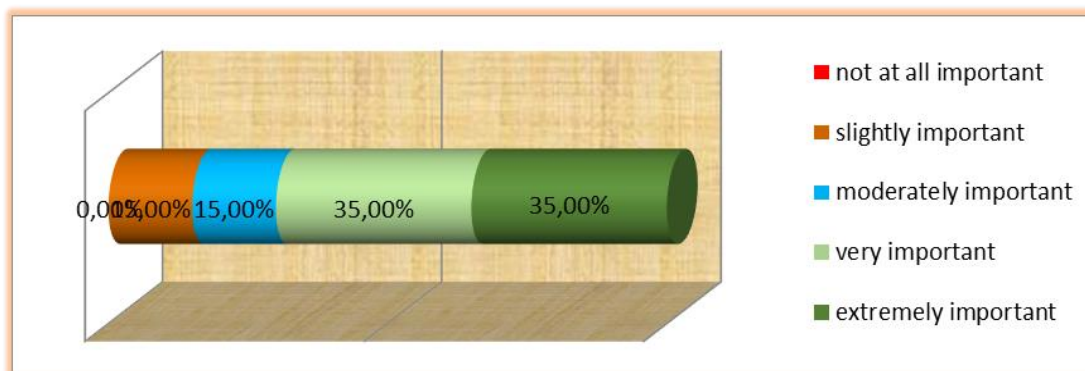
	not at all important (1)	slightly important (2)	moderately important (3)	very important (4)	extremely important (5)	Total
Ensuring sufficient funding programs in terms of quantity and capital						
Greece	0	2	2	12	4	20
Ensuring flexibility in the implementation of financing programs						
Greece	0	3	3	7	7	20
Ensuring access to the banking system and lending						
Greece	1	1	3	10	4	19
Support for entities that provide Entrepreneurship Advisory Services						
Greece	0	2	6	10	2	20
Ensuring wider information on business opportunities						
Greece	0	2	9	3	6	20
Creation of financial support networks (e.g. business angels etc.)						
Greece	0	1	3	7	9	20

Figure 52: Ensuring sufficient funding programs in terms of quantity and capital



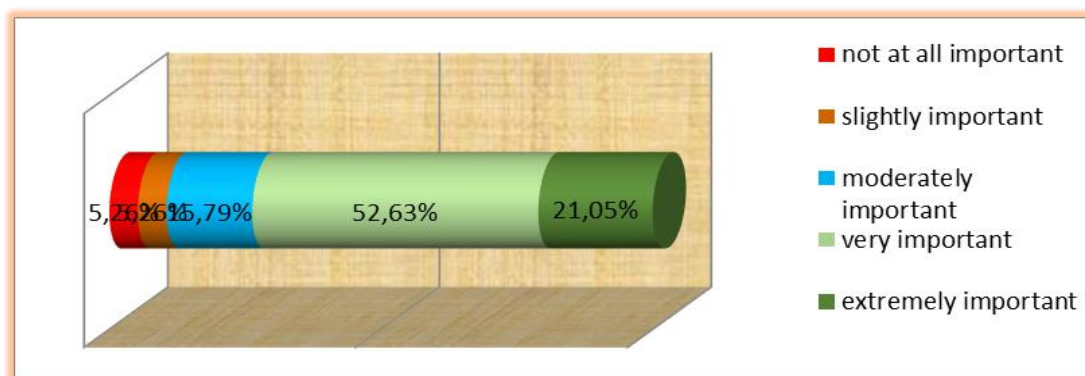
In Graph 52, the data showing that ensuring a sufficient number and amount of financial programs contribute to the improvement of the environment of a newly established business, but not decisively, are of interest.

Figure 53: Ensuring flexibility in the implementation of financing programs



Graph 53 shows the results of the effect of flexibility on the implementation of financing programs in the operating environment of a newly established business. It becomes clear that the effect of flexibility is rather moderate, a finding that needs further investigation as it is known that flexibility is closely related to efficiency in entrepreneurship.

Figure 54: Ensuring access to the banking system and lending



Contrary to the ambiguity of the findings of the previous Graphs in Graph 60 it becomes clear that the effect of access to the banking system and lending is very important for a newly established business.

Figure 55: Support for entities that provide Entrepreneurship Advisory Services

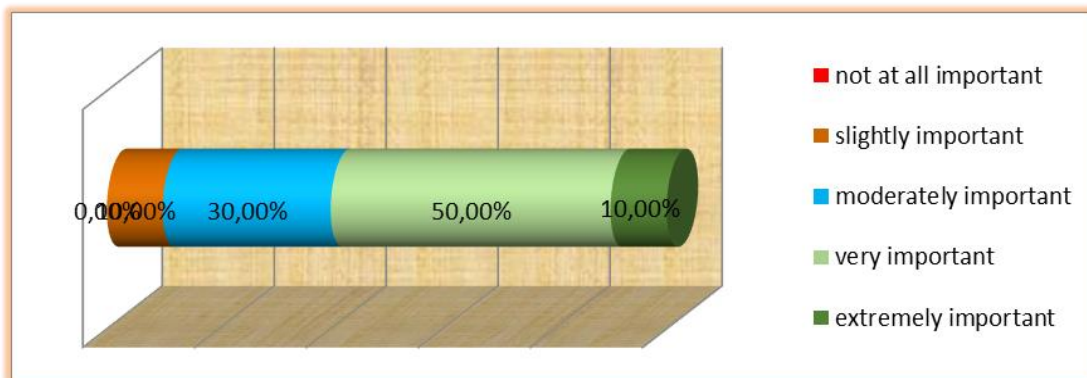
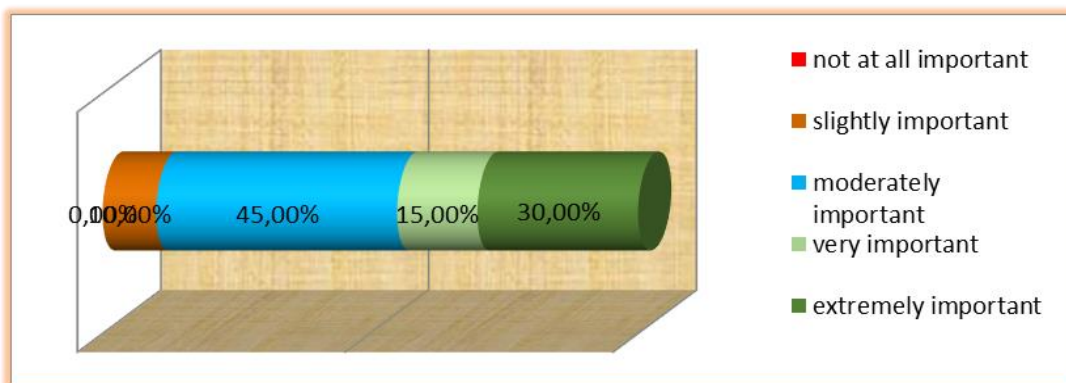


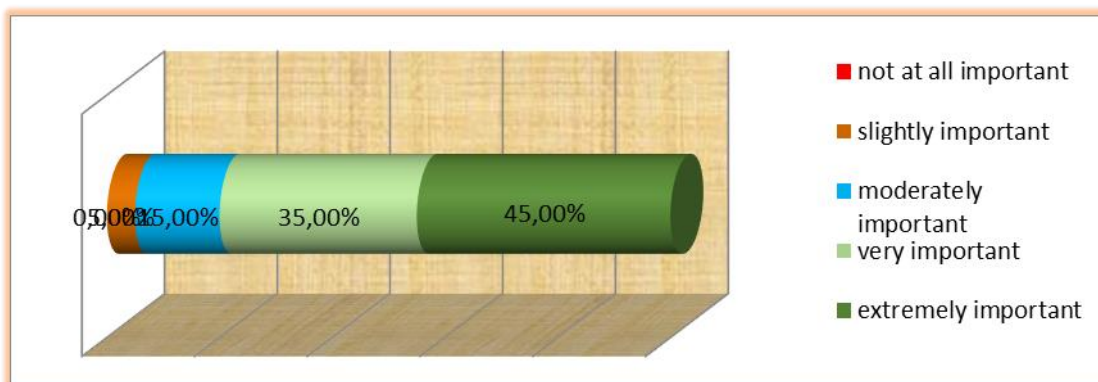
Figure 55 presents the results of the findings on the question of the role played by the support of organizations that provide entrepreneurship advisory services. The findings show a rather modest effect.

Figure 56: Ensuring wider information on business opportunities



In Figure 56, it becomes clear that ensuring access to business opportunity information contributes significantly to the operating environment of a start-up.

Figure 57: Creation of financial support networks (e.g. business angels etc.)



Corresponding to the previous Graph, the contribution of the creation of financial support networks seems to be positive according to the results shown in Graph 57.

Table 13: Evaluate the extent to which the following policy measures help to improve the start-up business financing environment in the region (2)

	not at all important (1)	slightly important (2)	moderately important (3)	very important (4)	extremely important (5)	Total
Creation of guarantee funds (e.g. venture capitals)						
Greece	0	3	2	9	6	20
Elaborating best practice manuals for entrepreneurs on the forms of financing						
Greece	1	2	5	10	2	20
Providing financial support at an early stage of business development						
Greece	0	5	8	5	2	20
Participation of entrepreneurs in international exhibitions, conferences and seminars						
Greece	1	0	2	8	9	20
Matching entrepreneurs with innovative solutions and potential investors						
Greece	0	2	7	9	2	20
Mapping opportunities for Global Value Chains						
Greece	2	2	5	8	3	20
Developing a system of financial incentives for start-ups						
Greece	1	1	1	11	6	20

Figure 58: Creation of guarantee funds (e.g. venture capitals)

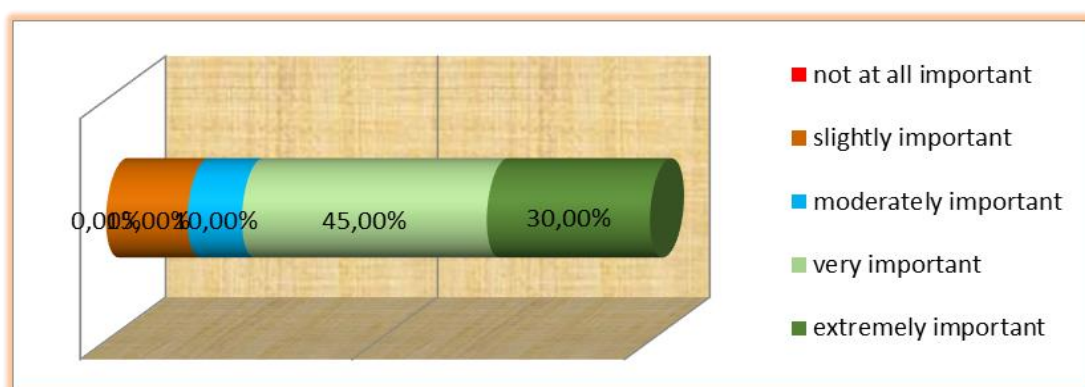


Figure 59: Elaborating best practice manuals for entrepreneurs on the forms of financing

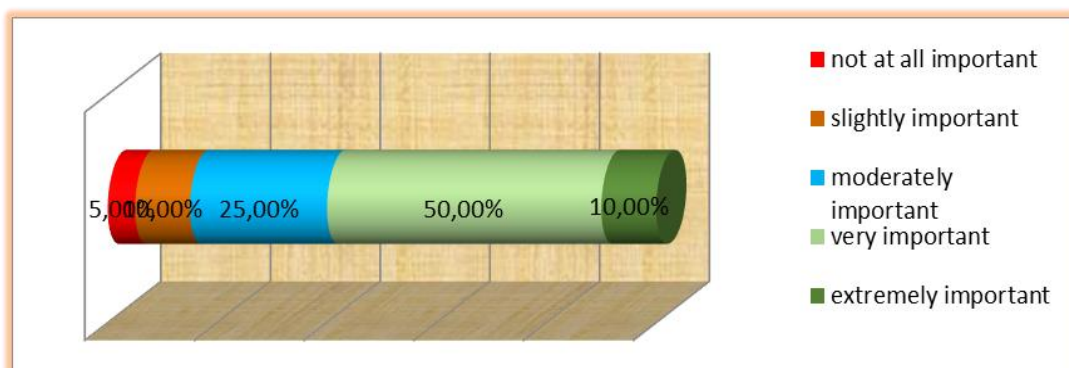


Figure 60: Providing financial support at an early stage of business development

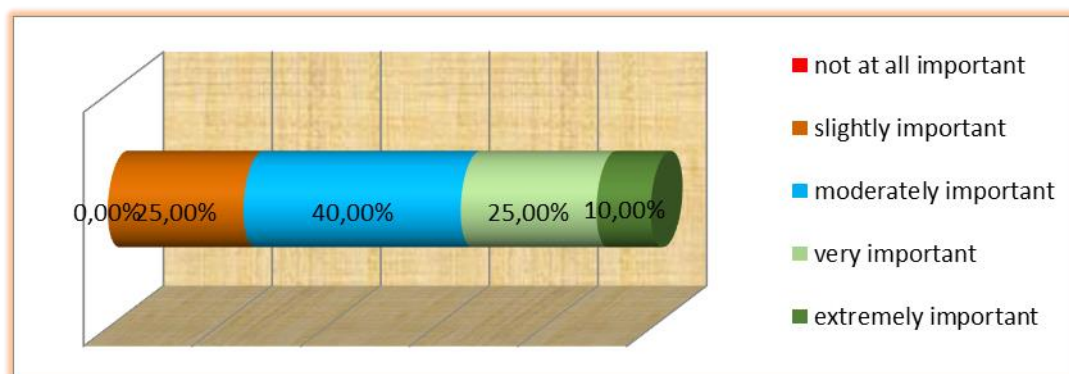


Figure 61: Participation of entrepreneurs in international exhibitions, conferences and seminars

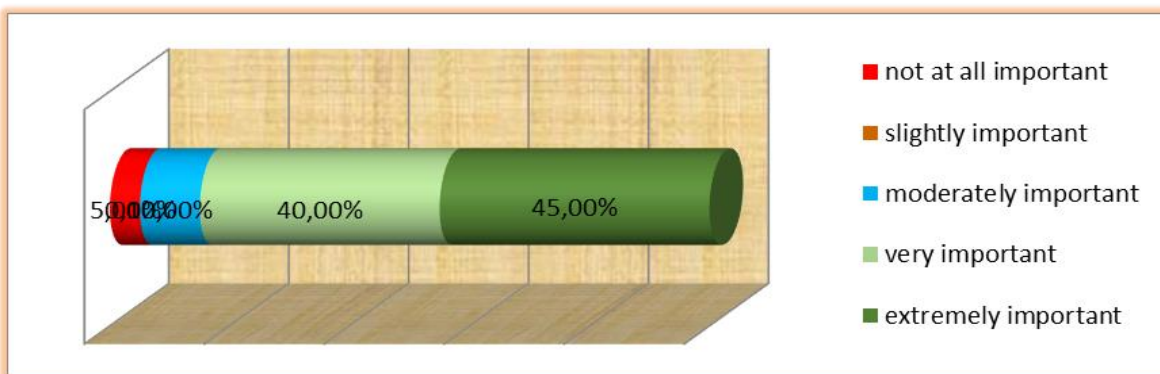


Figure 62: Matching entrepreneurs with innovative solutions and potential investors

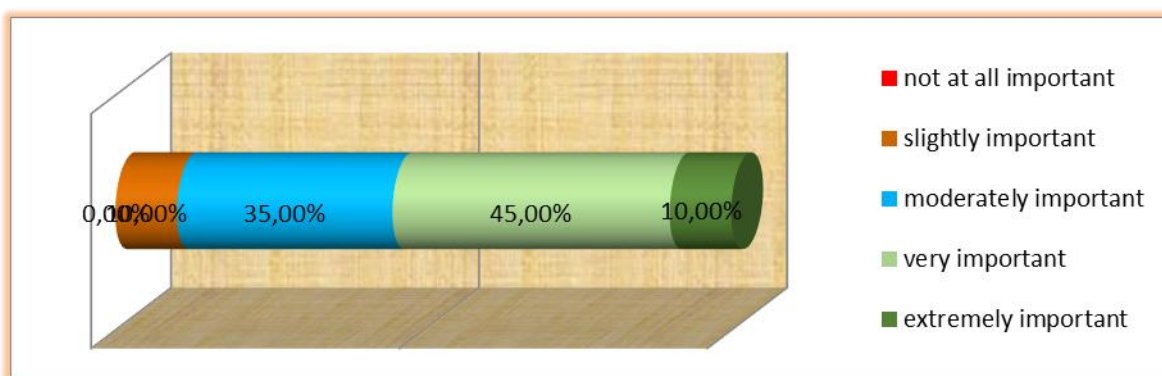


Figure 63: Mapping opportunities for Global Value Chains

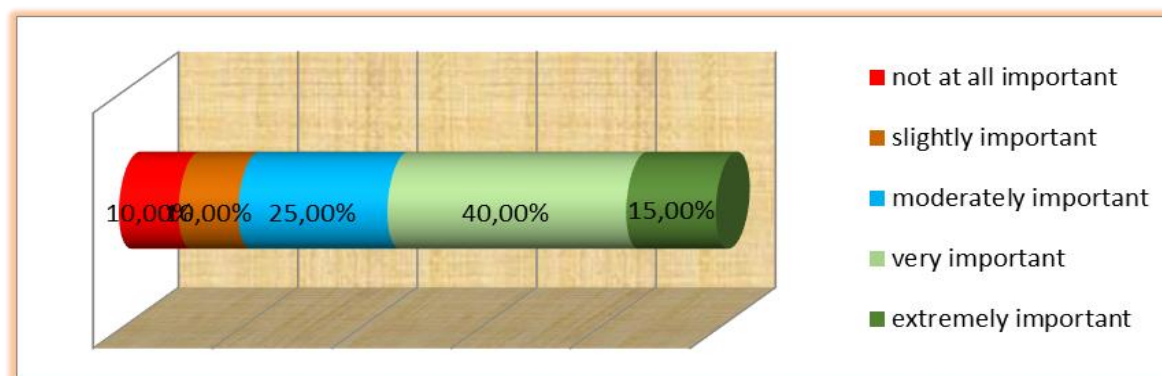


Figure 64: Developing a system of financial incentives for start-ups

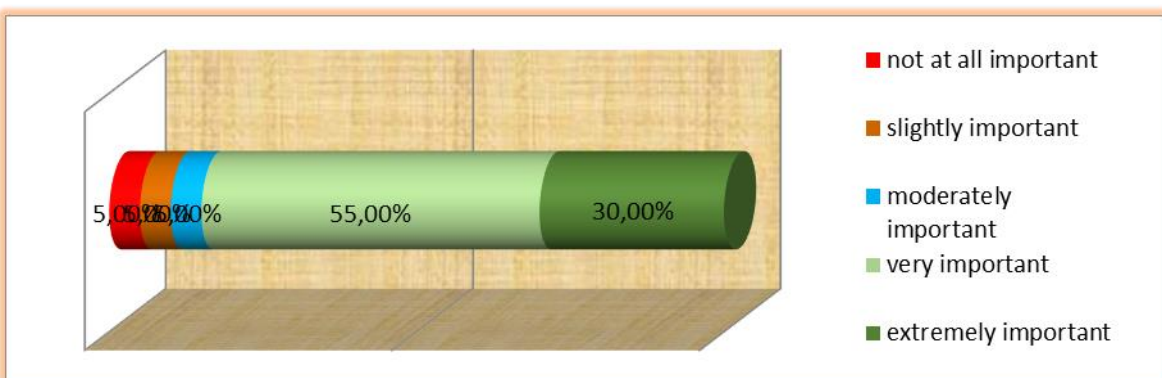
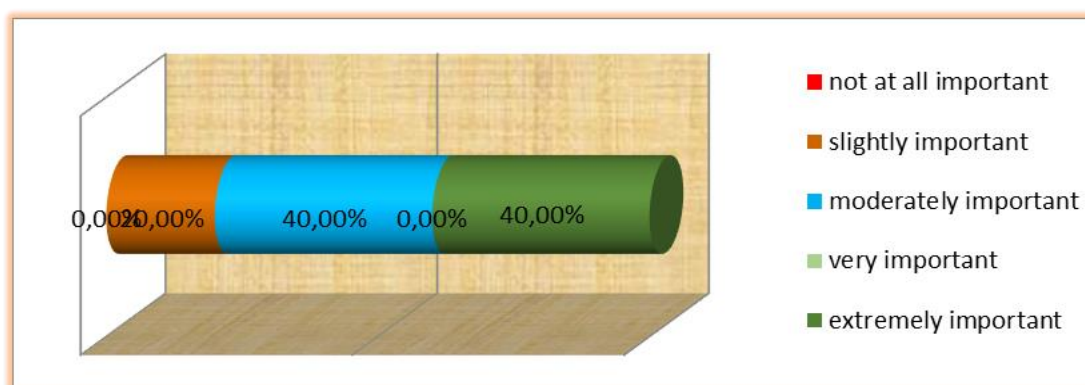


Table 14: Evaluate the extent to which the following initiatives of pre-incubation are relevant in the area (1)

not at all important (1)	slightly important (2)	moderately important (3)	very important (4)	extremely important (5)	Total
-----------------------------	---------------------------	-----------------------------	-----------------------	----------------------------	-------

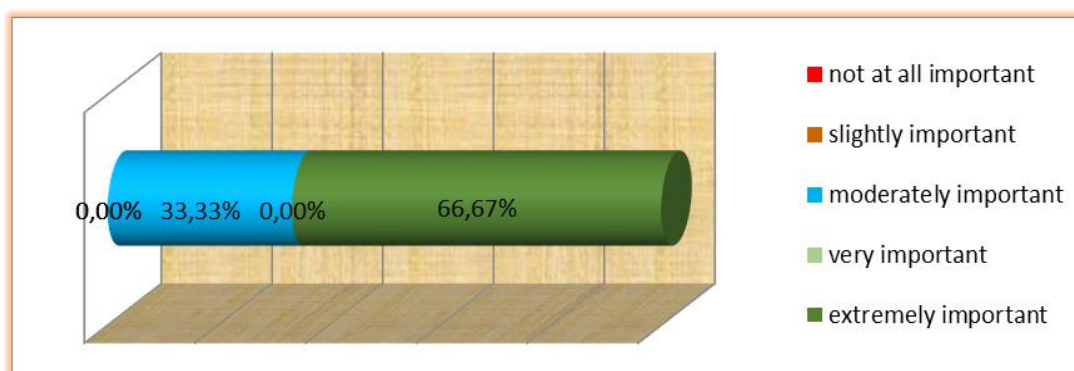
Inform the potential entrepreneurs about the benefits of pre-incubation						
Greece	0	2	4	0	4	10
Training and counseling activities						
Greece	0	0	4	0	8	12
Creation of a platform for transfer of know-how in the framework of pre-incubation						
Greece	0	3	8	0	5	16
Creation of an online forum in the framework of pre-incubation						
Greece	1	4	11	0	2	18
Creation of an accelerator in the premises of the pre-incubator						
Greece	0	0	4	0	4	8

Figure 65: Inform the potential entrepreneurs about the benefits of pre-incubation



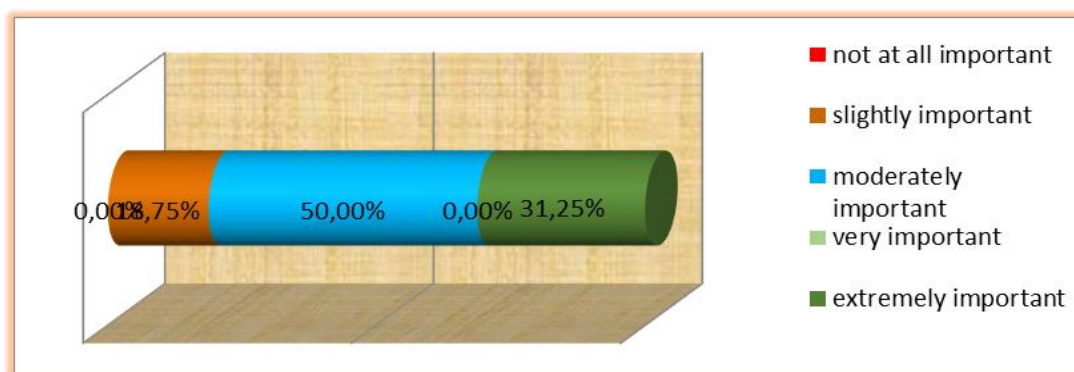
The data in Figure 65 shows that informing potential entrepreneurs of the advantages of preheating will have modest results, so expectations should be limited.

Figure 66: Training and counseling activities



The effect of the training and counseling actions seems to be surprisingly divided in the respondents' perceptions from slightly important to very important.

Figure 67: Creation of a platform for transfer of know-how in the framework of pre-incubation



Also noteworthy are the findings presented in Graphs 67 and 68 as the creation of a know-how transfer platform and an online forum do not seem to be actions that create positive expectations.

Figure 68: Creation of an online forum in the framework of pre-incubation

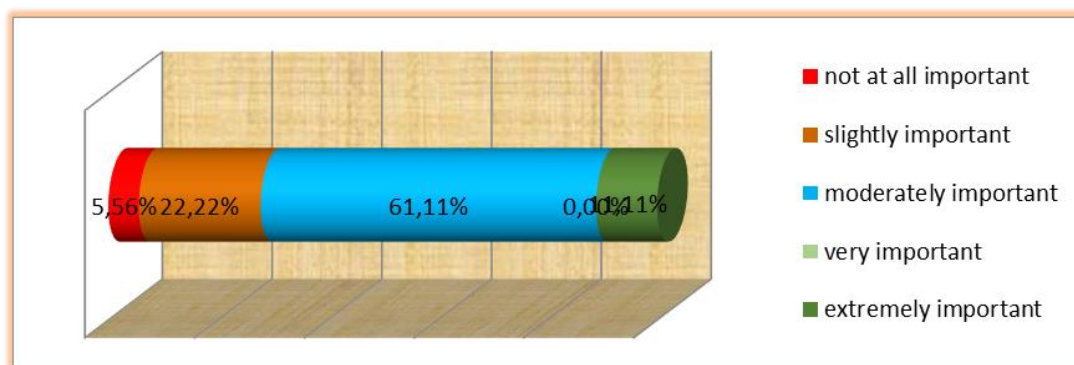
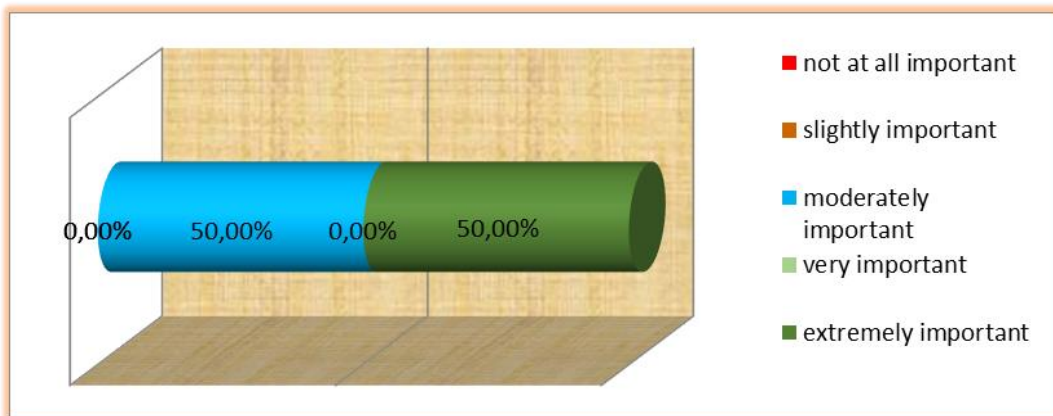


Figure 69: Creation of an accelerator in the premises of the pre-incubator



The creation of an accelerator also does not seem to create positive expectations as its effect is mostly assessed as moderate. These findings are interesting as they are not expected in relation to the international experience. One interpretation could possibly be the respondents' low level of familiarity with these concepts.

Table 15: Evaluate the extent to which the following initiatives of pre-incubation are relevant in the area (2)

	not at all important (1)	slightly important (2)	moderately important (3)	very important (4)	extremely important (5)	Total
Creation of an expert groups for independent evaluation of innovative ideas						
Greece	0	1	5	0	5	11
Creation of a mentor network for advice and practical guidance						
Greece	0	0	5	0	5	10
Creation of a network of pre-incubation experts						
Greece	1	1	0	0	4	6
Creation of the pre-incubation premises						
Greece	0	1	6	0	8	15

Figure 70: Creation of an expert groups for independent evaluation of innovative ideas

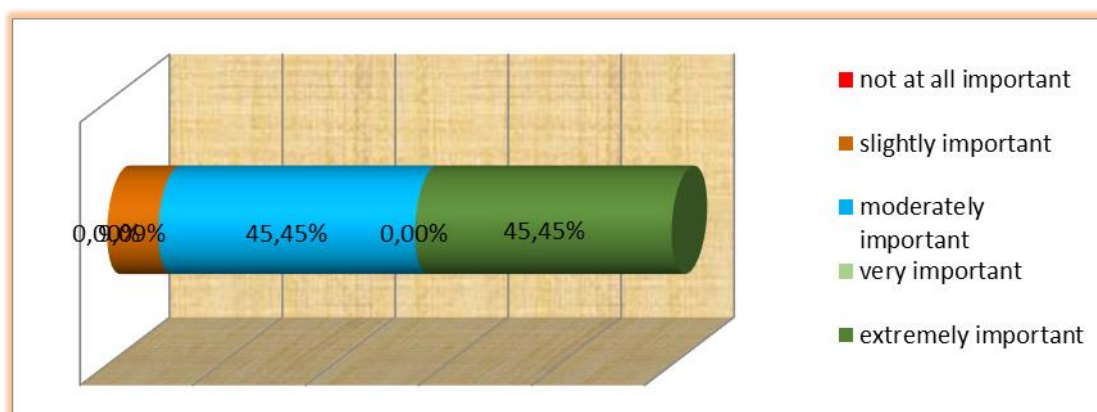


Figure 71: Creation of a mentor network for advice and practical guidance

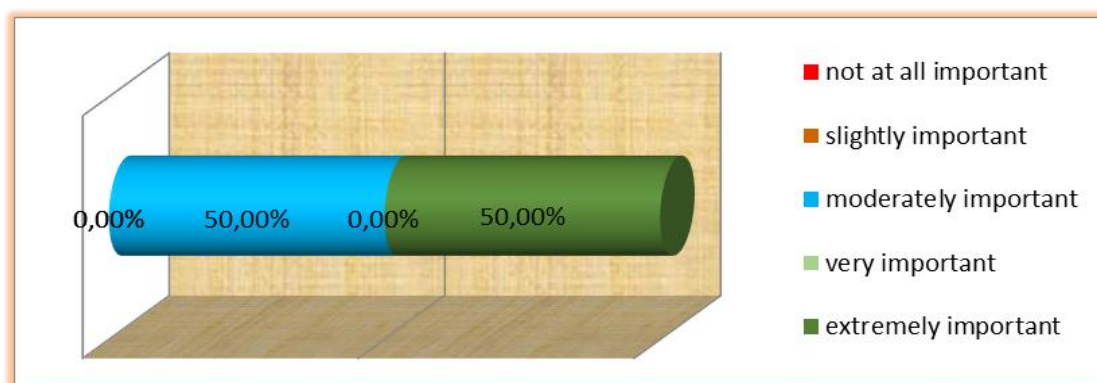


Figure 72: Creation of the pre-incubation premises

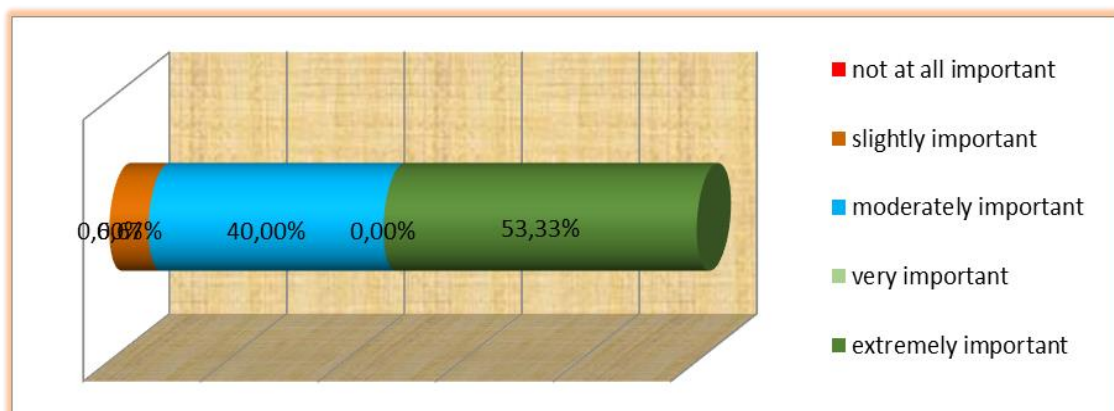


Table 16: Where do you think most of the new business ideas come from in your area? Rank (1 to 3) the most important ones

	1	2	3	Total Score
Mostly from the businesses themselves (intrapreneurship)	4	5	10	19
Mostly from young people	2	6	11	19
Mostly from unemployed	7	8	3	18
Mostly from foreign investors	5	8	4	17
Mostly from the university's R & D	3	9	5	17
I do not know	2	4	0	6

Another question that was asked for evaluation in this group in addition to the student group, was where respondents think most new business ideas in the region come from. And in this group the encouraging message extracted from the data in Table 16 is that ideas coming from young people show the highest score. Next in importance are the ideas from the businesses themselves.

Table 17: What is the most important target group in the region for a pre-incubator? In the case of multiple choices, please prioritize from 1 to 3

	1	2	3	Total Score
Mostly the students	2	6	11	19
Mostly the unemployed	5	10	3	18

Mostly the employees	2	10	5	17
I do not know	2	2	1	5
Other	1	2	0	3

The next question asked was who is the most important target group in the area for a pre-warming structure (students, workers, unemployed)? The data shown in Table 17 show a balanced focus on the student, unemployed and employed groups.

INTERVIEWS

Methodological approach

Five (5) interviews were conducted with experienced executives from the field of entrepreneurship and public administration and academia. The type of interview selected moves between structured (directed) interview and non-structured-free interview. The purpose of this item was to supplement or clarify the information collected by the questionnaire or the Focus Group. Why does he behave e.g. in a specific way the respondent? How does it feel? etc. Many times, it is not possible to fully externalize such data with the questionnaire. The researcher had predetermined certain questions that acted as guiding axes, without having formulated the questions accurately, as in the case of the structured interview.

A/A	FUNCTION	INTERVIEWEES
1	Business Consultants	3
2	Chamber representatives	1
3	Incubations	1
TOTAL		5

The planning of the interview was based on the following important points:

What is the problem;

Were the questions posed by the researcher sought to gather the necessary information? For this reason, the questions selected did not limit or hinder the in-depth approach to the problem.

What, and how much, will be the sample?

Respondents represented as much as possible the categories of the population mentioned in the survey of potential entrepreneurs. In addition, some of the interviews were conducted with those who completed the questionnaire.

Challenge the respondent's interest

Respondents voluntarily participated in the survey. The interview was attempted to be attractive, highlighting the expediency and usefulness of the research results. For this reason, all respondents were briefed to be persuaded to respond freely. The original and spontaneous thought was sought, which will be closer to the reality experienced by the respondent. That's why the researcher avoided large imports and many clarifications.

The researcher informed about the way of conducting the interview, in order to secure the permission of the respondent (eg justification of the use of tape recorder, anonymity, etc.).

A tape recorder was used and notes were kept during the interview as well as the recording or completion of certain data by the researcher after the interview. In addition, assurances were given to the respondents that at any time they could interrupt the interview and delete what they had expressed before.

The researcher tested the questions in 2-3 respondents before proceeding to the normal interview, so that he could identify possible gaps or possible ambiguities in the questions.

What will be asked?

The researcher formulated questions that arise from the research questions and concern the purposes of the research. He had previously set up a questionnaire map so that it would not be 'lost' during the interview. This map will ensure consistency and logical continuity of questions. The researcher noticed the linguistic wording so that he did not anticipate the answer he was waiting for through the wording.

Project CO-WORKING

INTERVIEW

This interview is part of a joint research effort of the Alexander Innovation Zone, Aristotle University of Thessaloniki, University in Greece and the National & World Economy and the National Company Industrial Zone in Bulgaria, to create of a cross-border innovation system that supports business ideas through business pre-incubation structures to be set up in both countries. The CO-WORKING project is funded by the INTERREG Greece-Bulgaria Program.

IMPORTANT! The information provided in the questionnaire is completely confidential and will be used exclusively for research purposes.

0 PERSONAL INFORMATION

Select the property that describes you	Sex
Elected in Local Government	<31
Chamber Representative	31-40
Academic / Researcher	41-50
Consultant in SMEs (consulting)	51-60
Entrepreneur	61-70
Student	>70
Unemployment	
Other	

Area in which you live	Education
Thessaloniki	Primary
Kardjali	Secondary
XXX	Graduate
XXX	Postgraduate
	PhD

Sex
Man
Woman

Pre-Incubation Structure: In the present study, the term pre-incubation refers to a structure that aims to support innovative and promising business ideas that have not yet been transformed into a business in the form of a tax start. The aim of this structure is to minimize the risks of business risk by providing

for a sufficient period the appropriate space and equipment, as well as training, mentoring and coaching services.

Thank you very much for your valuable contribution!

Question 1	What do you think are the key elements that characterize the business environment of the area?
Question 2	What are the biggest challenges facing someone today who wants to start a new business in the area?
Question 3	What needs to change to improve the business environment for a young entrepreneur?
Question 4	Do you know the structures for warming up business ideas? If so do you have any in mind? How would you evaluate their work?
Question 5	Do you think that the creation of a pre-incubation structure could help strengthen entrepreneurship? If yes, please substantiate your opinion
Question 6	What should a preheating structure in the area have to offer? A. in services B. in infrastructure

Question 7	What is the most important target group in the area for a pre-incubation structure?
Question 8	Where do you think most of the new business ideas in your area come from?

Findings

What do you think are the key elements that characterize the business environment of the region?

The first element highlighted by many was the bad psychology in the field of entrepreneurship. The negativity and pessimism both due to the general economic crisis, exacerbated the negative psychology and made it pervasive in the way of thinking of many young people who are looking for solutions for their future. It became clear that the need to find an alternative economic model is now urgent. The region lacks executives who will closely monitor developments, while at the same time the institutional and fiscal framework is constantly changing. The state instead of supporting entrepreneurship actually hinders it by constantly intervening instead of encouraging it.

What are the biggest challenges facing someone looking to set up a new business in the region today?

For a young person to get involved in business the first thing that should be ensured is an environment of trust that will inspire, encourage and support them every day. This is so far not visible. A young entrepreneur is called upon to face a fiercely competitive environment without being properly prepared for it. It is often observed that expectations are cultivated for him which are not confirmed in practice when he starts his business venture. As a result soon comes disappointment and the cancellation of the goals and visions he has set. It is also important for a young person to define from the beginning the market he wants to address. If it only addresses the small market size of Kastoria it is doomed to failure. The important thing is that the trend of brain drain has resulted in the deforestation of the region by young people with high qualifications and skills, with the result that this has a negative reflection on the dynamism of the region's economy. It is therefore very crucial to design incentive policies that will bring these young people back to their place.

What should change to improve the business environment for a new entrepreneur?

What is needed is a holistic approach that will stimulate business activity again. To do this, an investment in the comparative advantages of the region is needed, an organized approach to the production stages that will start from production and will end in processing, packaging, standardization and promotion. All these should be designed in a way to ensure the production of value chains that will add value to the local production system.

Also, nothing can be done if polynomialism, bureaucracy, corruption and the centralization of the administration system are not dealt with drastically. Synergies and collaborations with the neighboring countries that for years the region had turned its back on should also finally be exploited.

A key obstacle, however, that should be changed is the change in mentality, which for years made public office appointment the dream of every young person. In the last decade, however, this model is now collapsing and should be replaced by the model of business risk, creation, innovation and social mobility.

Do you know the preheat structures of business ideas? If so do you have any in mind? How would you rate their work?

Most of the respondents did not have a complete picture of the pre-warming model. However, after being informed, they expressed different opinions. Some raised the issue of confidentiality of business ideas as a barrier to moving ventures into practice. Some others felt that this issue could be overcome by drawing on international experience. All agreed however that the important issue in a pre-warming structure is the provision of specialist knowledge in the field of entrepreneurship.

Do you think that the creation of a pre-warming structure could contribute to strengthening entrepreneurship? If so, please substantiate your opinion

All interviewees agreed that a pre-warming structure if worked properly could help and inspire many young potential entrepreneurs to realize their business vision in a smoother and safer way. However, the crucial issue raised was the underlining of the importance of political and financial support of the project in practice. Also, a structure of this kind could more easily function as a field of cooperation between knowledge (University), research (Research Centers) and entrepreneurship support structures (EBE, Development Companies, etc.).

What should a preheating structure provide to the area?

A. in services

B. in infrastructure

Findings from the interviews revealed that such a structure in the service sector should provide information, training, guidance and networking.

In the field of infrastructure, office and meeting spaces, internet connection and the possibility of presenting business ideas would be necessary

What is the most important target group in the region for a preheating structure?

There is no doubt based on the findings that the most important target group is young scientists with high qualifications and skills who are unemployed and women in particular.

Where do you think most new business ideas in your area come from?

It became clear that the role of the family in which someone grows up and the perception they had about entrepreneurship is very important. If there is a family business tradition, many ideas are born within this environment. Education and the extent to which business ideas are encouraged or not also play an important role. In practice, however, most business ideas seem to be born through interaction with other people and through the access given by technology and the internet to a multitude of information and stimuli.

FOCUS GROUP

Introduction

The specific document intends to arrange the preparation and implementation of two focus groups on each side of the Greek-Bulgarian border in a coherent way. That is, this document will try to present the conceptual framework of the focus group, the methodology that has to be followed and the suggested content for the conduction of the focus groups.

This guide aims to assist the elaboration of the Deliverable 3.1 which aspires to conduct a survey on the c-b Pre-incubation Strategy. The analysis will be based on primary data to be extracted from the questionnaires and interviews of the fieldwork and the debate is going to be based exactly on the focus groups.

Conceptual framework

The methodological approach of the focus group consists of an organized collective interview and interaction of a number of participants for a focused topic or for a series of interrelated phenomena and processes (Iosifidis 2008). Focus Groups is a title given to a special type of group interview that is structured to gather detailed knowledge on a specific issue from selected participants. The focus groups is a research method of producing rich quality data, through a process of interaction of the participants in the group and for a defined area of research interest.

According to Krueger (1988: 18), the focus group method is "a carefully organized discussion, designed to draw perceptions and beliefs on a specific research topic, within a permissible, non-threatening environment." Similarly, Kitzinger (1994) points out that this method offers access to the ways people think or why they think the way they think. For Morgan (1998), it is essentially "a way to listen to people and learn from them."

The focus groups are not a group interview with an interviewer who asks questions and the respondents simply answer them, but this is a group discussion in which participants are asked to talk to each other about a specific topic through an interaction process that can be "vertical", ie interaction between the researcher and the participants, but above all it is "horizontal interaction" between team members (Wilkinson, 1998). The interaction between team members results in the researchers' influence on the process being less and more emphasis is placed on participants' responses (Frey & Fontana, 1993).

It provides for the concentration of a limited number of individuals in a common natural (virtual) environment to discuss a specific issue or a series of interrelated issues in an organized way with the help of one or more mediators. One of the key features of the Focus Group method is its collective character and the dynamics of the interaction that develops within it.

In particular, through the application of the focus group method, it was particularly sought to develop interactive relationships between participants, knowing that the dynamics of these relationships can illuminate different aspects of the object under investigation. All participants were either directly or indirectly related to the issue being explored in entrepreneurship through different positions, perspectives and perspectives each.

The goal of the Focus Groups was to collect rich and detailed quality data on the perceptions, meanings, actions, practices and social relations of the participants in them. From this point of view, the Focus Groups contributed to the better interpretation of the current situation in terms of the business environment and in the production of new approaches and proposals.

The central dimension of the method was its focused and specific object. This object was the perspective that the creation of a pre-incubation structure could have. The role of the moderator in the Focus Groups was also of central importance. The moderator was primarily responsible for the smooth running of the Focus Group, the full and effective information of the participants on the subject and its purposes, ensuring the most equal participation of all participants, dealing with unforeseen events, the appropriate questions and challenging rich and meaningful discussion.

The moderator sought to meet the key qualifications to be effective: communication skills, good mood, cultural sensitivity, confidence, language skills, non-judgmental perceptions of participants, empathy, flexibility, in the dynamics of the groups, the real interest in the perceptions of others, the humor, the good memory and the active listening of the speeches of the participants. It also needs to be able to set and delimit the subject and the rules of the discussion as well as manage issues of power or dominance that may arise within the group.

The model of heterogeneous focus groups was selected (Robson, 2007). This model has the following advantages:

- ⇒ They can enrich or motivate the discussion.
- ⇒ They may inspire other team members to look at the issue from a different perspective.
- ⇒ They can create power imbalances.

The aim of the focus group is to gather deliberately selected people who participate in a facilitated discussion intended to elicit some perceptions about a particular topic or area of interest. Unlike interviews, which usually occur with an individual, a focus group allows members to interact and influence each other during the discussion and consideration of ideas².

The purpose of a focus group is not to arrive at a consensus, some level of agreement, or to decide what to do about something. Focus groups are designed to identify the feelings, perceptions, and thoughts of people about a particular product, service, problem or solution.

Otherwise said, the aim of the focus group is to facilitate the cascading of conversation amongst participants. Focus groups are beneficial because they utilize qualitative data collection methods. Just as in the dynamics of real life, the participants are able to interact, influence, and be influenced³.

A focus group generally consists of 5 to 12 potential persons (comfortably and circle sitting) who are asked their opinions in a group interview.

² <https://www.thebalancesmb.com/what-is-a-market-research-focus-group-2296907>

³ <https://www.entrepreneur.com/encyclopedia/focus-group>

The potential participants for the focus groups in the framework of the project CO-WORKING should be representatives of the following target groups:

- ❖ Private business associations
- ❖ Research and academic institutions
- ❖ Policy makers
- ❖ Innovative local firms
- ❖ Young entrepreneurs

It is important to use a moderator. The chosen person should have an adequate knowledge of the topic, he or she should appear like the participants, and s/he should exercise mild unobtrusive control. Also, it is advised to use an assistant moderator.

Methodology

Underneath there is presented a schedule of the focus group event. Although focus groups are informal, the organizers should have a list of questions to be helped to direct the discussion.

The recommended pattern for starting the group discussion includes, as indicate by Krueger⁴:

1. Welcome,
2. Overview of the topic,
3. Ground rules,
4. First question

During the event, the moderator should use the following techniques:

1. Be mentally prepared

- ❖ Alert and free from distractions
- ❖ Has the discipline of listening
- ❖ Familiar with questioning route

2. Use purposeful small talk

- ❖ Create warm and friendly environment
- ❖ Observe the participants for seating arrangements
- ❖ Make a smooth & snappy introduction

3. Control reactions to participants

- ❖ Verbal and nonverbal
- ❖ Head nodding
- ❖ Short verbal responses
- ❖ (avoid "that's good", "excellent")

4. Use subtle group control

- ❖ Experts
- ❖ Dominant talkers

⁴ <https://www.eiu.edu/ihec/Krueger-FocusGroupInterviews.pdf>

- ❖ Shy participants
- ❖ Ramblers

5. Use pauses (5 second pauses) and probes

Probes:

- ❖ "Would you explain further?"
- ❖ "Would you give an example?"
- ❖ "I don't understand."

Also, please take into consideration the followings:

1. Use an assistant moderator

- ❖ Handles logistics
- ❖ Takes careful notes
- ❖ Monitors recording equipment

2. Record the discussion

- ❖ Tape recorders
- ❖ Written notes

After finishing all the questions, and towards the wrapping up of the event, please use the appropriate (three steps) conclusion, again as indicated by Krueger:

1. Summarize with confirmation,
2. Review purpose and ask if anything has been missed,
3. Thanks and dismissal

Please use the following rules during the event:

- No right or wrong answer, only different points of view
- One person speaking at a time (to assist also the recording)
- First name basis
- No need to agree with others, but we must listen respectfully as others share their views
- Muted phones

Also, consent forms should be used. The consent forms are completed in advance by all those participating at the event. A template should be used by the organizers to make sure the participants understand the information and sign.

Furthermore, please record the session. Afterwards, please transcribe the recording according to the sessions, questions and respondents.

For further reading on the methodology of conducting a focus group please consult Krueger's guide "Designing and Conducting Focus Group Interviews".

Proposed Content

Please split the event into two sessions. The first part should be organized as an interactive Questions & Answers session. The second part will be dedicated to the SWOT analysis.

First part

The proposed questions of the focus group are as follows:

1. What do you think are the **key elements** that characterize the incubation & pre-incubation environment of the area?
2. What are the **biggest challenges** for the new start-ups in the area?
3. What needs to change in order to **improve the business environment** for a new entrepreneur?
4. Who do you think are the most important **agents of innovation** in the area?
5. Who do you think are the most important **agents of entrepreneurship boost** in the area?
6. Which do you think are the (mega) **trends** that affect the incubation & pre-incubation ecosystem of the area?
7. Which are the **driving forces** likely to exert the greatest influence over the next 5 to 10 years on the pre-incubation & incubation in the area?

After writing down all the driving forces, please ask you audience to vote on the importance of each one. Thus, at the end of the question block, you should have a ranking of these driving forces.

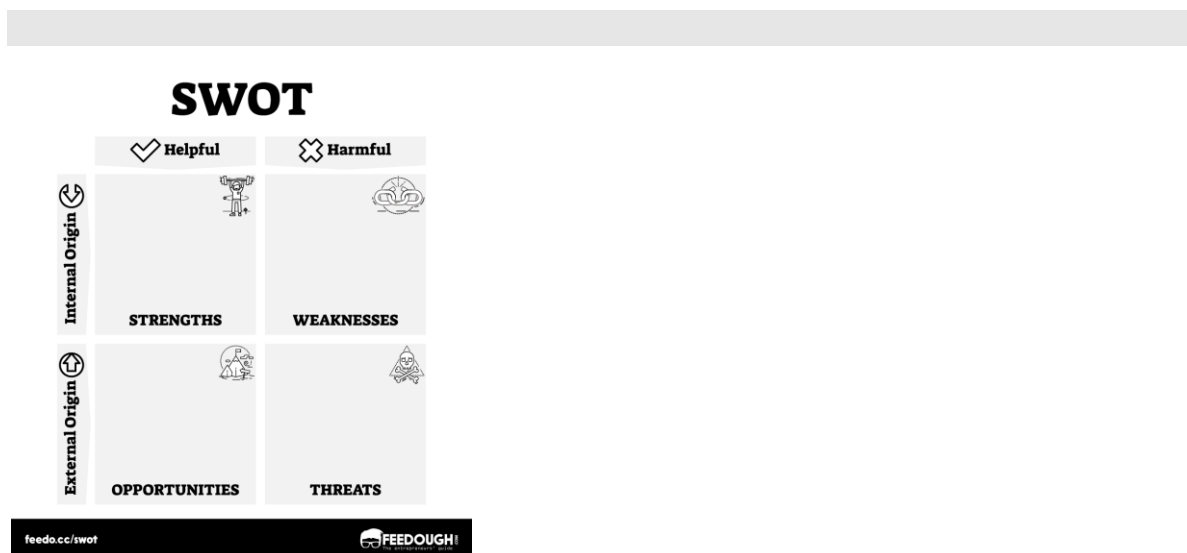
The driving forces can be both from the external and internal environments.

Second part

The purpose of the second part is to conduct a SWOT Analysis for the area in relation to (pre)incubation and innovation. The particular analysis will assist in the elaboration of the scenarios building.

Please follow the underneath procedure when conducting the second part:

- A. Please draw a 4 quadrant square on a white board stand like in the figure below:



Source: feedo.cc/swot

- B. Please ask the questions underneath one by one and ask your participants to write the replies on sticky notes - one strength, one weakness, one opportunity and one threat for the area in terms of pre-incubation & incubation. Then, please ask the participants to stick these notes in the respective quadrant.
- C. After everybody has finished, please read one by one all the replies under every quadrant, and ask the participants who wrote the respective note to comment.
- D. Please repeat the procedure for the parameter “innovation in the area”.

The questions that should be answered in the second part are as follows:

In relation to Pre-incubation & Incubation:

1. What are the strengths of the area in terms of Pre-incubation & Incubation?
2. What are the weaknesses of the area in terms of Pre-incubation & Incubation?
3. What are the opportunities for the area in terms of Pre-incubation & Incubation?
4. What are the threats for the area in terms of Pre-incubation & Incubation?

In relation to Innovation:

5. What are the strengths of the area in terms of innovation?
6. What are the weaknesses of the area in terms of innovation?
7. What are the opportunities for the area in terms of innovation?
8. What are the threats for the area in terms of innovation?

References

Krueger Richard A. (2002), Designing and conducting Focus Group Interviews, available at: <https://www.eiu.edu/ihec/Krueger-FocusGroupInterviews.pdf>

Devault Gigi (2019), What is a Market Research Focus Group? Available at: <https://www.thebalancesmb.com/what-is-a-market-research-focus-group-2296907>

Focus Group, Entrepreneur Europe, available at: <https://www.entrepreneur.com/encyclopedia/focus-group>

Annex – Moderator Skills

Select the right moderator <ul style="list-style-type: none"> • Exercise mild unobtrusive control • Adequate knowledge of topic • Appears like the participants 	Record the discussion <ul style="list-style-type: none"> • Tape recorders • Written notes
Use an assistant moderator <ul style="list-style-type: none"> • Handles logistics • Takes careful notes • Monitors recording equipment 	Control reactions to participants <ul style="list-style-type: none"> • Verbal and nonverbal • Head nodding • Short verbal responses (avoid "that's good", "excellent")
Be mentally prepared <ul style="list-style-type: none"> • Alert and free from distractions • Has the discipline of listening • Familiar with questioning route 	Use subtle group control <ul style="list-style-type: none"> • Experts • Dominant talkers • Shy participants • Ramblers
Use purposeful small talk <ul style="list-style-type: none"> • Create warm and friendly environment • Observe the participants for seating arrangements • Make a smooth & snappy introduction 	Use pauses (5 second pauses) and probes <p>Probes:</p> <ul style="list-style-type: none"> • "Would you explain further?" • "Would you give an example?" • "I don't understand."

Addressing Questions

The moderator formulated questions through the discussion process, which were, among other things, open-ended, simple, clearly articulated so as not to create reservations or a sense of shame in the participants. The types of questions included:

- ⇒ **Start-up questions**, which helped participants get to know each other, begin to feel comfortable with each other and recognize common features that connect them.

- ⇒ **Introductory questions** that introduced the general topic of discussion and gave participants the opportunity to comment on how they understand or have experienced the phenomenon under investigation.
- ⇒ **Transitional questions**, which proceeded to the discussion in the direction of the central questions (key questions).
- ⇒ **Key questions**, which focused on the essence of the research topic. In this category, 2-5 questions were asked that were particularly important for the analysis phase and to which more time was devoted than the rest.
- ⇒ **Concluding questions**, which invited participants to make final statements about everything discussed within the group.
- ⇒ **Summary question**. This question was asked after the moderator made a short summary (2-3 minutes) about the important questions and ideas that emerged from the discussion. At this point, participants were asked to give their opinion on the adequacy of the proposed summary.
- ⇒ **Final question**, which gave participants one last chance to add something they considered important to the topic under investigation and may have been omitted during the discussion.

Findings

As part of the empirical research, an organized meeting was held with the methodological approach of the Focus Group (focus groups). The Focus Group was held in person in Thessaloniki on Friday, November 18, 2022. This report presents the findings of the empirical research, which provide valuable information for the analysis of Deliverables 3.1.1.

A total of 5 people who had the following profile participated in the Focus Group:

A/A	FUNCTION	INTERVIEWEES
1	Business Consultants	2
2	Academics	2
3	Communication Expert	1
TOTAL		5

How do you perceive the business environment of the region at the present time?

The main and common feature that emerged from the discussion that arose from the above question was the issue of negative psychology that is pervasive in the market, in the sphere of entrepreneurship, as this sector during the years of the crisis experienced and is experiencing severe withering. Moreover, in the general business environment the tax regime, the instability of the rules, the polynomial, the lack of financing and the decline in purchasing power have sent the business world into a spiral of frustration and insecurity. Hundreds of workers have fallen into unemployment, but also into immigration. Under these conditions there is no room for tolerance from businesses. The risk of business lockouts is visible as is the disappearance of the skilled workforce. The state on the other hand does not seem to be a key and stable supporter in business ventures of young people with promising business ideas.

What challenges does a young person who wants to develop a business face?

From the discussion that ensued, it was emphasized that a young person starting a business in the area if they only cater to the local market is doomed. For this reason, the importance of extroversion in the viability of the business venture was emphasized. Extroversion is the key here and Thessaloniki offers the right conditions as it has a port and an airport and is in a strategic geographical location.

Of course, the crucial issue is how to find the ways, policies and incentives that will make young people inspired and take initiatives in order to eliminate the avoidance of taking business risks. It is found that the world refuses to differentiate and innovate. At this point, it was emphasized that the biggest opponent of a young person who wants to enter the business is the lack of trust towards the institutions, the state and the supporting agencies. For this reason, people with high skills have left in the context of strong brain drain trends.

In the establishment of a business the crucial issue is not just the idea but how this idea will become realizable. It was emphasized that the important thing is that the one who has an idea can find and receive support and guidance. To find an answer to the question which steps should he follow?

It is true that there are great prospects for exploiting material, intangible and natural resources. The big question is how to strengthen the competitiveness of existing SMEs and how to promote the establishment of new innovative SMEs with an emphasis on the RIS3 priority areas. In this context, the creation of incubators or clusters and networks of similar SMEs is an important challenge. It is also necessary to create substantial support structures for SMEs.

It was emphasized that the region needs the development of entrepreneurship, which will support all sectors: primary, manufacturing and services. The big bet is the coupling of the needs of local businesses with academic institutions, and networking with corresponding structures in Greece and abroad.

In the field of tourism, there are significant prospects for development with a new innovative approach such as culinary tourism, religious tourism, naturalistic tourism as well as an effort to link the tourist product with local products.

What changes are needed to improve the business environment?

It was emphasized from the beginning that in order to change the business environment, the region should invest in the comparative advantages it has in relation to its external surroundings. For example, it cannot invest in cheap labor or low taxation because there are much cheaper labor and a much more favorable tax regime in the neighboring countries. It was emphasized that with Bulgaria in particular, synergies and collaborations that may emerge should be explored.

The main demand is to increase the purchasing power of the region which has decreased dramatically for many years. The comparative advantages of the area are the access to Egnatia, the unparalleled natural wealth, the tangible and intangible cultural heritage, the geographical location, the distinctive gastronomy and the branded local products. Investing in these sectors by harnessing innovation and encouraging entrepreneurship could change the region's prospects. However, in order to do all this, it was emphasized that bureaucracy, corruption, incompetence and polynomialism must be dealt with. Today there is no body that effectively guides young entrepreneurs and protects them from actions that may cause consequences later, e.g. business name registration etc.

Experience shows that investments made in tourism have not incorporated an education and deep knowledge of the tourism industry. The first step needed is to identify areas where investment

opportunities exist. For example in the IT sector, (eg creative, websites etc) there is a shortage at the local level. It was emphasized that it is crucial to base entrepreneurship on endogenous potential.

The view was also expressed that organized approaches and verticalization of production with processing, standardization, packaging, marketing etc. are needed. In other words, one should become a farmer and an entrepreneur. This view was challenged by others and the view was supported that everyone should become good at what they know best. So verticalization is not the optimal solution.

In order to strengthen entrepreneurship in the region, potential entrepreneurs should be informed about the legal establishment of businesses and their tax framework, how to organize and analyze a business idea and everything related to the organization and management of a business. In order to do this, academic knowledge should be connected with the needs of the market. In addition, new entrepreneurs need to be informed about how to finance start-ups, how to find investors, how to find suitable specialized staff, how to create a network of partnerships and how to implement marketing and advertising activities.

Could a pre-incubation structure in the region help boost entrepreneurship?

It was felt that a warm-up structure would greatly help one could bring the potential entrepreneur to alertness by getting very useful stimuli. There is no doubt that through interaction with others other ideas are born and existing ones are enriched. It's like someone looking in a mirror and constantly improving their image.

The services of a preheat structure it is important to understand that in order to have them one will have to pay. So if these services are provided free of charge for a period of time it is very important. The rules of the market say that when I get something that is specialized I pay for it and get it. But a young person needs support to learn to think entrepreneurially. So it is in any case a positive initiative.

One issue that particularly occupied the discussion was the issue of the confidentiality of the business idea. It has been suggested that many do not want to share their business idea with others. This in practice is a significant obstacle to the development of support services in a specific direction. What is certain is that ideas can not only spread but also leak very easily. Usually, it was supported by some, the core of the idea is not shared by anyone. But it can share the general idea that gives a general direction. On the other hand, however, the opinion was supported that there is no reason to hide an idea when it is specific and when the conditions for observing the rules of confidentiality are met.

It was clarified by the coordinator that the definitions of the business incubator show several variations, but coincide in some basic characteristics. Business incubators are organizations that provide rental space, shared business services, business support, training and financial support to new startup businesses with the goal of accelerating their successful growth.

Of course, at the very early stage of the development of a business idea, the services offered by business "pre-incubators" are necessary. The main difference between business incubator and pre-incubator business is usually defined by the stage of development in which the incubated businesses are. Incubators provide their services to startups that have already been established and are in the early stages of development, while pre-incubators support future businesses that are not yet established and are in the planning stage.

It was found that a constant goal of the pre-incubator structure should be to mobilize all productive and scientific forces and create a network of synergies for the efficient operation of the incubator. It was pointed out that at this early stage companies have not yet progressed to form a business

plan, develop a prototype and establish a business team, so they are not ready to receive investment or go to market. In other words, the pre-warming structure should have as its main object the support of businesses that are in the embryonic stage, during their design process, offering all the necessary services until their establishment.

The feeling is that pre-incubators face the problems commonly encountered by members of the academic community in the business world, such as insufficient financial knowledge, unknown prospects of success of developing products and services in the market, high financial risk, lack of personal business skills and ignorance of the value of copyright.

Another critical issue if we want to achieve innovation is to enable members of the academic community to have the opportunity to test their business idea and gain business experience without having their own business. In particular the ICT sector can work effectively in an incubator. There are no special requirements on premises and the most important infrastructure is high-speed broadband networking. In the selection of the location of the incubator, the parameter of guaranteeing ultra-high-speed internet may have to be weighed.

It was also noted that the existence of a relevant university in the reference area is also an advantage in terms of the possibility of providing consultancy/guidance services.

It was estimated that if we want the pre-warming structure to work effectively it should be able to provide significant incentives for businesses to enter them, with the provision of rental space, support services, legal and administrative support, secretarial support, business support, training and financial support, provision of fully equipped office and production premises, intellectual property rights and patenting, transfer of know-how, networking. In addition, it should encourage the creation of partnerships and actions to integrate the business into the market, once the phase of development and business incubation has been completed. All of the above are important incentives for businesses to enter a pre-incubator or an incubator, as well as the cost of research, development, building facilities, equipment supply, management & marketing activities, operational costs, training and the creation of partnerships, legal and financial support as well as securing patents and intellectual property rights has a particularly significant cost, which is unaffordable for start-ups.

This project, of course, was emphasized by some, is not at all easy to achieve if one takes into account the low growth rate of the region of Western Macedonia as a whole, the lack of a critical mass of economic activity and the little interest from both investors and researchers. For these reasons, potential entrepreneurs should be properly informed about the conditions for hosting their businesses and their ideas, and there should be suitably qualified staff who will manage and contribute to their development. In addition, for prewarming to work, political will and the political support framework are needed.

Who should a pre-incubation structure primarily target?

It was emphasized from the beginning that the pre-warming structure should focus its efforts mainly on young people, women and in general on parts of the population that are vulnerable in the crisis environment, but have ideas and business concerns. It was also underlined that special opportunities should be given to young people with high qualifications and skills who are oriented to immigrate from the region and from the country as a whole in the context of the brain drain phenomenon which took on dramatic dimensions during the years of the crisis. This would be the pre-heating structure's most important contribution to the local economy as it could act as a buffer against the exodus of skilled people who can contribute much to the region.

Prospective pre-incubator participants should also include students, graduates and researchers of academic institutions. A critical issue highlighted here is that these models work when research and knowledge are effectively linked to the real economy. In other words, applied research produced in universities and research centers should be exploited. It was emphasized that usually the research

produced in universities is not implemented in practice. This is the problem not only of the region but also of the entire country.

If another important issue raised was that the problem with young people who want to get involved in entrepreneurship, is that they usually do not have the financial resources to invest, so any failure in any of their endeavors could deter them decisively. This is where the preheat structure should come in and fill that gap. These people should also be given all the information so that they are aware of the harsh reality they have to face.

It was emphasized that even large and successful companies have not found everything they have done on their own. They travel, they ask, and I adapt to reality in a creative way. What should always be avoided, he emphasized, is bad copying. In the end whether an idea is good or not is decided by the market. In addition, the good entrepreneur creates new needs through advertising.

It was noted that what should be sought is to help these young people to do something simple and not something complex and overly innovative. Something that adapts to real needs. For example, we do not have professionals who can efficiently organize an excursion. We are sitting on a gold mine and we are not doing what we should. Many times we go to sell in future ways but in this way we become out of date. For example, fur in the 90s had to be sold in bazaars and not in shop windows.

Finally, it was underlined that young and innovative entrepreneurship faces limitations and challenges such as the fact that young people do not have easy access to financing and lack business experience. In addition, the development of an innovative product is a high-risk investment (both during the development phase, due to the cost of implementing the prototype, and during the product's distribution phase, due to the difficulty of promoting it to consumers).

All of the above should be taken into account when planning, as the business model that generally operates in the country has a high degree of introversion and bureaucracy. The transformation of new business ideas into viable businesses is a process that needs to be supported with various financing tools and the creation of a protected environment for the start of new businesses so that the chances of unsuccessful entry into the space are eliminated.

It is also important to understand that it is very difficult to convince a young child to become an entrepreneur. Critical factors that determine this are the general economic and political environment, the education system, studies, support mechanisms, but above all the personal representations one has from childhood. For example, a child who has grown up in an environment of entrepreneurial culture this is a very positive background for later taking entrepreneurial risk.

GOOD PRACTICES & LATEST INNOVATION TRENDS

Identify the latest innovation trends and Good Practices in incubation and pre-incubation

Introduction

Three forces are coming together to shape the twenty first century: the youth, entrepreneurship and ICT, as stated by Rob Salkowitz in his book *The Young World Rising*. The incubators, accelerators, living labs, startup events, and pre-incubators are places where all these three forces come together and create value.

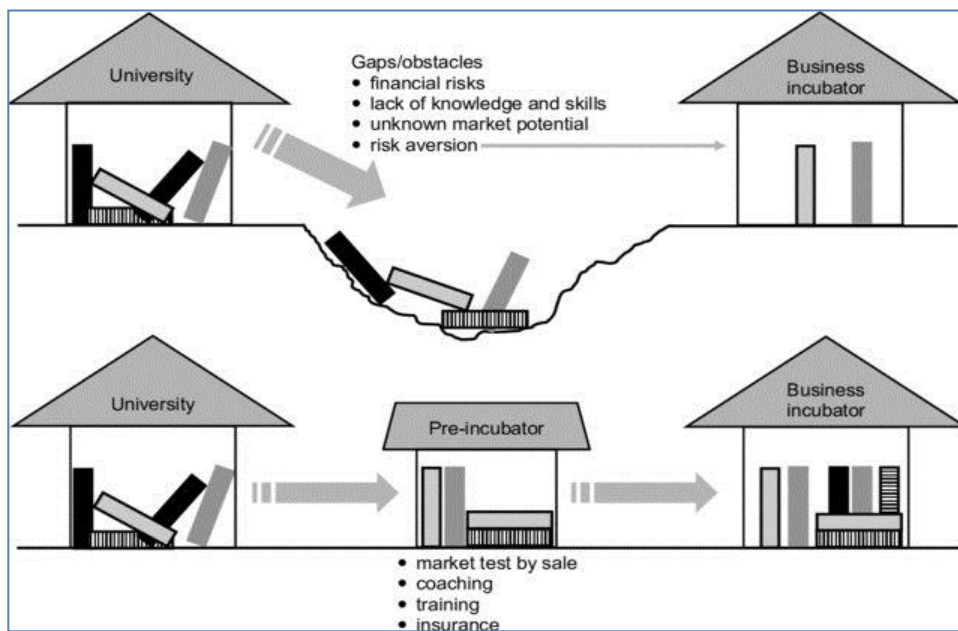
The purpose of this deliverable is to present the results of scanning the global arena for best practices in incubation and pre-incubation in order to pick up some good examples to follow.

The particular report has been elaborated in the framework of the CO-WORKING Project, which is funded by the Greece- Bulgaria Cross border programme 2014-2020. The deliverable that resulted in this report is part of the Working Package 3 which tries to elaborate a pre-incubation strategy for the Greek- Bulgaria cross-border area.

The subject of pre-incubation is not very well known in the global literature, as there are very few pre-incubation structures world widely. The structures that mostly deal with the start-ups in the world today are the incubators and accelerators, or a hybrid of the two. The former is trying to find the right soil for the right seed and the latter tries to create a boosting environment for the seed that is already in the soil.

The pre-incubation, on the other hand, is a process that tries to overcome obstacles like financial fear, lack of knowledge and skills, the unknown potential of the market and of the tools to conduct market research and the risk aversion, and which are nicely depicted in the underneath figure (Figure 1). Thus, the pre-incubation structure will offer support in market test by sale, coaching, training and insurance.

Figure 1. The role of the pre-incubation



Source: Jhones and Thoimas, 2013

Each incubator and accelerator has its own program and task. They all differ in traits, location, mission, and human resources. However, what they all have in common is that each program must demonstrate effectiveness for their start-up clients, their local ecosystem, and their own organization.

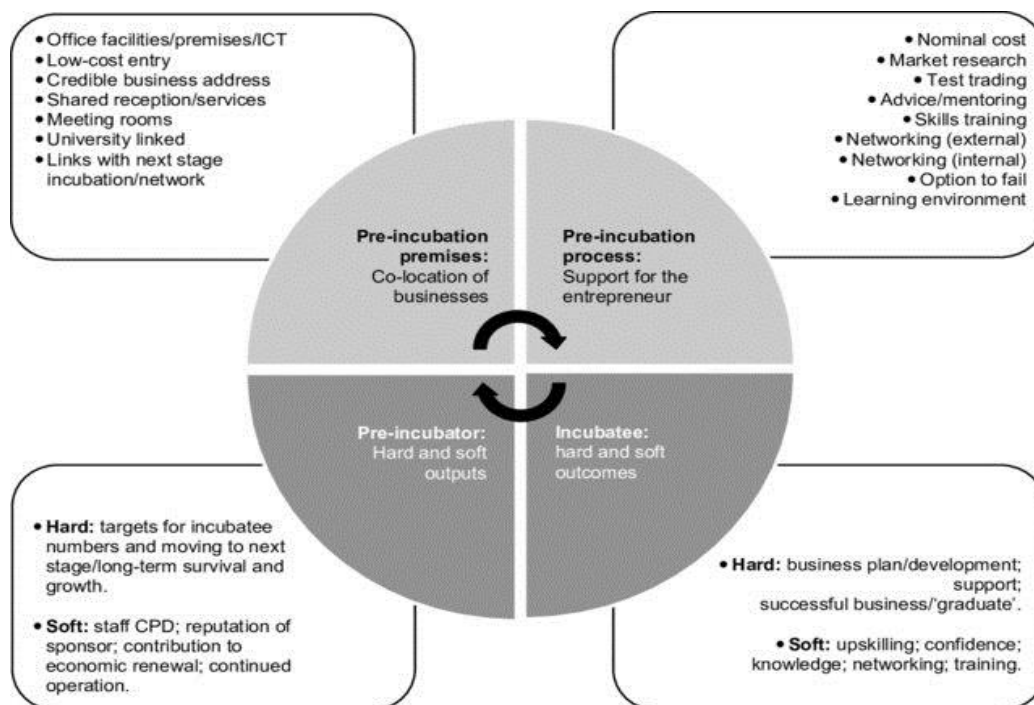
The pre-incubation structure in order to achieve the above-mentioned goals should offer the following premises:

- Office facilities/ICT
- Low-cost entries
- Credible business address
- Shared reception/services
- Meeting rooms
- University linked
- Links with next stage incubation/network

The pre-incubation structure should offer support for the nascent entrepreneurs in terms of:

- Nominal cost
- Market research
- Test trading
- Advice/mentoring
- Skills training
- Networking (external & internal)
- Option to fail
- Learning environment

Figure 2. The premises, processes and outcomes of a pre-incubator



Source: Jhones and Thoimas, 2013

The outputs of the pre-incubator should be in both hard and soft terms. The hard outputs should be the number of incubatees, long term survival and growth. The soft outputs should be the reputation of sponsors, contribution to economic renewal, and continued operation. On the other hand, the outputs should also gain both hard and soft outcomes. The hard outcomes should be the business plan and development support, and successful business graduate. The soft outcomes should be up skilling, confidence, knowledge, networking and training. On the other hand, the outputs should also gain both hard and soft outcomes. In any way, as in the case of incubators and accelerators, the output of the pre-incubator should be in terms of the value provided to the incubatees, the value provided to the ecosystems and the value provided to the pre-incubator per se.

2.Criteria for evaluation

Hence, the role of the pre-incubation is to offer value not only for the client/incubatee, but also for the whole ecosystem. In addition, the criteria according to which the programs offered by the incubators, accelerators and pre-incubators should be evaluated are as follows:

- the value they provide to the incubatees/clients,
- the value they offer to the ecosystem, and
- the value they provide to the structure per se and the stakeholders.

These are the exact 3 criteria according to which the UBI Global – an Innovation Company and Community ranked the university linked business incubators and accelerators in their world ranking report of 2019/20 (UBI-Global, 2019).

In particular, these 3 criteria serve as broad categories with many parameters/indicators taken into consideration. Under the category *value for the incubatee* UBI Global puts the following three groups of key performance indicators:

- Competence development
- Number of Services offered
- Number of Coaching & mentoring hours
- Access to Funds
- Total investment attracted,
- Average investment attracted
- Seed funding attraction
- Access to network
- Number of Partners,
- Number of Events and
- Number of Alumni engagement

Under the category *value for the ecosystem*, Ubi Global places 2 groups with 6 key performance indicators:

- Economy enhancement
- Number of Jobs created and sustained,
- Sales revenue,
- Number of Graduates,
- Amount of Self-generated revenue
- Talent retention
- Number of Client startups accepted,
- Number of Graduate retention

And finally, under the classification *value for the incubation program*, UBI-global puts 2 clusters with 7 KPIs:

- Program attractiveness
- Number (absolute and per spot) of In-state applications,
- Number of Out-of-state applications,
- Amount of Sponsorship attraction
- Post incubation performance
- Percentage of 1-year survival rate,




















- Percentage of 5-year survival rate,
- Percentage of High growth enterprises,
- Number of IPOs

Then, from a sample of 1580 programs, located in 82 countries, there were retained 364 programs for benchmarking. These programs, as representation of different incubators and accelerators were assessed according to various key performance indicators (KPI), under the above mentioned 3 categories.

Each KPI then was rendered a weight. The average weight per KPI was 4.4%. Some KPIs (like *Jobs created and sustained*, *Sales revenue*, *Client startups accepted*, *Total investment attracted*, *Partners* and *In-state applications*) were given a bigger weight (of 6.7%).

The Figure 3 below shows the world top 10 university business incubators, according to UBI Global's assessment. The order in the table is alphabetical. The best performer in terms of the key performance indicators mentioned above seems to be the SETsquared Partnership from UK - a business incubator and enterprise partnership comprising five research-intensive universities: Bath, Bristol, Exeter, Southampton and Surrey.

Figure 3. World Top 10 University Business Incubators

	PROGRAM	PARTNER UNIVERSITIES	COUNTRY
	Chalmers Ventures	Chalmers University of Technology	 Sweden
	The DMZ at Ryerson University	Ryerson University	 Canada
	IPN Incubadora	University of Coimbra, Polytechnic Institute of Coimbra	 Portugal
	İTÜ Çekirdek	Istanbul Technical University	 Turkey
	PoliHub - Innovation District & Startup Accelerator	Politecnico di Milano	 Italy
	Red de Incubadoras de la Universidad del Valle de Mexico	Laureate International Universities	 Mexico
	The SETsquared Partnership	University of Bath, University of Bristol, University of Exeter, University of Southampton, University of Surrey	 United Kingdom
	University of Toronto Entrepreneurship	University of Toronto	 Canada
	UtrechtInc	Utrecht University, University Medical Center Utrecht, University of Applied Sciences Utrecht	 Netherlands
	YES!Delft	Delft University of Technology, The Hague University of Applied Sciences	 Netherlands

Source: UBI Global World Rankings 19/20 Report

Half of the incubators from the list are located in Europe, 2 are in Netherlands (*UtrechtInc* and *YES!Delft*), 2 - in Canada (*DMZ at Ryerson University* and *University of Toronto Entrepreneurship*), 1 – in Sweden (*Chalmers Ventures*), 1 – in Portugal (*IPN Incubadora*), 1 – in Turkey (*ITUCekirdek*), 1 – in Italy (*PoliHub – Innovation District & Startup Accelerator*) and 1 – in Mexico (*Red de Incubadoras de la Universidad del Valle de Mexico*).

When looking at the world top 10 public business incubators, the picture is somehow different (see Figure 4). The top performer seems to be the *I3P* from Italy, even though it seems to be linked to the Polytechnic University of Turin.

Figure 4. World Top 10 Public Business Incubators











PROGRAM		COUNTRY
	Beijing Beihangtianhui Technology Incubator Co., Ltd.	 China
	Beijing Zhongguancun Software Park Incubation Service Co., Ltd.	 China
	ETC Baltimore	 United States
	HCDC Business Center	 United States
	I3P - Incubatore delle Imprese Innovative del Politecnico di Torino	 Italy
	Ingria Residentsip Program	 Russia
	Los Angeles Cleantech Incubator	 United States
	Montpellier BIC	 France
	Uppsala Innovation Centre	 Sweden
	WSL	 Belgium

Source: UBI Global World Rankings 19/20 Report

The figure above reveals that 3 of the top incubators are located in the United States (*ETC Baltimore*, *HCDC Business Center* and *Los Angeles Business Incubator*), 2 are located in China (both in Beijing), 2 are located in Sweden (*WSL* and *Uppsala Innovation Center*), 1 – in Russia (*Ingria Resident ship Program*) and 1 – in France (*Montpellier BIC*).

The Figure 5 underneath shows the world top 5 private business incubators. The top seems to be in the USA (*1871 – Chicago's technology and Entrepreneurship Center*).

Figure 5. World Top 5 Private Business Incubators

PROGRAM			COUNTRY
	1871		 United States
	Guinness Enterprise Centre		 Ireland
	IE Orchard National Incubator		 China
	MIDITEC		 Brazil
	Royal Scientific Society - iPARK		 Jordan

Source: UBI Global WorldRankings 19/20 Report

In the list there is also Ireland with the *Guinness Enterprise Centre*, China with the *IE Orchard National Incubator*, Brazil with the *MIDITEC* and Jordan with the *Royal Scientific Society - iPARK*.

In another ranking list, Forbes places the US incubators and accelerators based on a number of factors, but mostly focusing on the value of the incubators' companies. In other words, they take the exit prices or the last priced equity valuation of the companies that have gone through each program. They take also into account other measures, such as how much venture funding their companies have raised, what percentage of their companies have raised funding and what percentage of their companies have been acquired or gone out of business.

3.The Champions at International Level

This section presents some of the champions identified in the previous part through the analysis of the top ranked private and public incubators. The criteria by which these incubators have been placed on the first places are the *value for the incubatee*, the *value for the ecosystem* and the *value for the incubation program*. Each one of these three criteria includes several key performance indicators and each indicator is assigned a weight. Underneath are presented the three top incubators in more details. Some of them (like the I3P) provide also pre-incubation programs.

SETsquared, UK

The **SETsquared** is a unique enterprise partnership and a dynamic collaboration between five leading research-led United Kingdom universities of Bath, Bristol, Exeter, Southampton and Surrey. Ranked as the Global No. 1 Business Incubator, they provide a wide range of highly acclaimed support programmes to help turn ideas into thriving businesses.

It started in 2002 and since then it has supported over 4,000 entrepreneurs helping them raise £1.8bn of investment. Independent research carried out by Warwick Economics has estimated the economic impact of SETsquared supported companies to £8.6bn, with the creation of 20,000 jobs, and by 2030 this is set to grow to £26.9bn.

Some of the world's most disruptive technologies have originated from University research, and this has and will continue to change the business and technology landscape. SETsquared alongside their partner universities is helping to facilitate the process of business and technology transformation by putting in place a number of schemes and programmes which not only are helping researchers to work more innovatively but also to ensure external business is able to tap into the resources and expertise available within universities.

Their mission is to turn innovation into thriving business and drive economic growth within their regions and across the UK. The aim is to maximise the impact of the combined research portfolios of the five university partners for social and economic benefit and to provide support to academics, students and local businesses to instil an entrepreneurial spirit across their regions.

There are a dozen of programs offered to the public, to cover a wide range of needs. In particular:

Student enterprise – a programme that tries to put the students on the entrepreneurial path. There are organized 3 Day Start-Up events which is a 72-hour learning-by-doing campus workshop that teaches entrepreneurial skills to university students in an extreme hands-on environment.

Researcher to Innovator - a three-day programme for early career researchers and PhD students to develop entrepreneurial thinking and business skills; These events try to equip the researchers with tools to think creatively, network and listen effectively; they teach how to realise their idea's potential and accept risks; they offer the skills to engage with other entrepreneurs and innovators and increase their research impact.

ICURe – are the initials from The Innovation to Commercialisation of University Research (ICURe) Programme, which is a collaboration between **SETsquared**, NorthbyNorthwest Partnership,

Midlands Partnership, Innovate UK, UK Research & Innovation (UKRI) and Department for Business, Energy and Industrial Strategy (BEIS) and is designed to move ideas and innovation out of universities and into the marketplace where they will have the greatest impact. The ICURe Programme offers university research teams with commercially-promising ideas up to £35k to 'get out of the lab' and validate their ideas in the marketplace.

Digital Entrepreneur – fast paced and dynamic, it is a fully-funded, two-day programme designed for founders of digital businesses. It is built on Strategyzer's Business Model Canvas, and the startupper's deep dive into their business model, value proposition, customer segmentation, channels for winning customers and revenue model, helping them to build a strong foundation for profitable and successful business. It's designed to be very practical and hands on and putting theory into practice on their own business as well as other established business models. The programme culminates in the opportunity to pitch their business model to a panel of experts and also speed mentoring which offer lots of valuable feedback on their business.

Satellite data and Space-tech – a two-day programme designed for innovative businesses and entrepreneurs using satellite-derived data and space-related technology. It focuses on the essential elements of starting a business such as getting to problem/solution fit, identifying the market opportunity and mapping out your customers. Hands-on and interactive, this programme is delivered in partnership with the UK Space Agency.

Health Innovation – an immersive and interactive 4-day training course, which will use Strategyzer's Business Model Canvas as a basis for exploring and developing the startupper's business plan. This programme aims to offer a really effective tool to test the validity of the business model and understand and explain the value of the proposition to the NHS and health sector.

There are four more programs available which concentrate on the acceleration part: **Business Acceleration programme**, **Digital Business Acceleration Hub**, **Business Acceleration Growth Hub**, and **Scale-up** programme. These programmes are designed to provide the startupper's with support around the key challenges of the early stage businesses like R&D, raising investment and accessing new talent.

I3P, Italy

The I3P (Incubatore Politecnico di Torino) is the Incubator of Polytechnic of Turin in Italy. I3P supports the creation and development of innovative start-ups with high technological intensity and growth potential, founded both by university researchers and students, and by external entrepreneurs, providing strategic consulting services, coaching, mentoring, fundraising support and spaces.

The mission of the Incubator of the Polytechnic of Turin is to support the ecosystem of entrepreneurship, with the aim of generating economic development and employment in innovative industrial chains. I3P adopts a strategy of collaboration with private subjects and institutions, engaged in research and advanced training, in services for technology transfer, in the financing of innovation, in internationalisation.

The interaction with the Polytechnic of Turin is central to the support services offered by I3P. The University and the research and innovation institutions connected to it represent the main pool of technical and scientific expertise for the development of incubated start-ups and provide access to highly qualified human resources.

I3P tries to create value for the incubated startups by connecting entrepreneurs with a rich network of mentors including professors, researchers, managers with many years of experience in leading large corporations, successful start-uppers, and serial entrepreneurs.

I3P supports the entrepreneurial team through incubation and pre-incubation programs, providing consultancy, training and connections with I3P network, with the aim of maximize start-ups' growth thanks to services provided both directly and through partners. There are provided the following four services:

Consultation

Thanks to the network of mentors and tutors, there is offered a complete path, starting from the definition of the business model and the industrial plan. There is also consultancy provision on intellectual property, fiscal, law and employees' management matters. There is provided support for interactions between start-ups and the research centres of the polytechnic, providing technical skills to complete the entrepreneurial teams.

Fundraising

There is provided support to the start uppers for capital's raising through continuous connections with business angels, Venture Capital funds and corporations. There is assistance for the entrepreneurs in defining their funding strategy and there is direct access to measures supporting company creation managed by local entities and institutions.

Networking

There are created synergies between start-ups and the innovators' community through the networks made of research centres, large companies, associations and entities.

Internationalization

There is provided support for growth in foreign markets through a network of partner incubators, linked by "soft landing" agreements, in Europe, Israel and United States.

1871 – Chicago's Technology & Entrepreneurship Centre, USA

This incubator has an interesting name, but also a symbolic and semantic one. It represents the aftermath of the Great Chicago Fire – a conflagration that burned the city of Chicago (USA) in 1871. The name of the incubator was inspired by what came next: a remarkable moment when engineers, architects, and inventors banded together to build a new city. Their innovations – born of passion and practical ingenuity – shaped not just the city of Chicago, but also the modern world.

In the same way the executives of the incubator try to build a diversity and density of the community in order to create the conditions for both calculated and fortunate collisions of success between founders, corporate partners, and community members. The members are assisted to discover how to build the right product in the right way, learn where they are in their founder's journey, and discover what they need to tackle next.

The incubator tries to put founders and innovators at the centre of their gravity. They have a network of 350 mentors, 100 different partners, more than 650 alumni, 4 venture capital firms, and 7 partner universities.

The incubator is organizing hundreds of events a year, with experienced speakers, members, mentors, and influencers that inspire and innovate. They host the following events every year and they are an integral part of their mission to inspire, equip, and support founders across Chicagoland. Some of these events are:

- **Campus 1871**, where the students are welcome to have a startup experience. They collaborate with peers across the city, 1871 founders, and mentors to gain an understanding of how to put a product to market.
- **International Women's Day** - It is a full of female-focused programming that celebrates the International Women's Day theme: Each For Equal. Beginning with breakfast and a fireside chat there will be workshops, lunch, a keynote speaker, and happy hour networking to close.
- **Momentum Awards** – It is an annual awards event, hosted by 1871 and the Chicagoland Entrepreneurial Center, and it is Chicago's most anticipated digital technology event of the year.
- **Policy Forums** - Together with the Kauffman Foundation, 1871 convenes entrepreneurs, supporters, and policymakers to increase awareness, education, and advocacy.
- **ITA Events** – Together with the Illinois Technology Association they organize from educational sessions, to networking events and webinars.

Y Combinator, USA

The top incubator in the analysis of Forbes is the *Y Combinator*. Since its establishment in 2005, this incubator has funded over 2,000 startups, and its companies have a combined valuation of over 100 billion. It is an average of \$50 million per startup. It's a remarkable figure, considering that this California-based incubator has been in existence only for 15 years.

Among the companies that passed through this incubator are the airbnb, Dropbox, coinbase, Gitlab, and many more other big companies.

They created a new model for funding early-stage startups. It is like they created a pre-incubation before incubating. Thus, twice a year they invest a small amount of money in a large number of startups. They work intensively with these teams for three months, to get them into the best possible shape and refine their pitch to investors. Each cycle culminates in Demo Day, when the startups present their companies to a carefully selected, invite-only audience.

Tendercapital, a very dynamic European asset management group based in London, but with branches in Ireland, Italy, and Switzerland, in an article about the best startup incubators in the world, puts *Y Combinator* on top of the list, based on the numbers this incubator displays: 13,000 startup applications via internet alone every year. The incubator then picks out between 200 and 240 projects to back per year, adopting a very stringent selection process.

Among the ten incubators in the ranking list of the Tendercapital, nine of them are located in USA. The only incubator in the list, located outside USA, and places somewhere in the middle of the list is the *Seedcamp*, from UK.

Seedcamp, UK

Seedcamp adopts a different approach, believing that startup entrepreneurs are more in need of intelligent human input rather than money. Their philosophy is that to set up a solid company, a startup must be able to draw on a global network of suitable advisors – thus allowing those to overcome all the standard challenges faced by all startups in the quickest time possible. Seedcamp provides consultancy, training and other services designed to help startups make their assault on the market.

In the space of a decade, the incubator has provided funding for more than 300 companies, raised investment of over \$2 Bn in follow-on funding from leading global investors and “created” three unicorns: Transferwise, Revolut and Uipath.

PoliHub, Italy

PoliHub sprang from the Business Accelerator’s years of experience, founded in 2000, thanks to contributions from important public and private entities, including the City of Milan, which has always been an active supporter of youth and technological development. The Polytechnic University of Milan, one of the best in Italy, felt the urge to create an entity which could host and foster young high-tech businesses able to transform scientific research into industrial applications. The initiatives like FluidMesh, Laserbiomed, Neptuny, ResTech and Telerilevamento Europa have been particularly successful. The most recent successes of PoliHub have been Empatica and FABtotum, companies that have grown remarkably over the years, earning significant national and international market recognition.

Main function of the PoliHub is to support the creation of the innovative technology companies and foster their collaboration with large enterprise through:

SCOUTING – Entrepreneurial idea and innovative project selection

TUTORSHIP – by forming teams and prototyping

PoliHub offers an intense business empowerment program, specifically designed for startups, in collaboration with MIP, the Polytechnic University of Milan’s business school and center of excellence. The program offers input from key players in the worlds of business and venture capital, specialty seminars on crucial topics for startup development and in-depth workshops on technological themes.

MENTORSHIP - by defining a business model and market viability

The mentoring program is tailor-made for PoliHub’s startups. Every entrepreneurial initiative is supported by one or more expert mentors with experience in the relevant sector, who help accelerate the growth of the individual startups. PoliHub has a Mentor Club, whose members have specialized experience and skills to select and validate business ideas.

ADVISOR - Research, financing and scale-up support

Advisory is a service offered to PoliHub’s startups in order to support them in private and public fund raising. PoliHub operates with the main Italian and foreign Venture Capital funds and Business Angel and important Corporate Venture networks. In addition, PoliHub directly participates in Ban-Up, a holding company created to favor startup financing.

Finally, PoliHub operates via Fondazione Politecnico di Milano to identify major sources of public, national and international funding, startup funding and to build specific co-financed applied research projects.

OPEN INNOVATION - Helping companies find the best new ideas and to collaborate with the startups. The main “open” innovation support services offered by PoliHub are:

- Startup Intelligence: a permanent Observatory that monitors the evolution of the startup ecosystem nationally and internationally, and transfers and shares that information with the Innovation Managers of major Italian companies.
- Hackathon: events that bring together experts in relevant fields to face timed concrete technology and business challenges.

- Startup Scouting & Innovation Consultancy: we help companies find startups that can help them innovate and we facilitate the integration of the startups' services in the business model.
- Tailored Startups: they identify and model custom startups able to meet companies' specific innovation needs.
- Corporate VC: they support companies in identifying opportunities to invest in high-tech startups.
- Corporate Spin-off: they incubate and foster spin-off companies in their highly innovative district, free from possible company conditioning.
- Call for Ideas: initiatives aimed at gathering the best innovative ideas in specific fields and providing the entrepreneurs with the cultural and methodological tools necessary to realize worthwhile business ventures.

Axel Springer Plug & Play (Germany)

The 100-day program at the Axel Springer Plug & Play in Berlin provides guidance, networking, workshops, support & information for investors in the teams they choose each season.

A number of start-ups are currently being supported, including a volunteer market to help refugees, a virtual reality advertising platform and an interactive wedding invitation designer.

SeedRocket (Spain)

Established in Barcelona and Madrid, SeedRocket has been linking start-ups with potential investors since 2008. Success stories include EscapadaRural, an agricultural cottage search engine, and Habitissimo, an online portal and work platform for employers. SeedRocket is known for its mentor guidance program, various activities with participants, and investor days.

i5invest (Austria)

With more than 100 successful projects funded, the i5invest is one of Austria's largest incubators. Based in Vienna, this accelerator believes in long-term investments and mentorships with the newly established companies with which it cooperates. They also focus on highly expandable business models to turn a small idea into a big business over time.

Telenet Kickstart (Belgium)

Telenet Kickstart is working with Belgian start-ups to work together through the early stages of development. He is known for networking events and international travel to meet with companies, attend conferences and work with leading organizations. Telenet Kickstart's team believes in supporting start-ups that have a sustainable development plan and a long-term vision.

JIC Starcube (Czech Republic)

JIC Starcube is a three-month acceleration program that provides more than 160 hours of seminars and consultations with emerging technology companies. It has a team of 80 mentors, with lawyers and copywriters to help create the business plans. In particular, they are looking for projects related to virtual reality, big data, smart technology, sensors and retail. The companies selected work in the co-workingspace in Brno.

Accelerace (Denmark)

Based in Copenhagen, Accelerace is one of the leading accelerators in Europe. To date, they have partnered with more than 265 new businesses, created more than 1,205 jobs and helped new companies raise more than 240 million euros in funding. They have multiple programs depending on the activity of the start-ups they work with, including biotech, foodtech, cleantech and medtech.

Startup Wise Guys (Estonia)

Based in Tallinn, this incubator has partnered with more than 50 start-ups from 30 different countries. Participants come from all over the world, including South Africa, Chile, India and Australia. Working with a team of 150 consultants, Startup Wise Guys companies are able to develop their business ideas and find the best markets to promote them.

The Family (French)

Founded in 2005 to help young Italian entrepreneurs, H-FARM has now expanded to Seattle, London and Bombay. In addition to being a hatchery for local start-ups, H-FARM hosts events such as road safety hackathons and discussions about the future of Internet of Things (IoT) technology. They also manage the H for Human Foundation to provide research scholarships on technology and innovation.

Rockstart (Netherlands)

Based in Amsterdam, Rockstart takes 150 to 180 days to turn a business idea into a business ready for investment. They have different acceleration issues, such as smart energy, mobile and digital health. They have office space and event space in Amsterdam.

Lisbon Challenge (Portugal)

The Lisbon Challenge is a Thermocouple that offers a three-month acceleration program that believes in a human-centric approach. Lisbon Challenge graduates have raised more than \$ 50 million in investment. Participants also receive more than 150,000 euros in privileges when participating in Thermocouple programs. Services include free office space, intensive mentoring programs and personalized support.



4. Startup Events

There are a number of events which seems to nurture the startup ecosystem. These events are quiet intensive and not only do they provide a platform for networking, but they also foster team building, promotion, spreading of the entrepreneurship and technology events, attraction of talents, creative undertakings, etc. These events are very catalytic, especially when you are stuck and have no clue how to advance forward with your idea and business plan. This is where these startup events and conferences come in. The attendance of these events opens new and valuable insights, tips, tricks, recommendations, and suggestions. Some of these events are the *hackathon*, the *startup weekend*, the *startup riots* and the *startup safaris*.

These events are also part of the pre-incubation process and the startup ecosystem. And even though shorts, these events offer very effective testing grounds for startups. They are designed to give aspiring entrepreneurs an opportunity to find out if their idea is viable, to network and find potential investors. Underneath these events are short presented.

Hackathon

A hackathon is a design sprint-like event, like a workshop in which computer programmers and others involved in software development, including graphic designers, interface designers, project managers, domain experts, etc. collaborate intensively on software projects. Hacking in this case is creative problem solving, and it doesn't have to involve necessarily – the technology. The participants form typically groups of about 2-5 individuals, and using their laptops dive into problems. Training workshops are a great parallel track especially for newcomers but also for all participants.

The goal of a hackathon is to create functioning software or hardware by the end of the event. Hackathons tend to have a specific focus, which can include the programming language used, the operating system, an application, an API, or the subject and the demographic group of the programmers. In other cases, there is no restriction on the type of software being created.

The format can be both offline and online, and usually there are monetary prizes at the end for the first 3 places.

Startup Weekend

A startup weekend is a 54-hour weekend event, during which groups of developers, business managers, startup enthusiasts, marketing gurus, graphic artists and others pitch ideas for new startup companies, form teams around those ideas, and work to develop a working prototype, demo, or presentation by Sunday evening.

Founded in July 2007 in Colorado USA, Startup Weekend brought together 70 entrepreneurs to try to create a startup in just 54 hours. The model quickly expanded to cities around the world. Today Startup Weekend has grown into an organization with a global presence (150 countries). So far it has organized more than 2.9k events, formed more than 23k teams and has an alumni community of more than 190k.

The first day is dedicated to meet, pitch and team up, where the participants get to know their new friends and meet the people they will 'be working with. Also, the participants that desire can pitch their idea and, then teams are formed. The second day local mentors are coming throughout the

event to coach over hard problems. And the teams are responsible for covering all the aspects of the idea: from finding customers to building the product. Thus, the teams are getting all the resources and support in place to make things happen in a short period of time. The third day is dedicated to presentation. There is a 5 minutes time block to present the product or service to the crowd and the panel of experts. Also, there is the opportunity to talk to the experts and mingle with the mentors.

Startup Riots

Startup Riots are a one day conference where 30 startups do 3 minute, 4 slide presentations. It is one of the latest attempts at jump-starting the startup culture and tech community. It is an endeavour that started in Atlanta, USA, and this wasn't randomly. Atlanta is far from the Silicon Valley and the mega polises of the east coast, and this affected the initiation of this undertaking.

In essence it's a networking event focused around startup pitches to an audience comprised of recent grads looking for jobs, people involved in technology with other companies and investors as well as other start-ups. The Startups pitch everyone. The people involved in technology with other companies can serve as early adopter customers to relevant start-ups, the job seekers can find interesting local start-ups to work for and investors can invest in intriguing start-ups looking for funding.

In terms of scale it seems to be a smaller event then the other two mentioned above since it tries to keep a manageable audience, in order to allow the maximum amalgamation.

Startup Weekend

Startup SAFARI events are decentralised multi-day events for the local startup scene. Startups open their doors to everyone and give an authentic behind the scenes look to the daily work of entrepreneurs. Through these events someone can travel through the whole city and explore the local startup ecosystem in a unique way, attending interactive sessions directly in the startup offices. This is an access point to the world of true entrepreneurship.

Organizing startup events since 2012, Startup Safari is a network of more than 30 cities and plenty of projects connecting startups with investors and corporate partners, and building a network that allows the startups to connect all around the world. Through these years Startup Safari has organized more than 200 events and has a database of more than 10.000 startup contacts.

Connecting startups and established companies is beneficial for everybody involved. With individualized tours through startup hubs and creative networking events, this event tries to help startups and corporation to connect on eye level and build a foundation for future activities.

Educating traditional corporations on the latest startup trends in their industry, startup mindset and – working mode, can help to overcome inertia, build up awareness for industry changes, speed up processes and help to overcome outdated patterns of behaviour.

This event supports also corporations on their way towards a digitalization. From an active role as Leadership-Mentors to taking action as interim partners, they try to make sure that change is going into the right way and is sustainable and successful.

The executives behind this event try to help also the public institutions to increase the number of startups in their city, build an attractive startup ecosystem and educating the public institutions staff on startup mentality, methodologies and mindset. They also help the private companies to

reimagine their strategy and accelerate innovation, to learn how the startups think, act and decide, and to build strong partnerships with startups.

5. Lean Startup methodology

The following five sections will present different approaches in teaching entrepreneurship and enterprise development. In particular, there are presented five schools of teaching all originating in USA. They are the *Lean Startup process*, the *d.School methodology* taught at the Stanford University and the *Disciplined Entrepreneurship*²⁴ taught at the Massachusetts Institute of Technology, Living Labs that originated at MIT and the Breakthrough Incubators advocated by Arthur D. Little consulting company. These are approaches that change the way the entrepreneurship and innovation is being taught and implemented.

The startup is an institution, not just a product, according to the author of the Lean Startup approach *Eric Ries*, so it requires management, a new kind of management specifically geared to its context. A particular quotation of this person states that “*Startup success can be engineered by following the process, which means it can be learned, which means it can be taught*” (Ries, 2011).

Thus, this approach tries to manage the creation and early stages of the startups, by getting a desired product to customers' hands as soon as possible. The Lean Startup method teaches how to drive a startup, how to steer, when to turn, and when to persevere and grow a business with maximum acceleration. It is a principled approach to new product development.

Figure 6. The Lean Startup process



A core component of Lean Startup methodology is the build-measure-learn feedback loop. The first step is figuring out the problem that needs to be solved and then developing a minimum viable product (MVP) to begin the process of learning as quickly as possible. Once the MVP is established, a startup can work on tuning the engine. This will involve measurement and learning and must include actionable metrics that can demonstrate cause and effect question.

Source: Ries (2011)

To improve entrepreneurial outcomes, and to hold entrepreneurs accountable, the methodology tries to focus on the boring stuff: how to measure progress, how to setup milestones, how to prioritize work. This requires a new kind of accounting, specific to start-ups.

One of the critical differences is that while existing companies *execute* a business model, start-ups *look* for one. This distinction is at the heart of the lean start-up approach. It shapes the lean definition of a start-up: a temporary organization designed to search for a repeatable and scalable business model.

The lean method has three key principles:

First, rather than engaging in months of planning and research, entrepreneurs accept that all they have on day one is a series of untested hypotheses—basically, good guesses. So instead of writing an intricate business plan, founders summarize their hypotheses in a framework called a *business model canvas*. Essentially, this is a diagram of how a company creates value for itself and its customers.

Second, lean start-ups use a “get out of the building” approach called *customer development* to test their hypotheses. They go out and ask potential users, purchasers, and partners for feedback on all elements of the business model, including product features, pricing, distribution channels, and affordable customer acquisition strategies. The emphasis is on nimbleness and speed: New ventures rapidly assemble minimum viable products and immediately elicit customer feedback. Then, using customers’ input to revise their assumptions, they start the cycle over again, testing redesigned offerings and making further small adjustments (iterations) or more substantive ones (pivots) to ideas that aren’t working.

Third, lean start-ups practice something called *agile development*, which originated in the software industry. Agile development works hand-in-hand with customer development. Unlike typical yearlong product development cycles that presuppose knowledge of customers’ problems and product needs, agile development eliminates wasted time and resources by developing the product iteratively and incrementally. It’s the process by which start-ups create the minimum viable products they test.

The Lean Startup methodology teaches to work smarter and not harder. It has a premise that every startup is a grand experiment that attempts to answer a question. The question is not "Can this product be built?" Instead, the questions are "Should this product be built?" and "Can we build a sustainable business around this set of products and services?" This experiment is more than just theoretical inquiry; it is a first product. If it is successful, it allows a manager to get started with his or her campaign: enlisting early adopters, adding employees to each further experiment or iteration, and eventually starting to build a product. By the time that product is ready to be distributed widely, it will already have established customers. It will have solved real problems and offer detailed specifications for what needs to be built.

Too many startups begin with an idea for a product that they think people want. They then spend months, sometimes years, perfecting that product without ever showing the product, even in a very rudimentary form, to the prospective customer. When they fail to reach broad uptake from customers, it is often because they never spoke to prospective customers and determined whether or not the product was interesting. When customers ultimately communicate, through their indifference, that they don't care about the idea, the startup fails.

The Lean Start-up provides a scientific approach to creating and managing start-ups and getting a desired product to customers' hands faster. The Lean Start-up method teaches you how to drive a start-up how to steer, when to turn, and when to persevere-and grow a business with maximum acceleration. It is a principled approach to new product development.

6. d.School methodology

The Hasso-Plattner Institute of Design at Stanford (d.school) is the leading institution when it comes to teaching Design Thinking. The d.school is a place for explorers and experimenters, a hub for innovation, collaboration and creativity at Stanford University. It is a place where there is a constant effort to unleash the creativity of the students through the *Design thinking* approach.

The d.school's teaching and learning program is focused on helping people strengthen their creative abilities in order to apply them to the world. In the classes, students take on projects and challenges that require a new way of looking at what's possible to frame problems and produce innovative solutions both in class and beyond.

The students learn how to apply design thinking to their problems in order to generate innovative and user-centric solutions. They learn how to make use of practical design thinking methods in every stage of the problems, with the help of method templates. They acquire the how to initiate a new working culture based on a user-centric approach, empathy, ideation, prototyping, and playful testing. They study how to employ ethnographic and analysis methods, such as interviews, focus groups, and surveys. They are taught on how to prototype early and fast, as well as test their prototypes so as to reduce risks and accelerate organizational learning.

The *Design thinking* model taught by the d.school is a design methodology that provides a solution-based approach to solving problems. It's extremely useful in tackling complex problems that are ill-defined or unknown, by understanding the human needs involved, by re-framing the problem in human-centric ways, by creating many ideas in brainstorming sessions, and by adopting a hands-on approach in prototyping and testing.

The five stages of Design Thinking, according to d.school, are as follows: Empathise, Define (the problem), Ideate, Prototype, and Test, as shown in the Figure 7 below.

Figure 7. Design thinking straight line process



Source: d.school

The first step of this model is to gain a complete understanding of the problem somebody is trying to solve. That is, to empathise with the problem of the customer. This involves observing, interviewing and questioning, understanding the problem. Otherwise said, the students must engage and immerse into the world of the problem.

The second step is defining the problem. After collecting all the information in the first stage, this step requires a careful analysis of this information, synthesis and delineation of the problem. This is a very important step in the whole process and a bridge which leads to the solution in the next stage.

Thus, the next step is the ideation. During the third stage of the Design Thinking process, designers are ready to start generating ideas. There are hundreds of Ideation techniques such as Brainstorm, Brainwrite, Worst Possible Idea, and SCAMPER. Brainstorm and Worst Possible Idea sessions are typically used to stimulate free thinking and to expand the problem space. So, by the end of this

phase, the students should have found the best way to either solve a problem or the elements required to circumvent it.

The fourth phase requires transforming of the solution into a prototype or a couple of cheap prototypes in order to examine the capability of the solution. This is an experimental phase, and the aim is to identify the best possible solution for each of the problems identified during the first three stages. The solutions are implemented within the prototypes, and, one by one, they are investigated and either accepted, improved and re-examined, or rejected on the basis of the users' experiences. By the end of this stage, the design team will have a better idea of the constraints inherent to the product and the problems that are present, and have a clearer view of how real users would behave, think, and feel when interacting with the end product.

The final fifth stage is where the designers or evaluators rigorously test the complete product using the best solutions identified during the prototyping phase. This is the final stage of the 5 stage-model, but in an iterative process, the results generated during the testing phase are often used to *redefine* one or more problems and inform the *understanding* of the users, the conditions of use, how people think, behave, and feel, and to empathise. Even during this phase, alterations and refinements are made in order to rule out problem solutions and derive as deep an understanding of the product and its users as possible.

Design thinking methods and strategies belong at every level of the design process. However, design thinking is not an exclusive property of designers—*all* great innovators in literature, art, music, science, engineering, and business have practiced it. What's special about design thinking is that designers and designers' work processes can help systematically extract, teach, learn, and apply these human-centered techniques in solving problems in a creative and innovative way—in our designs, in our businesses, in our countries, and in our lives.

7. Disciplined Entrepreneur (DE24)

The DE24 is a systematic and rigorous 24 step methodology to build new innovation-based ventures, created at Massachusetts Institute of Technology. **Disciplined Entrepreneurship (DE24)** is a set of tools used by MIT students, startup founders and corporate teams to build new ventures. It tries to depose the hypothesis believed by many people that the entrepreneurship cannot be taught, and those who are successful in starting a business are born with something others do not have. This strategy dispels that myth and shows how innovation-driven entrepreneurship can be broken down into discreet behaviours and processes which can be taught to intelligent and hardworking people.

As can be seen in the Figure 8 below, there are 24 steps to be followed by the new entrepreneurs in the journey of venture creation. These 24 steps form the canvas of actions to be taken by the start uppers. These 24 steps cover 6 categories or phases of venture building journey.

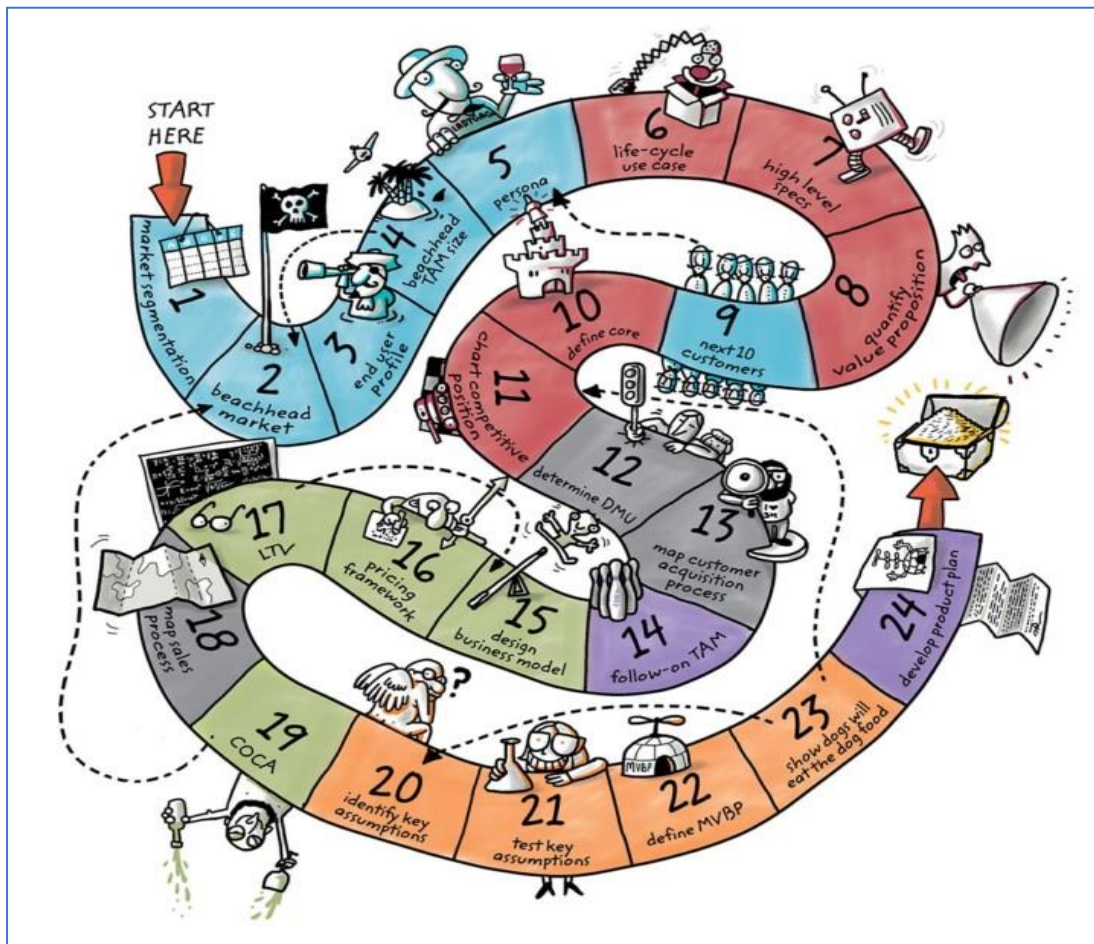
The first phase has to do with the ***identification of the customer***. There are six steps here:

- *Market Segmentation*, where the nascent entrepreneurs attempt to identify their customer and to create their profile;
- *Select a Beachhead Market*. A beachhead market is like a beachhead in war, like the invasion of Normandy. In the same way, the start-uppers should pick a market and win their early battles there;
- *Build an End User Profile*. At this stage the start-uppers will need to use market research in order to identify the typical end user in their beachhead market segment;

Calculate the Total Addressable Market (TAM) Size for the Beachhead Market. This market size is the amount of revenue the new entrepreneurs would make if 100% of the market became customers.

- *Profile the Persona for the Beachhead Market*. Here the start-uppers create a persona to serve as an exemplar.
- *Identify your next 10 customers*. The persona developed is useful, but the start-uppers need to identify other customers to make sure they aren't being too specific with the persona.

Figure 8. Disciplined entrepreneurship 24 (DE24)



Source: Aulet, 2013

The second phase relates to **what can you do for your Customer**. Here are the five steps of this phase, as follows:

Full Life Cycle Use Case, this is the step 6 where after the start-uppers have gathered detailed information about the target customer, they need to gather equally specific information about how they will use the product.

High-Level Product Specification, the step 7 in which the start-uppers should create a high-level product specification, a visual representation that shows what the product will look like.

Quantify the Value Proposition, step 8 measures the value proposition, focusing on the customer's needs, not on technology or features. In other words, it shows how the customer will get value from the product, expressed as a tangible metric.

Define your Core. In this step, the start-uppers describe what their business gives to customers that other companies cannot provide. That is, their company's core.

Chart your Competitive Position. With the competitive position chart, the students analyze how well both they and their competitor fulfil the customers' two highest priorities.

The third phase covers **how your Customer acquires your Product**. Here are three steps:

Determine the Customer's Decision-Making Unit (DMU), the step 12 in which the students try to verify if the potential customers will be able to buy the product, by identifying firstly who will make the purchasing decision for the end user.

Map the Process to Acquire a Paying Customer, is the step 13 in which the start-uppers need to understand the decision-making process of the customer, so that they can make their product fit that process.

Map the Sales Process to Acquire a Customer, this is the step 18th of the process in which the students try to map the sales process, to think about the sales channel they are going to use and how it will change over time, and to consider factors such as how they intend to make sales and how to collect money.

The fourth phase concentrates on **how you make Money off your Product**, with 4 steps:

Design a business model, the step 15 in which the start-uppers must answer the question: "How will the company make money?"

Set your pricing framework is the step 16 in which starts the pricing process, but pricing is likely to change several times through the step, leading to different price points. The entrepreneurs should learn to price based on how much value the customer gets from the product, not on how much it costs to produce the product.

Calculate the Lifetime Value (LTV) of an Acquired Customer is the step 17 of the canvas. The entrepreneurs learn to calculate the average profit they will make on a new customer and include factors such as revenue streams, costs, customer retention rates, and so forth.

Calculate the Cost of Customer Acquisition (COCA) is the step 19. The COCA is an important measure of cost. The LTV, along with the COCA can offer an idea of how much can be made in the beachhead market.

The fifth phase is **how you design & build your product**, with 4 distinctive steps:

Identify Key Assumptions is the step 20 in the process. You are creating a new kind of business that's never been attempted before. Because it is a new kind of business, the entrepreneurs make a lot of assumptions about the product, the market, the customer. Now, they must systematically go through and test them all.

Test Key Assumptions. In the step 21 the start-uppers must test their key assumptions as cheaply and quickly as possible; just empirical data to verify that their assumptions are on track with reality.

Define the Minimum Viable Business Product (MVBP), the step 22 in which the start-uppers will integrate their assumptions into a single system test to verify the minimal product for which a customer will still pay. The MVBP should be sufficient (in other words, it should do the job, and it should be simple).

Show that the "Dogs Will Eat the Dog Food". Where the start-uppers decide to price their product doesn't matter as much as showing that the customers will pay for it. It's not that unusual to see a team plug away dutifully on product design, only to find that, at the end of the day, they have a product no one will pay for.

The last phase is concentrating on **how you scale your business**, with two last steps to be taken:

Calculate the TAM size for Follow-on Markets. This is the step 14 in the process, but it belongs to the scaling business phase. The start-uppers should take a moment to consider what other markets might be good for their product. This should be a brief exercise, because for the most part, the focus should still be on the beachhead market.

Develop a Product Plan. This is the last step of the process, the point where the start-uppers can start build a product for the beachhead market. Now the start-uppers can develop a product plan.

8. Breakthrough Incubator

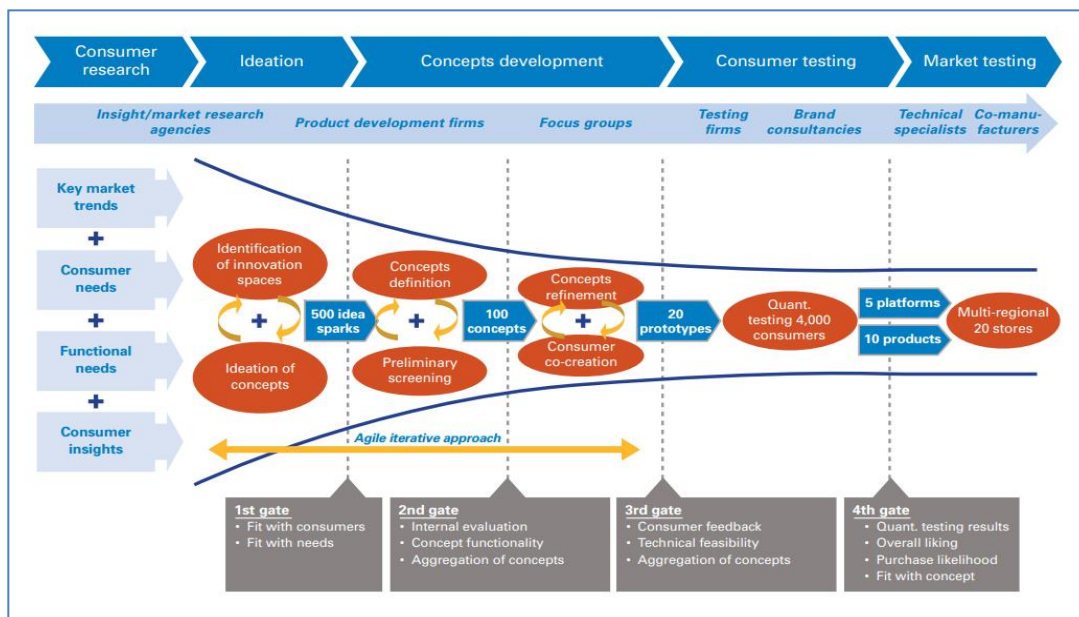
Breakthrough innovation is a model implemented at Arthur D. Little consulting company for assessing businesses to develop and launch radically new products, services or businesses that deliver significant value. This model is used mainly for established companies that have internal units or programs to drive breakthrough innovation.

It remains difficult for established companies to truly embrace the idea of investing in unfamiliar and non-core business opportunities which involve significant commercial risk and require new competencies. The Breakthrough Incubator (BI) model is a highly effective solution for companies that are serious about transformation and building sustainable new businesses of scale.

This model delivers major benefits in terms of speed, cost, and likelihood of success, according to its creators. It involves radical collaboration across the innovation ecosystem and covers the entire innovation process from idea to commercialization, including the strategic, commercial, operational, and technical aspects.

It starts from the *consumer research*, as can be seen in the Figure 9 below, it leads to *ideation*, to *concept development*, *consumer testing* and it ends with the *market testing*. In essence, this is the “build, operate, transfer” philosophy applied specifically to innovation and product development.

Figure 9. The Breakthrough Incubator Model



Source: Arthur D. Little

Once the basic scope and aims are defined and agreed, the BI partner commences the program with an initial strategic review aimed at establishing and confirming the feasibility of the proposition in terms of an achievable ambition. Initial steps also usually include market/ customer/consumer insight (“pull”) and technology analysis (“push”). The product and service development process then proceeds using an agile approach which includes: ideation, concept development, product development and customer testing. Once there is a shortlist of new target products, supply chain sourcing and manufacturing/operational analyses are conducted (i.e., how can it be made at scale?) and an initial business case is developed, leading to a growth strategy which sets out the path to

grow a sustainable business in a three- to 10- year time frame. Simultaneously, work is commenced on, for example, brand/offer strategy and channel analysis. A key feature of the model is that the BI partner takes the project through to commercialization, including test launching of actual products and services – not stopping at the prototype or bench-scale phase.

A typical BI program commences with an ambition from the company's top team to create a new business based on innovative products or services in an area which is non-core to the existing business. Rather than conducting the program in-house, the company engages a suitably qualified BI lead delivery partner ("BI partner") firm to take on the entire innovation process. The BI partner acts as an "orchestrator", harnessing resources from within the BI organization itself, as well as an extensive ecosystem of specialist partners. The BI partner takes full, single-point accountability for successful delivery as the prime for the program (Eager et al, 2018).

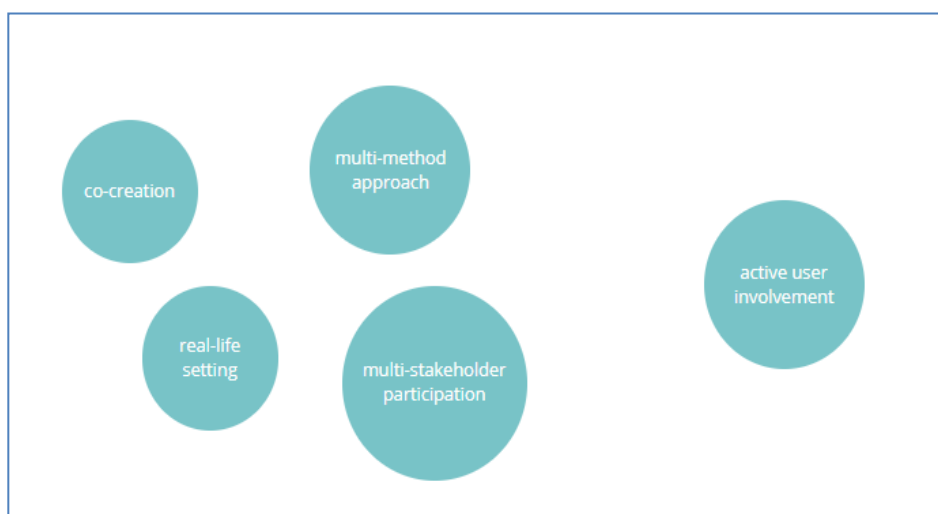
A key aspect of the model is the use of agile approaches in the development process, with a strong focus on early customer/consumer testing, and iteration with short cycles, including immediate assessment of commercial and strategic implications in parallel with product development and testing. This agile approach ensures that the development is strongly market-/customer-/consumer focused and the practical and scale-up aspects are properly assessed at an early stage – rather than after prototyping.

9. Living Labs

The Living Labs (LLs) are defined as user-centred, open innovation ecosystems based on systematic user co-creation approach, integrating research and innovation processes in real life communities and settings. LLs are both practice-driven organisations that facilitate and foster open, collaborative innovation, as well as real-life environments or arenas where both open innovation and user innovation processes can be studied and subject to experiments and where new solutions are developed.

LLs operate as intermediaries among citizens, research organisations, companies, cities and regions for joint value co-creation, rapid prototyping or validation to scale up innovation and businesses. LLs have common elements but multiple different implementations.

Figure 10. The elements of the Living Labs



Source: European Network of Living Labs

There must be present 5 key elements in a living lab:

- *active user involvement* (i.e. empowering end users to thoroughly impact the innovation process)
- *real-life setting* (i.e. testing and experimenting with new artefacts “in the wild”)
- *multi-stakeholder participation* (i.e. the involvement of technology providers, service providers, relevant institutional actors, professional or residential end users)
- *multi-method approach* (i.e. the combination of methods and tools originating from areas of ethnography, psychology, sociology, strategic management, engineering)
- *co-creation* (i.e. iterations of design cycles with different sets of stakeholders).

The next figure (Figure 11) shows the similarities and differences between the pre-incubators and the living labs. In terms of objectives, the pre-incubation approach focuses on supporting future entrepreneurs from the higher education and research environment to establish successful businesses, whereas the Living Lab approach emphasizes on the user-centric innovations in the development of new products and services, using a co-creation process.

The pre-incubation process does not necessarily have a user-centric approach in assisting the development of a business idea into a marketable product or services, as is the case of the Living Lab approach. However, the process of testing the market of a business idea during pre-incubation, including traditional market analysis, identification and direct with potential customers and

presentation of the product or service in a business style, provides the opportunity to incorporate customer requirements into the product design, configuration and price.

Figure 11. Differences between Pre-incubators and Living Labs

Concept	Pre-incubation	Living Lab
<i>Objective</i>	<i>Innovation development and support:</i> <ul style="list-style-type: none"> – Supporting future entrepreneurs from the academic environment to establish and manage a successful business 	<i>Innovation development and support:</i> <ul style="list-style-type: none"> – Supporting user-centric innovations for new products and services, using a co-creation process
<i>Structure</i>	<i>Collaborative environment:</i> <ul style="list-style-type: none"> - Focused on potential entrepreneurs - Involving regional stakeholders, such as higher education institutes, regional innovation centres, business incubators, private capital 	<i>Collaborative environment:</i> <ul style="list-style-type: none"> - User-centric approach - Involving innovators, researchers, service providers, policy makers
<i>Facilities</i>	<i>Resource-sharing facilities:</i> <ul style="list-style-type: none"> - Working space (real or virtual) - ICT infrastructure - Information and communication tools 	<i>Resource-sharing facilities:</i> <ul style="list-style-type: none"> - Virtual space - ICT infrastructure - Information and communication tools
<i>Services</i>	<i>Co-ordination and management of the innovation process:</i> <ul style="list-style-type: none"> – Selecting and managing potential entrepreneurs – Defining the market potential of new ideas and forming business plans – Linking into special networks and expertise – Training in business skills and requirements 	<i>Co-ordination and management of the innovation process:</i> <ul style="list-style-type: none"> – Engaging and motivating users – Supporting the Living Lab process – Brokering and managing Living Lab projects – Internal and external communication

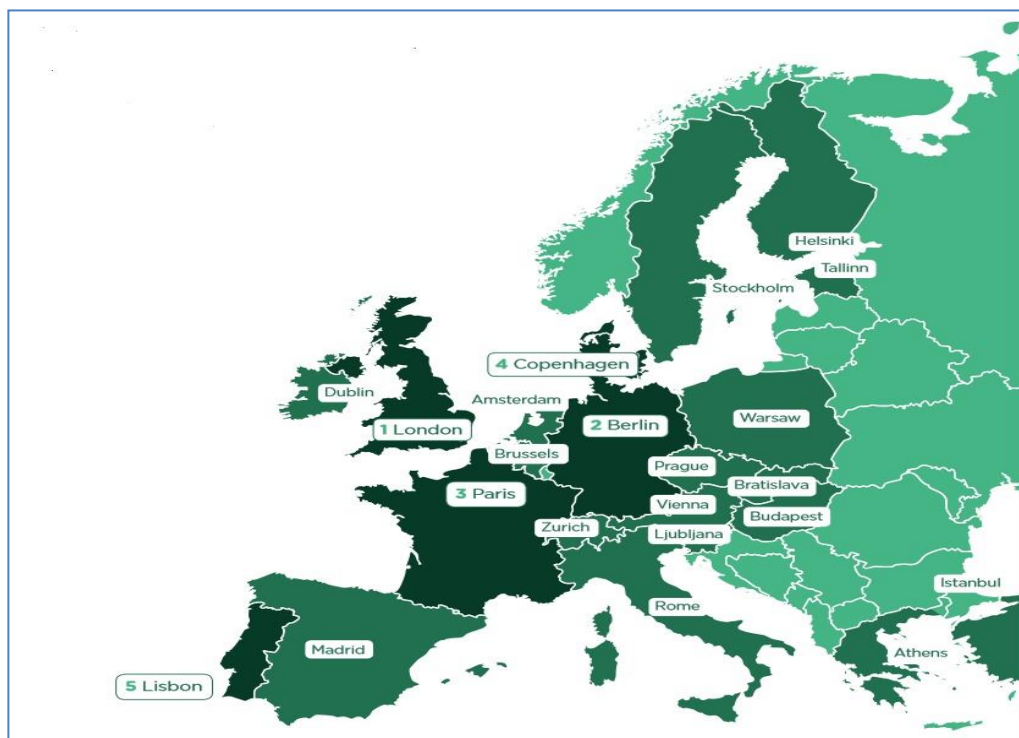
Source: European Network of Living Labs

The rest of the parameters seem to be similar. Thus, the living labs are trying to focus on making the society a part of the innovation process. This parameter is very important in the product development. Also, this approach resembles more the 4Helix cooperation strategy. That's why it is recommended to use this approach in any pre-incubation endeavor.

10. Startup hubs in Europe

The EU Startup Monitor states in its 2018 report that the biggest European startup hubs have been established in London, Berlin, Paris, Copenhagen and Lisbon, as shown in the Figure 12 below. This means that the startup ecosystems in these countries are more mature, saturated, rich and established.

Figure 12. the European Startup Ecosystem



Source: EU Startup Monitor 2018 Report

The fact that London is on the first place in Europe is not random. As a city, London is very welcoming to individuals with diverse backgrounds. London's place in the world economy is thanks to its finance industry, rather than tech and entrepreneurship (London Startup Ecosystem Report 2020). In finance, London competes with New York for the title of the *capital of the world*.

Whereas New York's premise is to enable investment to *win big*, London's premise is *stability, security, privacy* and sometimes the protection of generational wealth. The key takeaway is that London has so much going for it in terms of a great location, language, finance and talent. Even the time zone is perfect for building an international hub of operations.

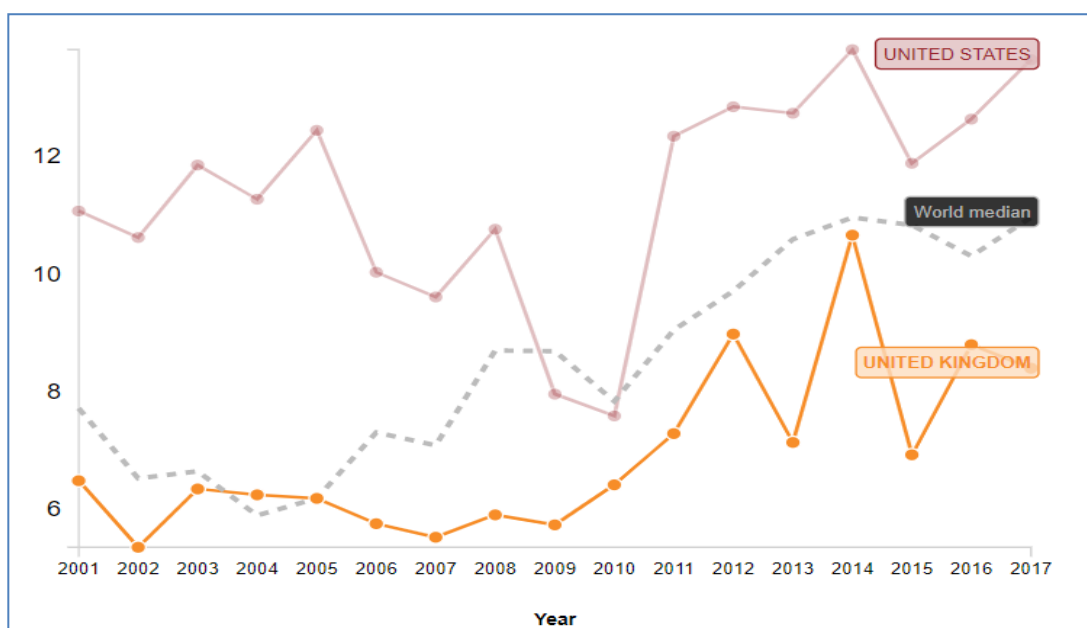
It seems that in UK a lot of things have stimulated from (Pike, 2013):

- Historical policy evolution
- International comparative performance
- Support on regional and local performance
- Strong interest in national and regional/local innovative policy issues

The indicator that looks at the entrepreneurial activity in a country is the Total early-stage Entrepreneurial Activity (TEA) Rate, which measures the percentage of 18-64 population who are either a nascent entrepreneur or owner-manager of a new business. The Global Entrepreneurship Monitor is measuring this rate in a number of countries. This enables the measurement of the propensity of individuals in particular countries to be entrepreneurial given the current social,

cultural and economic framework conditions that exist there. The Figure 13 below shows the TEA rate in UK compared with the world median and USA.

Figure 13. Total early-stage Entrepreneurial Activity Rate in UK, 2001-2017



Source: Word Bank, based on data from Global Entrepreneurship Monitor

As can be seen in the figure above, in 2017 UK had a TEA rate of 8.4. That is, 8.8% of the population aged 18-64 is either a nascent entrepreneur or owner-manager of a new business. This level is lower however in relation to the world median and that of USA, which in the particular year were at around 10% and 13.5%, respectively. In 2019 the TEA in UK reached the 9.34 level, showing an increase of 44% from 2001 to 2019.

German startup system

Berlin is among the 5 biggest European startup hubs. This is due to the fact that the startup ecosystem in Germany is well organized, which makes it easier to found and build innovative companies. The German market offers favourable launch infrastructure, good facilities and many options for funding.

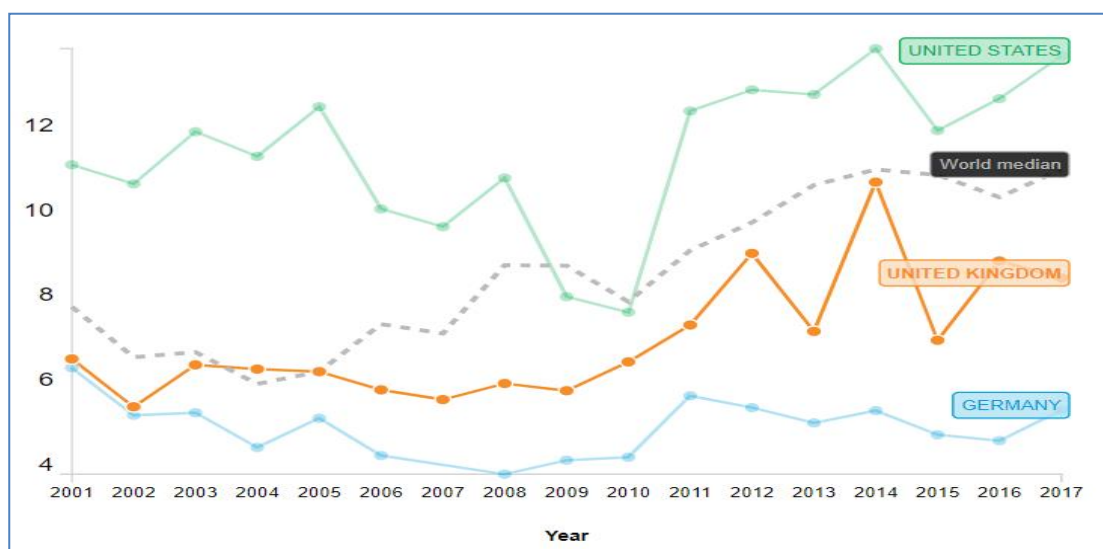
The German market is also famous for good conditions for international companies whose ambitions for promoting their products go far beyond just the local market. According to some opinions, one of the most important features that distinguish German startups from others is innovative business models and non-standard products that are in high demand on the market.

Also, it turns out that more than 10 per cent of the CEOs of startups in Germany come from abroad, and one-fifth of employees is foreign. The latest trends on the local market are PropTech and Greentech startups.

There are also favourable conditions in terms of obtaining funding. There are a lot of organizations or investors that have a wide offer for startups. Take for example the Rocket Internet and the German Startups Group. Rocket Internet is listed on the stock exchange and belongs to one of the main investors in Germany. The company has shares in many promising startups. The German Startups group, which is a Berlin-based investment company and a venture capital provider for Germany's flourishing startup scene, finances young company growth and also supports their set-up, providing them with business expertise.

The Figure 14 underneath shows the total early-stage entrepreneurial activity in Germany, in absolute terms, but also in relation to UK, USA and the world median. In 2017 this rate was at 5.28%, far below the United States (13.64%), world median (almost 11%), and UK (8.40%). In 2018 this rate was at 5.5% and in 2019 it rose to 7.63%. From 2001 to 2019 this rate increased by 21.5%, even though through all this period the rate in the country was around 5%, bottoming in 2008 below the level of 4%.

Figure 14. Total early-stage Entrepreneurial Activity Rate in Germany, 2001-2017

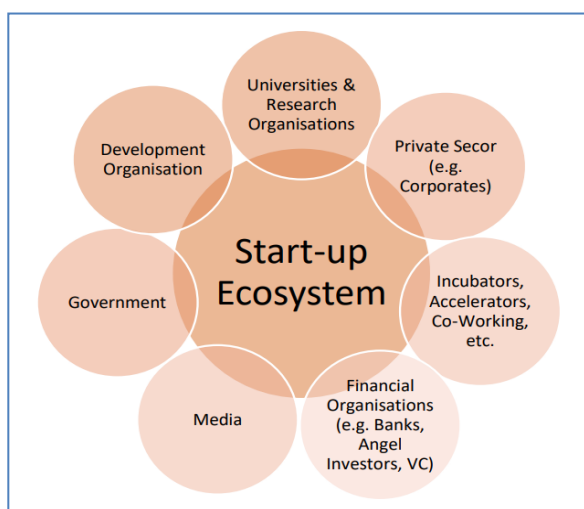


Source: Word Bank, based on data from Global Entrepreneurship Monitor

Germany seems to be in a good geographical and geopolitical position in the centre of Europe, which greatly facilitates movement and communication with other countries. It is also worth taking into account the stability of the local economy, which is not without significance for startups and potential investors. According to NimbleFins, Germany was ranked in first place in the 'Best European Countries for Startups 2019' analysis. The United Kingdom was in second place and Ireland third.

The figure 15 below shows the participants of the start-up ecosystem. Besides the incubators and accelerators, there are universities and research centres, the private sector represented by the businesses and corporations, the financial sector represented by the banks, VC and business angels, the government, the development organizations and the media.

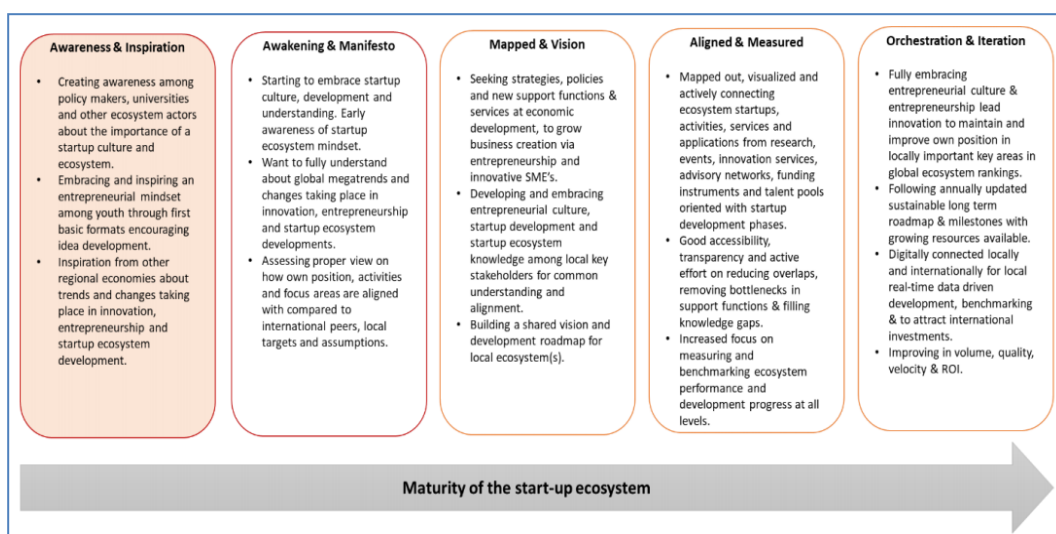
Figure 15. Startup ecosystem members



Source: Hach & Trenkmann, 2019

The next figure shows the dimensions that mark an ecosystem as mature. As can be seen, the more mature the ecosystem becomes the more interaction and collaboration there is between the participants. Even more, by progressing in maturity the ecosystem starts to build a shared vision and development roadmap, and then it starts to benchmark its performance.

Figure 16. Startup ecosystem maturity



Source: Hach & Trenkmann, 2019

Awareness and inspiration is the first dimension of the ecosystem's maturity, while the last and most mature dimension is the *Orchestration & iteration*.

11. Pre-incubation in Europe

The first defined pre-incubator in Europe was established in 1997 at the University of Bielefeld, in Germany, and the Higher Education Institutions have subsequently been the most likely hosts for pre-incubation centres (USINE, 2002). Thus, there is a strong link between the universities and the pre-incubators.

The first pre-incubator was established with the aim:

- To qualify academic entrepreneurs to found and to manage a company on their own,
- To increase the number of academic spin-offs,
- To create sustainable spin-offs, and
- To create a “culture of entrepreneurship” within the university.

In the framework of the EC-funded innovation project USINE (University Start-up of International Entrepreneurs) the concept of pre-incubation was transferred also to the Universidad Politécnica de Valencia in Spain and the Ecole Polytechnique in France.

- Ecole Polytechnique, Paris. Being a leading French institution in the area of High-Tech research, Ecole Polytechnique set up a pre-incubator as a link to the existing incubator X-TECH. Combining the high research potential with the pre-incubation concept promised a number of sustainable High-Tech spin-offs.
- Universidad Politécnica de Valencia (UPV). UPV has succeeded to implement systematic processes to source, protect and exploit promising inventions resulting from university research. The pre-incubator set up within the framework of the project intended to complement the spin-off process generation process at UPV and helps to create more sustainable spin-offs.

The innovative feature of the pre-incubator was that there was a specific management, legal and insurance structure that allowed academic researchers to test the feasibility of their business ideas before they could take the risk of setting up a company. This experience, in addition to continuous training and coaching, was expected to increase the sustainability of the future company.

In Europe we don't see many pre-incubators. Most of the structures dealing with the entrepreneurship are either incubators or accelerators. It is the incubators that undertake the role of the pre-incubation, to crave and shape the new business ideas. Like in the case of Spain, where the incubators have three phases: pre-incubation, incubation and post-incubation.

On the other hand, there are a lot of spin-offs happening at Universities across Europe and worldwide, which represent academic entrepreneurship. According to a study by O'Shea et al. (2005) the average research university in the US in that year generated an average of 1.91 spinoffs per annum. In the case of MIT, this number was 31 spinoffs in one year alone. Of course, in the rest of the world this number is smaller.

Thus, we see many cases in Europe where the incubators undertake the role also of pre-incubation. However, in many European countries, researchers have to choose between academia and business, as any activity in one field will lead to rejection by the other. In particular, those researchers who are used to lifelong employment by public authorities only see a limited attractiveness in producing knowledge for private markets, where risks (but also opportunities) are higher. Within business, lack of experiences with scientists and scientific knowledge and its uncertainty caused misunderstandings of actual potential by academia-business interactions. In many cases, it seems as if both sides (academia and business) use different language codes and are permanently suspicious of being exploited by the other side. The achievement of the EU objectives to become the world leading market will critically depend on overcoming these barriers (Wink, 2004).

Despite the common view that the university has been the temple of knowledge and the creator and trustee of a society's knowledge throughout its history, it was well into the nineteenth century when this knowledge began to systematically move into the field of science and technology. The temple of knowledge was involved in simply increasing knowledge *per se*, a far cry from the needs of a today's industrial fabric (Gil and Saez-Cala, 2004).

It is considered that MIT alumni have created about 4000 companies worldwide with an annual turnover of about \$250 Bn. In UK in the years 2011-2013 the universities have contributed to the national economy by \$70Bn and have produced about 750.000 new jobs (Gatsios, 2014). UK and USA universities also earn substantial income from patents and licences. This is a common indicator for the performance of universities and research organizations in the context of knowledge exploitation.

The university is a natural incubator with flexible resources, people and access to students who can be organised to undertake new projects (Etzkowitz, 2003). Thus, the proximity to universities and public research organizations is an important factor for any spinoff or startup.

Spin-offs and startups are part of the universities' outputs. Thus, in Germany Humboldt Innovation initiated 2 spin-off zones in Berlin. The spin-off zone is a pre-incubation centre in which students or early-stage start-ups get coaching support to further implement their business idea. The spin-off zones are located in the city centre and in the technology park Adlershof. Two staff members manage each zone and one coach is responsible for assuring close contact with around 9 start-ups.

Univations GmbH Institute for Knowledge and Technology Transfer at the Martin-Luther University Halle-Wittenberg is the local partner for pre-incubation, entrepreneurial education and business model development for technology-based businesses. As a private enterprise and associated institute, Univations provides process-oriented start-up services from idea development to sustainable management.

The Technology Centre Dortmund, in addition to typical incubator services like internet, telephone service, conference rooms, room cleaning, certain capacity building activities, it offers more specialised services like:

- A pre-incubation centre where students can test their ideas and where business plan ideas are commented and checked with the expertise available in the technology park
- A specialised expertise and contact network of research and project funds
- Contacts with larger businesses and other experienced businesses in the sector/branch
- Contacts with the local banks and their financial credit offers as well as with business angels and venture capitalists
- Contacts with research and testing infrastructure like laboratories
- Links to technical expertise in the different branch fields

In Sweden a significant number of higher education institutes offer entrepreneurship education, which does not focus on traditional teaching of individuals, but has increased the focus on active involvement of the **students in commercializing research and new venture creation**. A specific example is the case of Jonkoping University, which provides a course to all students, where teams of students can establish their own company, parallel to their study. The students get access to experienced mentors and relevant teaching activities during the study. Many activities are coordinated by Creative Centre, which is a non-profit organization at the university that runs the Business Lab, a **pre-incubator** where persons get an environment to explore the potential of their ideas. With more than 200 student start-ups during a period of 5 years, it can be viewed as an implementation of a business generation model of entrepreneurship education, where learning by doing and student involvement is the core activity.

The KTH Innovation is an incubator created at the KTH Royal Institute of Technology in Sweden. It offers a pre-incubation program, where the startupper get one year of focused development, a

physical place to get to work, and become a part of their supportive community. The goal of the program is to help its pre-incubatees to find their first customer and to have their first product or service ready for launch. On the way, they are learning a lot about entrepreneurship and business development. The program includes weekly workshops to develop as an entrepreneur and offers office space on campus.

In Greece the role of pre-incubation again is undertaken by the incubators. Also, we don't see universities based incubators. But there are a few excellent examples of incubators and accelerators.

OK!Thess acts as a pre-incubator for the Northern Greece, by providing three acceleration cycles each year that turn innovative ideas into investment-ready products or services through an intense entrepreneurial training, coaching and mentoring programme. The cycle comprises an intensive programme of master classes, as well as regular one-to-one coaching by an experienced professional who advises and guides participants through to the emergence of a good business plan. Since the beginning of the operation of OK!Thess 140 teams have applied for the accelerator programme. During the first six cycles, 47 teams have participated, whereas currently there are 14 teams going through the acceleration process. It is estimated that almost 125 people have been involved in these actions. Finally, 22 teams still continue their effort by receiving occasional help (Alumni teams).

Also, Corallia Innovation Hub in the south (Athens) in collaboration with the Enter*Grow*Go (egg) incubator provides incubation and pre-incubation services. The egg incubator is an initiative of the Eurobank and Collarila, and has produced from 2013 impressive results for the level of Greece.

12. Startups in Greece & Bulgaria

Greek startup ecosystem

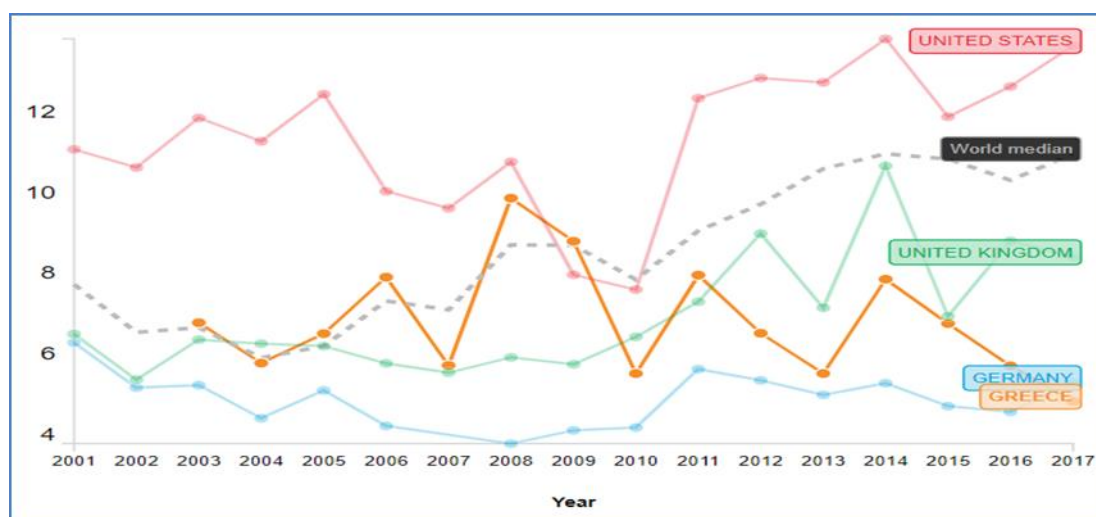
Up until now the entrepreneurship in Greece was marginalized. The public authorities' at all three levels and the whole public sector were looking at the entrepreneurship with disgust. The academics were looking at the entrepreneurship as a remote island which doesn't have anything to do with the universities and the research centres.

Even more, some indicators were showing that doing business in Greece was not the easiest thing on earth. That is, according to the indicator *ease of doing business*, Greece was on the 79th place among 190 analyzed countries. From the OECD countries Greece it on the last place (World Bank, 2018).

The fear of failure is another indicator that shows the entrepreneurial propensity in Greece. According to Global Entrepreneurship Monitor, 41.6% of the population aged 18-64 indicates that the fear of failure would prevent them from setting up a business, when the global rate was at 41.7% (GEM, 2019). That is, this fear is not high when benchmarked with the global average, but quite high when compared with Lebanon (22.4%), or USA (35.1%).

The indicator depicted visually in the Figure 17 below shows the percentage of the persons aged 18-64 who are either a nascent entrepreneur or owner-manager of a new business.

Figure 17. Total early-stage Entrepreneurial Activity Rate in Greece, 2001-2017



Source: World Bank, based on data from Global Entrepreneurship Monitor

As shown in the figure, in 2017 the entrepreneurial activity in Greece was at 4.8%, below the world median (almost 11%), USA (13.6%), UK (8.4%), and Germany (5.3%). Germany only in 2017 over passed Greece. From 2001 to 2017 the early stage entrepreneurship rate in Greece was above that of Germany. In 2018, this rate in Greece was at 6.4% and in 2019 it was at 8.2%, thus showing a steady increase.

One more indicator for the entrepreneurial behaviour and attitude is the *Entrepreneurship as a Good Career Choice Rate*, assessed by the Global Entrepreneurship Monitor. This indicator shows the percentage of the 18-64 population who agree with the statement that in their country most people consider starting a business as a desirable career choice. In Greece in 2019 it was at 50%, when the global average was at 65.7% (GEM, 2019).

Furthermore, the financial crisis of the last decade resulted in budget cuts and most important the brain-drain of the educated Greek youth. Both results affected negatively the country and the entrepreneurship.

Yet, in the last years, there seems to be an improvement in all the indicators in relation to entrepreneurship. The startup community has started to grow rapidly. There are more and more endeavors and events to support and assist the new entrepreneurs. Especially, after 2010, the growth is almost exponential. According to a research conducted by Marathon Venture Capital, 301 Greek startups raised a total of \$2.4 billion in 500 investment rounds by 268 venture capital funds between 2010 and 2018. Moreover, a total of 47 acquisitions and 5 IPOs took place during that period. These figures highlight a vibrant industry that has already reached a considerable size (Gasteratos, 2019).

There are a couple of factors that makes Greece a favourable location for startup activity and investment. The country has a highly educated talent pool: 25% of 25-to-64-year-old have a bachelor's degree (when the OECD average is 16%), with 25% holding a science, technology, engineering, or mathematics degree (when OECD average is 22%) (Antoniades, 2018).

Most of the incubators however are located in the big Greek metropolis: Athens and Thessaloniki. The rest of the cities in the country are missing any infrastructure in relation to incubators and accelerators. The only startup related actions are the startup weekend events organized in the big cities like Volos, Patra, Corfu, Chania and Heraklion.

Thus, Greece needs a lot of effort in order to improve its entrepreneurial activity. Improvements are needed in the institutional framework, commercial and legal infrastructure, access to funding, collaboration, attitude towards risk, cultural and social norms, government policies in terms of taxes and bureaucracy as well as support and relevance, government entrepreneurship programs, and finally - entrepreneurial education at school and post school stage.

Bulgarian startup ecosystem

Just a decade ago, Bulgaria did not really have a startup ecosystem despite being traditionally strong in the IT sector. However, since then, the country has been on a steady trajectory to transition from an outsourcing destination into a major innovation hub. Today, the Southeastern European nation is home to over 400 startups, 15 venture capital and growth equity firms, and an increasing number of accelerators, supporting associations, and co-working spaces. More and more founders who set up their ventures here are now reaching Series A or even later rounds. There is over €200M in VC funding available for local entrepreneurs as of the beginning of 2021.

According to the fDi European Cities and Regions of the Future 2020-21 report, the Bulgarian capital Sofia ranks 3rd in Europe when it comes to cost-effectiveness and foreign direct investments strategy. At the same time, the country enjoys a multilingual pool of over 65,000 IT specialists,

constantly boosted by 15 universities and 220 high-schools with ICT classes as well as numerous private academies. In a nutshell, it's much cheaper to build a great technology company here than in most major startup hubs around the world.

Moving forward, the startup ecosystem in Bulgaria seems well-positioned to develop further, especially in verticals like fintech, artificial intelligence, and deep tech. The success stories of local founders are not only a mechanism for driving top talent to the country but also inspiring a growing number of future entrepreneurs to build a venture here. Bulgaria has also managed to establish a good connection with its diaspora – successful entrepreneurs and investors living abroad. For example, Bogomil Balkansky, who is a partner at Sequoia Capital, Stefan Zlatev, an investor at Breakthrough Energy Ventures, and Mina Mutafchieva, principal at Dawn Capital.

There are multiple organizations invested in ecosystem building and the development of startup know-how and mindset in Bulgaria – such as the local chapters of Endeavor and Founder Institute, as well as the Bulgarian Startup Association (BESCO), and the Bulgarian Private Equity and Venture Capital Association (BVCA).

That said, for the ecosystem to reach the next level, there are still plenty of gaps that need to be filled. When it comes to startup-friendly regulation, efforts from governmental bodies are still insufficient and often missing. For the most part, the positioning of Bulgaria as a technological hub is driven by the private sector. On a similar note, there is no unified migration strategy for attracting senior-level sales and marketing talent from abroad. Innovation output from universities is still rarely commercialized, and to date, there are not enough incentives for that to change – financial or otherwise. Outside of the fintech sector, corporations are still rarely involved with the startup ecosystem. Last but not least, founders are concentrating in just one place – the capital Sofia. While the entrepreneurial communities in other big cities such as Varna, Plovdiv, and Burgas are also developing, there is more work to be done in smaller towns.

13. The Champions at Greece

i4G - Incubation for Growth SA - info@i4g.gr

The process of integrating a company into i4g includes all the stages from the initial exploratory contact to the final exit of the company from the incubation. It is pointed out that if there is a corresponding agreement, the management company of incubation participates in the share capital of the companies that will be installed in incubation.

- ⇒ 1st Screening
- ⇒ Detailed Appraisal (DueDiligence)
- ⇒ Investment Memorandum
- ⇒ Signing Agreements - Installation
- ⇒ Stay at incubation
- ⇒ Exit from the Investment - Interruption of Installation

The i4g provides spaces from 25 sqm to 100 sqm.

Today it hosts about 20 companies.

In its 15 years of operation, it has hosted a total of 45 companies.

It has invested more than 2.3m euros in incubators.

It is actively involved in international projects for the development of incubators in third countries.

PATRAS SCIENCE PARK- info@psp.org.gr

The procedure followed for the selection of companies is presented on the website <http://www.psp.org.gr/en/sign-up-procedure>.

Interest companies usually fall into the following categories:

Small innovative technology companies in their infancy

Businesses with significant technological and scientific background that utilize the results of research and technology created in the laboratories of the Academic and Research Institutions (spin-off) or large enterprises (spin-out)

Development Research and development units (development units)

Operations Centers of large companies

Cooperative Initiatives (Clusters)

- ⇒ International Companies or their subsidiaries with tradition and focus on innovation, research and technological development

External partners specialized in individual sectors of the value-added chain, in order to collaborate and provide specialized services. The methodology used to evaluate companies uses data from different sources of their business directly related to Resource Based View. Each company is examined separately and the existing synergies are taken into account or may be created between them in the context of future actions.

The obligations of the companies are to follow the operating regulations of the building, to participate in specific actions, to implement projects, to implement their business plan, to provide information about their actions, to observe the financial and operational obligations arising from the lease agreement

THERMI S.A. - eirini@thermi-group.com

Thermi incubator provides 5,000 sq.m. in a specially constructed building with meeting rooms, library, IT center, etc. provided in combination with lower market rent, call center, secretarial support for accounting, financial and legal operations. Since its inception, it has hosted 31 companies, 10 of which have been invested by Thermi itself. Its fields include medical applications, software, internet apps, agricultural technology, telematics, etc.

The approval process goes through a series of committees (technological, financial, investment) and if the process is completed successfully then on average 40% of the new incubator is purchased by incubator.

The process of including a company in the THERMI SA incubator begins with the evaluation of the business plan, the installation of the company in the incubator and the participation of THERMI SA in the company's share capital and then the maturation of the company and its exit from the incubator.

After joining the incubator, the companies undertake to follow a business plan agreed with the Coaches of the incubator and to inform the management of the incubator with quarterly reports on the monitoring of the goals that have been set. Each company is assigned a Coach as well as external partners (Mentors) who can help in the further development of the specific company.

FOUND.ATION MAKER'S PLACE PRIVATE COMPANY - info@thefoundation.gr

Found.Ation Maker's Place is one of the first innovation platforms in South East Europe, acting as a start-up hub, a digital enterprise accelerator, and a technology training team. It helps companies organize their processes and direct their resources to a human-centered future. It activates innovation through digital technologies and new business models. It trains people and companies in the digital mindset, technology platforms and tools, providing them with skills for the future and creating a pool of talent with new career opportunities. It connects businesses, start-ups and new talents in an entrepreneurial ecosystem. It was originally founded in 2011 as one of the first collaboration sites in SE Europe and has since developed into a comprehensive consultant for the evolving business world in the new technologically guided reality.

Epirus Scientific and Technological Park SA - <http://www.step-epirus.gr/>

In order for a company to be established in ESTP, it must submit the following documents:

⇒ Application

- ⇒ Affirmation
- ⇒ Company Statute
- ⇒ Business Plan

From the moment of submission of the above data, the Board of ESTP will respond positively or negatively within 15 days. The installation of the company is done immediately with the signature:

- ⇒ Installation agreement
- ⇒ Equipment receipt agreement

ESTP provides 32 Spaces for exclusive use, 1 Meeting rooms and one Seminar rooms.

Today ESTP hosts 22 companies and 2 support structures.

EKINISILAB –

EkinisiLAB is an initiative of SEV to create an organized environment for the emergence of innovative business plans by young people who need support, in order to turn their business idea into a complete business plan. SEV aims to effectively enhance the entrepreneurship of knowledge and to create new, innovative, extroverted businesses. EkinisiLab's strategy EkinisiLab focuses on knowledge-based development and the application of new technologies. EkinisiLab's strategic goals are:

- Supporting new entrepreneurship in areas of extroversion, high added value.
- The connection of research with the economy through the creation of new businesses (startups, spin-offs) and the development of partnerships (technology transfer) to improve the competitiveness and productivity of existing Greek companies.
- Creating value for society.

To whom is it addressed to:

- To future young entrepreneurs who envision original, new ideas and want to make them a "practice" in order to create their own successful business.
- To young entrepreneurs who need to acquire the knowledge and equipment they need to support their business.
- In groups of scientists with innovative proposals and interest in business development.
- To groups of researchers interested in developing proposals from their research work aimed at transferring technology to industry and production.

What it offers:

In the context of 6-month cycles:

- ⇒ Market study and business model design and implementation plan.
- ⇒ Personalized continuous guidance from experienced coaches.
- ⇒ Design of products and services with an international perspective.
- ⇒ Targeted communication strategy and planning of the necessary promotion and promotion actions.
- ⇒ Networking with businesses and financial organizations to develop business partnerships and secure financial resources.
- ⇒ Organized network of mentors of high-ranking business executives & entrepreneurs.

TECHNOLOGICAL CULTURAL PARK OF LAVRIO - info@ltp.ntua.gr

Lavrio Technological Cultural Park (TPPL), is an organization of scientific research, education, business and culture. It was founded on the site of the old French Society of Lavrio (Compagnie Française des Mines du Laurium) in 1992, on the initiative of the National Technical University of Athens.

The services provided by TPPL. but also the renovated facilities, continue to support research, education and technology. Today, the T.P.P.L. is essentially the only Technology Park in the region of Attica that specializes in key areas of modern applied technology, such as information technology, electronic technology, telecommunications, robotics, laser technology, environmental technology, energy saving, shipbuilding. , marine technology, etc.

The total area of the stadium is 250,000 sq.m. Of the three distinct building units of the complex, 18 buildings with a total area of 13,000 sq.m. have been restored and house the functions of the Park. about.

The 14 buildings with a corresponding covered area of 12,000 sq.m., form the first building unit. Their restoration was funded by the overall program for the establishment of the Technology Park, while from the remaining four buildings, with an area of approximately 1,000 sq.m., the two were funded by laboratory programs of the NTUA. and the other two from private resources, with self-financing of the established companies. The 10,000 sq.m. accommodate the established companies presented in the relevant paragraph, while the 3,000 sq.m. house the cultural and supportive uses of the Park.

The Cube Workspace M.I.K.E - hello@thecube.gr

Cube Workspace brings together people who are open to new ideas, love innovation and seek change through applicable initiatives.

On the seven floors of the building, it provides offices, meeting rooms, seminars, a workshop and an event space. It has already hosted 20 start-ups with some of the most innovative teams in Greece.

Space Description Space Number Total Area (sqm) Hospitality (individuals)

Cube Workspace provides 20 Spaces for exclusive use, 3 Meeting rooms, 4 Seminar rooms, 4 Areas of cooperation.

SCIENTIFIC TECHNOLOGICAL PARK CRETE - saitakis@stepc.gr

The Scientific and Technological Park of Crete (ETEP-K) is an initiative of the Foundation for Technology and Research (FORTH), in the context of its role in disseminating the know-how produced in the Academic Community and Research Institutes.

It is housed in two buildings, with spaces of 4000 sq.m. approximately in total at the Vasilika Vouton location, 7 km from the center of Heraklion, at the FORTH facilities, next to the new buildings of the University of Crete and the University Hospital.

Adapted to the changing needs of the region and the research developments of the Research Institutes of FORTH and the Academic and Research Institutions of Crete, ETEP-K offers, in addition to the facilities and services of INCUBATION for the expertise of the newly established companies professional services aimed at helping and guiding new businesses

KEDIVIM Entrepreneurship Incubator - info@kekpkm.gr

This is a new incubator operating in Serres. It is co-financed by the European Union and by National Resources of the Participating States under the IPA "Greece - The Former Yugoslav Republic of Macedonia 2007-2013" cross-border program.

Space Description Space Number Total Area (sqm) Hospitality (individuals)

The Park provides 4 Spaces for exclusive use, 1 Meeting room, 2 Seminar rooms.

The incubator currently hosts 3 companies.

ACEin - Athens Center for Entrepreneurship and Innovation-acein@aueb.gr

The Center helps the beneficiary business groups to develop their ideas and move from the idea stage to the business implementation stage, while increasing the chances of success through continuous interaction with the market. This process of development and maturation concerns each new business idea for a product / service and suggests that each business group wants a different approach to training, consulting guidance, support services and networking activities. The approach used to provide the above support actions is based on multiple levels based on the process of development and maturation of business schemes. The following are the basic stages of idea / group maturity (based on Lean Startup methodology):

Stage 1: Development of the business idea / model

Stage 2: Impression of concept and first feedback from the market

Stage 3: Development of concept and next feedback from the market

Stage 4: Final preparation for market exit

Stage 5: Start of operation and development

THESSALONIKI TECHNOLOGICAL PARK - park@thestep.gr

The Technology Park of Thessaloniki - SA Management & Development Company (TPTH) was founded in June 1994 in response to the growing need for an efficient and dynamic organization

that will promote the innovation, competitiveness and entrepreneurship of Greek companies.

The main shareholder of the company is the National Center for Research and Technological Development (EKETA), one of the largest research organizations in Greece. The Association of Industries of Northern Greece, the Association of Exporters of Northern Greece, as well as major Greek pioneers and important consulting companies are also participating in its shareholder structure. The Company promotes and strengthens the activities of the Thessaloniki Technology Park, in close cooperation with institutions, universities and other research centers.

Impact Hub Athens - athens.hosts@impacthub.net

The Impact Hub Athens is housed in a historic building in the area of Psyrri, an area that serves as a field of action for visual, traditional crafts and creative entrepreneurship in general, with a strong element of intercultural and social ferment.

Impact Hub Athens is a local and international connected network with the aim of positive social impact. Businesses and creative professionals work to design and implement standard business models that will define the future of entrepreneurship. From social integration, the environment and the fair trade, Impact Hub Athens connects specialized professionals, creating an intercultural network of strong social impact.

INNOVATHENS - TECHNOLIS CITY OF ATHENS SA - info@innovathnes.gr

The INNOVATHENS is located in the heart of the most recognizable landmark of Athens, the TECHNOLIS of the Municipality of Athens, which is visited by more than 900,000 visitors every year. There, the historic Gas Station 2 has been transformed into a state-of-the-art multi-purpose space, which serves as a comprehensive networking center for the exchange of knowledge and experience between businesses, researchers and generally creative people.

INNOVATHENS is a comprehensive Innovation and Entrepreneurship Support Center, where you can meet experienced market and academic executives, as well as successful entrepreneurs who will help in a practical way to mature their business idea and develop or his business.

OK!THESS - www.okthess.gr

The broad goal of OK!Thess is to make a substantial contribution to the creation of an innovation ecosystem. Such an ecosystem would involve on the one hand all those who are able and willing to contribute to the development of innovation in the city and on the other hand all the functions that are necessary for the healthy growth of the ecosystem itself.

The effort to achieve the goal begins with the opening of the pre-incubator of OK! Thess, which offers the following services:

- ⇒ Providing space for a group of up to 5 people to meet and work together.
- ⇒ Access to high speed Wi-Fi network.
- ⇒ Participation in seminars and lectures on innovation in the field of OK! Thess.
- ⇒ Daily guidance from a coach who specializes in startups.
- ⇒ Support from a mentor of the financial space where the startup or potential startup

is active.

- ⇒ Social interaction with other groups that are co-located.
- ⇒ Meeting opportunities with potential investors.

Recommendations are accepted by individuals or groups with innovative ideas, regardless of the degree of maturity, who would like to take advantage of the services of the pre-incubator of OK! Thess to set up a business (startup) or to strengthen a startup they have already set up.

TECHNOPSIS THESSALONIKI ICT BUSINESS PARK - www.technopolis.gr

The "High Technology Business Park - Technopolis Thessaloniki SA" is an initiative of the Association of IT Companies of Northern Greece (SEPBE) and was founded in 2001 with the participation of IT and High Technology companies from all over Greece, as well as public bodies.

The purpose of the company was to establish the first High Technology Business Park in Greece both to solve some of the problems of companies in the industry, such as their housing needs, but also to create a network of modern infrastructure and investment opportunities, which will be a developmental lung for both Thessaloniki and Northern Greece, as well as for the country in general. It includes an area of 94 acres on the east side of the city, which is the fastest growing area of Thessaloniki.

IQBILITY - <http://www.iqbility.com>

In 2013, the Quest Group set up a new IQbility business portfolio. In addition to developing young entrepreneurship, IQbility's goals are to channel Greek Value Added to international markets, promote young talented people, promote Greek innovation and competitiveness, leverage the experience and capabilities of human resources trying to contain brain drain.

The work of IQbility is to support young entrepreneurship in its first steps, providing selected business groups with resources, resources and know-how to facilitate their success in international markets.

14. Benchmarking Analysis per Best Practice

The methodological context of the present Benchmarking Analysis, is articulated upon the rationale of the aforementioned section “Criteria of Evaluation”. To this end, both international and Greek best practices are evaluated according to UBI-Global (2019) methodology, adapted in local specificities, as follows:

- ⇒ the value they provide to the incubatees/clients,
- ⇒ the value they offer to the ecosystem, and
- ⇒ the value they provide to the structure per se and the stakeholders.

Under the category *value for the incubatee* the research team put the following three groups of key performance indicators:

- ⇒ Competence development
- ⇒ Services offered
- ⇒ Coaching & mentoring hours
- ⇒ Access to Funds
- ⇒ Investment attracted,
- ⇒ Seed funding attraction
- ⇒ Access to network
- ⇒ Partners,
- ⇒ Events

Under the category *value for the ecosystem*, the research team placed the following key performance indicators:

- ⇒ Economy enhancement
- ⇒ Jobs created and sustained
- ⇒ Sales revenue
- ⇒ Graduates
- ⇒ Self-generated revenue
- ⇒ Talent retention
- ⇒ Client startups accepted
- ⇒ Graduate retention

The classification *value for the incubation program*, put the following indicators:

- ⇒ Program attractiveness
- ⇒ Applications
- ⇒ Sponsorship attraction
- ⇒ Post incubation performance
- ⇒ High growth enterprises
- ⇒ Number of IPOs

On this basis, a number of five external experts in incubating and start-ups, have been invited by the research team to evaluate each best practice in each one of the next sections, based on a five-level Likert rating Scale as follows:

- 2** = Strongly Agree
1 = Agree
0 = Neither agree or disagree
-1 = Disagree
-2 = Strongly Disagree

Within the present study the following best practices are evaluated:

- 1 SETSquared, UK
- 2 I3P, Italy
- 3 1871, USA
- 4 Y Combinator, USA
- 5 Seedcamp, UK
- 6 Polihub, Italy
- 7 Axel Springer Plug & Play, Germany
- 8 SeedRocket, Spain
- 9 I5invest, Austria
- 10 Telenet Kickstart, Belgium
- 11 JIC Starcube, Czech Republic
- 12 Accelerace, Denmark
- 13 Startup Wise Guys, Estonia
- 14 TheFamily, France
- 15 H-FARM, Italy
- 16 Rockstart, The Netherlands
- 17 Lisbon Challenge, Portugal
- 18 i4G, Greece
- 19 PatrasSciencePark, Greece
- 20 Thermi S.A., Greece
- 21 Found.ation Maker's Place, Greece
- 22 Scientific & Technological Park Epirus, Greece
- 23 Ekinisis Lab, Greece
- 24 Ltp.ntua, Greece
- 25 The Cube Workspace, Greece
- 26 Creta Technological Park, Greece
- 27 Park Growing Business Together, Greece
- 28 Acein, Greece

- 29 Thessaloniki Technological Park, Greece
- 30 Impact hub Athens, Greece
- 31 Innovathens-Technopolis, Greece
- 32 OK!Thess, Greece
- 33 Technopolis ICT, Greece
- 34 Iqbility, Greece

Table 1. The Value of the Incubatee - Benchmarking per Best Practice at International Level

INDICATORS	SETS	I3PI	1871	YCOM	SEED	POLI	ASPP	SERO	ISIN	TEKI	JICS	ACCE	SWG	TFAM	FARM	ROCK	LISB
Competence development	2	2	2	2	2	2	1	1	2	1	1	2	1	2	1	1	1
Services offered	2	2	2	2	1	2	1	1	2	1	2	2	2	2	2	1	2
Coaching & mentoring hours	2	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1
Access to Funds	1	2	2	2	2	2	1	1	2	1	1	2	2	2	1	1	1
Investment attracted	2	2	2	2	2	2	1	1	2	1	1	2	2	2	1	1	1
Seed funding attraction	2	1	1	2	1	1	1	1	1	1	1	2	2	2	1	1	1
Access to network	2	2	2	2	2	2	2	2	1	2	1	2	2	2	2	1	1
Partners	2	2	2	2	1	2	2	2	2	1	1	2	2	2	1	0	1
Events	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL	1,89	1,67	1,67	2,00	1,44	1,67	1,33	1,22	1,56	1,11	1,11	1,78	1,67	1,78	1,22	0,89	1,11

Table 2. The Value of the Incubatee - Benchmarking per Best Practice in Greece

INDICATORS	i4G	PSPA	THER	FOUN	STPE	EKIN	LTPN	CUBE	CTPA	PGBT	ACEI	TTPA	IHAT	INTE	OKTH	TICT	IQBI
Competence development	2	1	2	1	1	2	2	1	2	1	1	1	1	1	2	2	1
Services offered	2	1	2	1	1	2	2	1	2	1	2	2	1	1	2	2	1
Coaching & mentoring hours	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Access to Funds	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Investment attracted	2	2	2	1	2	1	1	1	2	1	2	1	1	1	2	1	1
Seed funding attraction	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1
Access to network	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	2	2
Partners	2	1	2	1	2	2	1	1	2	1	1	1	1	1	2	2	1
Events	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2	1
TOTAL	1,78	1,33	1,67	1,22	1,44	1,56	1,44	1,22	1,67	1,11	1,33	1,33	1,33	1,22	1,89	1,78	1,22

Table 3. The Value for the Ecosystem - Benchmarking per Best Practice at International Level

INDICATORS	SETS	I3PI	1871	YCOM	SEED	POLI	ASPP	SERO	ISIN	TEKI	JICS	ACCE	SWGU	TFAM	FARM	ROCK	LISB
Economy enhancement	1	2	2	2	2	2	1	1	1	1	1	2	2	2	0	0	1
Jobs created and sustained	2	1	2	2	1	1	1	1	1	1	1	1	1	1	0	0	1
Sales revenue	2	1	1	2	1	1	1	1	1	1	0	1	1	1	1	1	1
Graduates	2	2	2	2	1	1	1	1	2	1	1	2	2	2	1	1	2
Self-generated revenue	2	2	2	2	2	1	1	1	2	2	1	2	2	2	1	1	2
Talent retention	2	2	2	2	2	2	2	2	2	1	1	2	2	1	1	1	2
Client startups accepted	2	1	2	2	1	2	1	1	2	1	1	2	1	2	1	1	2
Graduate retention	2	2	1	2	2	1	2	1	1	1	1	2	1	2	1	0	1
TOTAL	1,88	1,63	1,75	2,00	1,50	1,38	1,25	1,13	1,50	1,13	0,88	1,75	1,50	1,63	0,75	0,63	1,50

Table 4. The Value for the Ecosystem - Benchmarking per Best Practice in Greece

INDICATORS	i4G	PSPA	THER	FOUN	STPE	EKIN	LTPN	CUBE	CTPA	PGBT	ACEI	TTPA	IHAT	INTE	OKTH	TICT	IQBI
Economy enhancement	2	1	2	1	1	2	2	2	2	1	1	1	1	1	2	2	1
Jobs created and sustained	1	1	2	1	1	1	2	2	2	1	1	1	1	1	1	1	1
Sales revenue	1	2	2	2	2	2	1	1	1	0	0	1	0	1	1	1	0
Graduates	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1
Self-generated revenue	2	2	2	1	1	2	2	2	2	1	0	1	0	0	2	2	1
Talent retention	2	1	1	1	1	1	1	1	2	1	1	1	1	1	2	2	1
Client startups accepted	2	2	1	1	2	1	1	1	2	1	2	2	2	2	2	2	1
Number of Graduate retention	2	1	1	1	1	1	1	1	1	1	1	1	1	0	2	1	1
TOTAL	1,63	1,38	1,50	1,13	1,25	1,38	1,38	1,38	1,63	0,88	0,88	1,13	0,88	0,88	1,75	1,63	0,88

Table 5. The Value for the Incubating Programme - Benchmarking per Best Practice at International Level

INDICATORS	SETS	I3PI	1871	YCOM	SEED	POLI	ASPP	SERO	ISIN	TEKI	JICS	ACCE	SWGU	TFAM	FARM	ROCK	LISB
Program attractiveness	2	2	2	2	2	2	2	2	2	2	1	2	2	2	1	1	1
Applications	2	2	2	2	2	1	1	1	1	1	2	2	2	2	1	1	1
Sponsorship attraction	1	1	1	2	1	1	1	2	1	1	1	1	1	1	1	0	1
Post incubation performance	2	1	1	2	1	1	1	1	2	1	1	2	2	2	0	1	1
High growth enterprises	2	1	1	2	2	1	1	1	2	1	1	1	1	1	1	1	1
Number of IPOs	1	1	2	2	1	2	1	1	2	1	1	2	1	1	1	1	0
TOTAL	1,67	1,33	1,50	2,00	1,50	1,33	1,17	1,33	1,67	1,17	1,17	1,67	1,50	1,50	0,83	0,83	0,83

Table 6. The Value for the Incubating Programme - Benchmarking per Best Practice in Greece

INDICATORS	i4G	PSPA	THER	FOUN	STPE	EKIN	LTPN	CUBE	CTPA	PGBT	ACEI	TTPA	IHAT	INTE	OKTH	TICT	IQBI
Program attractiveness	2	1	2	1	2	1	2	2	2	1	1	1	1	1	2	2	2
Applications	1	1	1	1	1	1	1	1	2	1	0	1	0	1	2	2	1
Sponsorship attraction	1	2	1	1	0	1	1	1	1	0	1	0	1	0	1	1	0
Post incubation performance	2	1	2	1	2	2	2	1	2	1	1	1	1	0	2	2	2
High growth enterprises,	2	1	1	0	1	1	2	1	1	0	0	1	0	1	2	2	1
Number of IPOs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL	1,50	1,17	1,33	0,83	1,17	1,17	1,50	1,17	1,50	0,67	0,67	0,83	0,67	0,67	1,67	1,67	1,17

Table 7. Aggregated Benchmarking per Best Practice at International Level

	The International Best Practices	Abbreviation	Value for the incubatee	Value for the ecosystem	Value for the incubation program	TOTAL
1	SETsquared, UK	SETS	1,89	1,88	1,67	1,81
2	I3P, Italy	I3PI	1,67	1,63	1,33	1,54
3	1871, USA	1871	1,67	1,75	1,50	1,64
4	Y Combinator, USA	YCOM	2,00	2,00	2,00	2,00
5	Seedcamp, UK	SEED	1,44	1,50	1,50	1,48
6	Polihub, Italy	POLI	1,67	1,38	1,33	1,46
7	Axel Springer Plug & Play	ASPP	1,33	1,25	1,17	1,25
8	SeedRocket	SERO	1,22	1,13	1,33	1,23
9	I5invest	I5IN	1,56	1,50	1,67	1,57
10	Telenet Kickstart	TEKI	1,11	1,13	1,17	1,13
11	JIC Starcube	JICS	1,11	0,88	1,17	1,05
12	Accelerace	ACCE	1,78	1,75	1,67	1,73
13	Startup Wise Guys	SWGU	1,67	1,50	1,50	1,56
14	TheFamily	TFAM	1,78	1,63	1,50	1,63
15	H-FARM	FARM	1,22	0,75	0,83	0,94
16	Rockstart	ROCK	0,89	0,63	0,83	0,78
17	Lisbon Challenge	LISB	1,11	1,50	0,83	1,15

Table 8. Aggregated Benchmarking per Best Practice in Greece

	The International Best Practices	Abbreviation	Value for the incubatee	Value for the ecosystem	Value for the incubation program	TOTAL
1	i4G	i4G	1,78	1,63	1,50	1,63
2	PatrasSciencePark	PSPA	1,33	1,38	1,17	1,29
3	Thermi S.A.	THER	1,67	1,50	1,33	1,50
4	Found.Ation Maker's Place	FOUN	1,22	1,13	0,83	1,06
5	Scientific & Technological Park Epirus	STPE	1,44	1,25	1,17	1,29
6	Ekinisis Lab	EKIN	1,56	1,38	1,17	1,37
7	Ltp.ntua	LTPN	1,44	1,38	1,50	1,44
8	The Cube Workspace	CUBE	1,22	1,38	1,17	1,25
9	Creta Technological Park	CTPA	1,67	1,63	1,50	1,60
10	Park Growing Business Together	PGBT	1,11	0,88	0,67	0,88
11	Acein	ACEI	1,33	0,88	0,67	0,96
12	Thessaloniki Technological Park	TTPA	1,33	1,13	0,83	1,10
13	Impact hub Athens	IHAT	1,33	0,88	0,67	0,96
14	Innovathens-Technopolis	INTE	1,22	0,88	0,67	0,92
15	OK!Thess	OKTH	1,89	1,75	1,67	1,77
16	Technopolis ICT	TICT	1,78	1,63	1,67	1,69
17	Iqbility	IQBI	1,22	0,88	1,17	1,09

15. Multi-criteria Analysis per Best Practice

The Multi-Criteria Analysis is used to determine preferences between alternative scenarios that have already been determined in a measurable way. A special feature of the multi-criteria analysis is the emphasis it places on the decision-making group's judgment (usually the study team itself) in the process of determining the criteria and the assessment of the weighting factors of each criterion. The foundation of the method is the subjective choice - by the study team itself. In essence, the purpose of the multi-criteria method is to play the role of a tool to support the decision-making process, but not necessarily to identify the solution. In the present study, each best practice has been evaluated according to the following criteria:

- 1 Innovative Approach
- 2 Administrative Capacity
- 3 Empowerment Performance
- 4 Financing Solutions
- 5 Sustainability
- 6 Awareness Performance

On this basis, a number of five external experts in incubating and start-ups, have been invited by the research team to evaluate each best practice, based on a five-level Likert rating Scale as follows:

2 = Strongly Agree

1 = Agree

0 = Neither agree or disagree

-1 = Disagree

-2 = Strongly Disagree

Table 9. Multi-Criteria Analysis per Best Practice at International Level

The International Best Practices		Innovative Approach	Administrative Capacity	Empowerment Performance	Financing Solutions	Sustainability	Awareness Performance	TOTAL
1	SETsquared, UK	2	2	2	2	2	1	1,83
2	I3P, Italy	2	2	2	1	2	1	1,67
3	1871, USA	2	2	2	1	1	2	1,67
4	Y Combinator, USA	2	2	2	2	2	2	2,00
5	Seedcamp, UK	2	2	1	1	1	2	1,50
6	Polihub, Italy	2	2	1	1	1	2	1,50
7	Axel Springer Plug & Play	2	1	1	1	1	2	1,33
8	SeedRocket	2	1	1	0	1	2	1,17
9	I5invest	2	1	2	1	1	2	1,50
10	Telenet Kickstart	2	1	1	1	1	1	1,17
11	JIC Starcube	2	2	2	2	1	2	1,83
12	Accelerace	2	1	2	1	2	2	1,67
13	Startup Wise Guys	2	2	1	1	2	2	1,67
14	TheFamily	2	2	1	1	1	1	1,33
15	H-FARM	2	1	1	1	1	1	1,17
16	Rockstart	1	1	2	1	1	2	1,33
17	Lisbon Challenge	2	1	1	1	1	1	1,17

Table 10. Multi-Criteria Analysis per Best Practice in Greece

The Greek Best Practices		Innovative Approach	Administrative Capacity	Empowerment Performance	Financing Solutions	Sustainability	Awareness Performance	TOTAL
1	i4G	2	2	1	1	2	2	1,67
2	PatrasSciencePark	2	2	1	1	1	1	1,33
3	Thermi S.A.	2	1	2	1	2	2	1,67
4	Found.Ation Maker's Place	2	1	1	0	1	2	1,17
5	Scientific & Technological Park Epirus	2	1	1	1	1	2	1,33
6	Ekinisis Lab	2	1	1	1	1	1	1,17
7	Ltp.ntua	2	1	1	2	1	1	1,33
8	The Cube Workspace	2	1	1	1	2	2	1,50
9	Creta Technological Park	1	2	1	1	2	2	1,50
10	Park Growing Business Together	1	1	1	1	1	1	1,00
11	Acein	2	1	1	2	1	1	1,33
12	Thessaloniki Technological Park	1	1	1	1	1	2	1,17
13	Impact hub Athens	1	2	1	1	1	1	1,17
14	Innovathens-Technopolis	2	1	1	1	1	1	1,17
15	OK!Thess	2	2	2	1	2	2	1,83
16	Technopolis ICT	1	2	1	1	2	2	1,50
17	Iqbility	1	1	1	1	2	2	1,33

16. Aggregated Final Ranking of Best Practices

The present section aggregates the aforementioned analysis, elaborating the final ranking of best practices that suits better to the region's specificities.

On this basis, a number of five external experts in incubating and start-ups, have been invited by the research team to evaluate each best practice, based on a five-level Likert rating Scale as follows:

2 = Strongly Agree

1 = Agree

0 = Neither agree or disagree

-1 = Disagree

-2 = Strongly Disagree

Table 13. Aggregated Final Ranking of all best practices related with Western Macedonia

All Best Practices	ORIGIN	Aggregated Benchmarking	Multi-Criteria Analysis	Consistency with RIS3	Final Ranking
1 Polihub, Italy	INT	1,46	1,50	1,00	1,32
2 Startup Wise Guys	INT	1,56	1,67	0,67	1,30
3 Creta Technological Park	GR	1,60	1,50	0,67	1,25
4 Y Combinator, USA	INT	2,00	2,00	-0,50	1,17
5 Accelerace	INT	1,73	1,67	0,00	1,13
6 The Cube Workspace	GR	1,25	1,50	0,60	1,12
7 Thermi S.A.	GR	1,50	1,67	0,00	1,06
8 SETsquared, UK	INT	1,81	1,83	-0,50	1,05
9 Thessaloniki Technological Park	GR	1,10	1,17	0,80	1,02
10 Ekinisis Lab	GR	1,37	1,17	0,50	1,01
11 OK!Thess	GR	1,77	1,83	-0,60	1,00
12 Technopolis ICT	GR	1,69	1,50	-0,20	1,00
13 Seedcamp, UK	INT	1,48	1,50	0,00	0,99
14 TheFamily	INT	1,63	1,33	0,00	0,99
15 Lisbon Challenge	INT	1,15	1,17	0,60	0,97
16 Iqbility	GR	1,09	1,33	0,40	0,94
17 1871, USA	INT	1,64	1,67	-0,50	0,94
18 i4G	GR	1,63	1,67	-0,50	0,93
19 Ltp.ntua	GR	1,44	1,33	0,00	0,92
20 Acein	GR	0,96	1,33	0,40	0,90
21 PatrasSciencePark	GR	1,29	1,33	0,00	0,88
22 Scientific & Technological Park Epirus	GR	1,29	1,33	0,00	0,87
23 Park Growing Business Together	GR	0,88	1,00	0,60	0,83
24 I5invest	INT	1,57	1,50	-0,67	0,80
25 I3P, Italy	INT	1,54	1,67	-1,00	0,74
26 Impact hub Athens	GR	0,96	1,17	0,00	0,71
27 Innovathens-Technopolis	GR	0,92	1,17	0,00	0,70
28 Rockstart	INT	0,78	1,33	-0,40	0,57
29 Axel Springer Plug & Play	INT	1,25	1,33	-1,00	0,53
30 SeedRocket	INT	1,23	1,17	-1,00	0,46
31 JIC Starcube	INT	1,05	1,83	-1,60	0,43
32 Found.Ation Maker's Place	GR	1,06	1,17	-1,00	0,41
33 H-FARM	INT	0,94	1,17	-1,00	0,37
34 Telenet Kickstart	INT	1,13	1,17	-1,20	0,37

17. Discussion

Pre-incubation services have gained significance in recent times in order to support business ideas which are still at a nascent stage and also to create a pipeline of new potential start-ups for the incubators. Nevertheless, the idea and the institution of the pre-incubator are not yet spread around the world and in many places the incubators undertake the role of pre-incubation. Like in the case of Greece and Spain, in most of the cases - the incubators have the role of pre-incubation, incubation and post-incubation process.

The first defined pre-incubator in Europe was established in 1997 at the University of Bielefeld, in Germany, and the Higher Education Institutions have subsequently been the most likely hosts for pre-incubation centres. The first pre-incubator was established with the aim among others to increase the number of academic spin-offs, and to create a “culture of entrepreneurship” within the university. Thus, there is a special relation of the pre-incubator with the spinoffs and the universities.

The university is a natural incubator with flexible resources, people and access to students who can be organised to undertake new and innovative projects. Thus, the proximity to universities and public research organizations is an important factor for any spinoff or startup nowadays. Plus, spinoffs and startups are considered now part of the universities’ outputs.

The universities are also important nuclei for innovation. Innovation-based incubators thus must work at the intersection between the sets of innovation and entrepreneurship, supporting entrepreneurs to profit from the added value of innovative ideas. The ultimate purpose is to support potential entrepreneurs in turning a science or technology-based business idea into a viable business.

Let alone the fact that there are scads of entrepreneurial talent waiting to be liberated in higher education institutions. Yet, despite the large number of university graduates, only a small number dare to make the transition into professional self-employment or start up their own companies.

The universities need to become more entrepreneurial, and to get away from their traditional approach of only teaching and research. They need to play an important role as both producers and disseminators of knowledge in entrepreneurial activities. The pre-incubators are a perfect locus for that.

Up until recently there has been a disconnection between entrepreneurship and innovation policies. There needs to be a convergence between the two to ensure optimisation of complementarities. Unfortunately, all too often, innovation policies do not incorporate entrepreneurship as a focus. Yet we know that entrepreneurship involves the act of innovation and that entrepreneurs are essential to convert knowledge into economic and social benefits.

There is recognized the fact that many cases that are suitable for pre-incubation may not generate significant returns for the higher education institutes, but there can be additional significant gains for the regional economy, such as giving rise to sustainable science or technology-based companies within the region.

That's why there is need for collaboration between all the parties of the 4Helix. Although capital is a catalyst for growth, a sustainable startup ecosystem requires more than investor interest. Large enterprises can play a critical role in nurturing the startup ecosystem by partnering in product development and funding mentoring programs. Collaboration among universities and government agencies can provide growing startups with a competitive edge.

Limited collaboration among the lead actors and stakeholders is also among the obstacles for a flourishing startup ecosystem in Greece. Plus, all the indicators of starting a business (like *fear of failure*, *total early-stage entrepreneurial activity*, *entrepreneurship as a good career choice*) in Greece up until recently have been lower than the world average and many OECD Countries. Yet, in the last years there is an improvement in many parameters that affects the startup ecosystem like the access to funding, collaboration, attitude towards risk, cultural and social norms, and government's policies. There is however need for more effort in all these directions in order to achieve a decent level; as there is a lot of effort needed for entrepreneurial education at school and post school stage.

In Bulgaria despite many existing policies in the last years covering innovation and entrepreneurship, the economic transformation process which commenced in the beginning of the 90s has not been able to lift Bulgarian's startup ecosystem. The Government has very limited resources and cannot provide the necessary financial support and guidance for innovation and entrepreneurship promotion policies. The Bulgarian universities are also a victim of the low government funds. In addition, the universities are unable to provide structures and methods for start-ups to develop innovative solutions as they on the one side miss the outreach to the industry that could create demand for start-up products and services, and on the other side miss knowledge on entrepreneurship and commercialisation of ideas that aspiring entrepreneurs could learn from. Thus, there is need for more collaboration of the academia with the industry, more entrepreneurship knowledge in the universities and more entrepreneurial education at school and post-school stage.

At the moment there are a couple of entrepreneurship teaching methods taught around the world which provide a concise, clear and straightforward road for the nascent entrepreneurs to follow. One of those is the lean startup process - an approach that tries to manage the creation and early stages of the startups, by getting a desired product to customers' hands as soon as possible, through a minimum viable product.

Another approach is that of the d.school at Stanford University where the students learn how to apply design thinking to their problems in order to generate innovative and user-centric solutions. The design thinking straight line process is a model extremely useful in tackling complex problems

that are ill-defined or unknown, by understanding the human needs involved, by re-framing the problem in human-centric ways, by creating many ideas in brainstorming sessions, and by adopting a hands-on approach in prototyping and testing.

An additional approach is the disciplined entrepreneurship (DE24) taught at MIT. It is a 24 steps approach that forms the canvas of actions to be taken by the start uppers. This strategy dispels the myth that the entrepreneurship cannot be taught and shows how innovation-driven entrepreneurship can be broken down into discreet behaviours and processes which can be taught to intelligent and hardworking people.

The next approach is the living labs which operate as intermediaries between citizens, research organisations, companies, cities and regions for joint value co-creation, rapid prototyping or validation to scale up innovation and businesses. Thus, the living labs are trying to focus on making the society a part of the innovation process. This parameter is very important in the product development. Also, this approach resembles more the 4Helix cooperation strategy. That's why it is recommended to use this approach in any pre-incubation endeavour.

The events like hackathon and startup weekends are also part of the pre-incubation process. And even though shorts, these events offer very effective testing grounds for startups. They are designed to give aspiring entrepreneurs an opportunity to find out if their idea is viable.

The incubators, accelerators and pre-incubators have to be assessed according to the values they offer. There are three criteria according to which all these structures are assessed: the value they provide to the incubatee, the value they provide to the ecosystem and the value they provide to the structure per se. According to these criteria, the top business incubators in the world are: *SETsquared* in UK, which is a dynamic collaboration between five leading research-led United Kingdom universities of Bath, Bristol, Exeter, Southampton and Surrey, *I3P* - the Incubator of Polytechnic of Turin in Italy, *1871* – Chicago's Technology and Entrepreneurship Centre and *Y Combinator*, both from USA, and *Seedcamp* from UK. These incubators are on the top of the list because they provide great value to the incubatees, to the ecosystem and to the program per se.

All these structures: incubators, accelerators and pre-incubators together with the events like hackathon, startup weekends and startup safari form the new ecosystem of incubation. And the more mature the ecosystem becomes the more interaction and collaboration there is between the participants. Even more, by progressing in maturity the ecosystem starts to build a shared vision and development roadmap, and then it starts to benchmark its performance.

The creation of any entrepreneurial activity can't be done in a desert. There must be a ecosystem that seeds, cultivates and supports these fragile endeavours. There must be strategic alliances and networks between the participants of the ecosystem. And the more alliances and networks there are, the more mature an ecosystem is. The ecosystem must cultivate the culture of entrepreneurship within the area at all stages, starting from the school stage. The nascent entrepreneurs must be taught to become comfortable being uncomfortable, to embrace the fear of failure, and to learn to fail and stand-up again and again. The last one is probably the most

important and powerful characteristic of the entrepreneurship – the resilience, which consists of 3 very important entrepreneurial dimensions: hardiness, resourcefulness and optimism.

Three forces are coming together to shape the twenty first century: the youth, entrepreneurship and ICT, as stated by Rob Salkowitz in his book *The Young World Rising*. The incubators, accelerators, living labs, startup events, and pre-incubators are places where all these three forces come together and create value for the economy and the society.

18. Conclusions

In the preceding analysis, an in-depth diagnosis and evaluation of the existing situation and the determination of actions for the required policy measures, with the appropriate spatial specialization in the reference area, were attempted in this deliverable. The empirical research included questionnaires addressed to institutions and companies. In-depth interviews were also conducted with experienced executives and experts and Focus Groups were organized.

Based on the findings of the above methodological tools of empirical research, the following conclusions could be drawn regarding the business environment:

First, it is known that entrepreneurship is primarily psychology and this issue is a critical factor for the reference area as a spirit of pessimism, negativity and resignation is prevalent. If this climate is not reversed by drastic initiatives to stimulate the spirit of entrepreneurship, no other policy measures can bring substantial results. However, in order to change this climate, one must first interpret its causes.

Second, the business environment of the reference area is characterized by good quality infrastructure and a high level of accessibility and a strong economic base in almost all economic sectors. As a result of this environment there are favorable conditions for fast growing businesses. In addition, the market size of the reference area is extremely large to make viable businesses that have dynamism.

Third, despite the favorable environment, there is a lack of entrepreneurial interest and entrepreneurial risk-taking, which indicates the lack of a healthy entrepreneurial culture. The reason can be found in the prevailing traditional standards of the expectation of securing a position in the public sector and in the educational system that does not inspire the entrepreneurial spirit.

Fourth, a very weak correlation of entrepreneurship with research and knowledge outcomes was identified. Universities, research centers and entrepreneurship support agencies seem to have failed to successfully fulfill their role in encouraging entrepreneurship by providing specific support services.

Fifth, the dominant obstacles to the development of newly established businesses appeared to be primarily the bureaucracy, the unsustainable tax framework, the instability of business rules, the lack of effective support mechanisms, the high cost of starting and setting up a business and of course the inability to access the banking system.

In order to improve the business environment in a way that encourages the creation and operation of start-ups, the following policy measures are deemed necessary:

First, there should be more flexibility in the procedural requirements for setting up and operating a business in a way that will encourage a new entrepreneur. This means simplifying the requirements of public services, tackling multiplicity, eliminating red tape and making extensive use of technological tools and the internet.

Secondly, it is necessary to establish an attractive network of incentives for young entrepreneurs which can combine subsidies, financing, guarantees, training and guidance.

Third, a critical factor is reducing the complexity of the planning and financing levels. In this direction, models should be designed which will bring together in a user-friendly and simplified way all the support stages of a business venture.

Fourth, the systematic training of both public service personnel and potential entrepreneurs is deemed necessary. For this reason, there should be integrated business education approaches that can be easily accessed by those interested.

Fifth, securing access to the banking system as well as to financial support networks is a very important factor in the success of a start-up business. However, in order to do this, the mechanisms that will systematically inform the interested parties about the financing opportunities of every form and source are deemed necessary.

Evaluating all the above framework of analysis it is concluded that the establishment of a pre-warming structure could under conditions help and inspire many young potential entrepreneurs to realize their business vision in a smoother and safer way.

19. References

- Antoniades, V., Giakumelos, M., Petrakis, Th., and Zacharia, Z. (2018), *Greece's Startup Ecosystem: A Prime Opportunity for Economic Growth*, The Boston Consulting Group, Retrieved from: <https://www.bcg.com/perspectives/190626>
- Aulet, B., (2013), *Disciplined Entrepreneurship: 24 Steps to a Successful Startup*, ISBN-13: 978-1118692288
- Eagar, R., Senechal, M., Kolk, M., Barder, T., Beaumont, M., and K. Baes (2018), *The Breakthrough Incubator*, Prism /1/2018, Arthur D. Little Survey, Retrieved from: https://www.adlittle.com/sites/default/files/prism/arthur_d._little_prism_the_breakthrough_in_cubator.compressed.pdf
- EBN (2010), *The Smart Guide to Innovation-Based Incubators (IBI)*, Retrieved from: https://ec.europa.eu/regional_policy/sources/docoffic/2007/working/innovation_incubator.pdf
- ESCP Europe Jean-Baptiste Say, Institute for Entrepreneurship (2018), *EU start-up monitor* (Report), Retrieved from: <http://startupmonitor.eu/EU-Startup-Monitor-2018-Report-WEB.pdf>
- Efthimiadou, I., Prokopiou, Th., and Kokorotsikos, P. (2011), *University pre-incubators as a tool for boosting innovative entrepreneurship in a user-centric innovation system*, XXVIII IASP World Conference on Science and Technology Parks, Retrieved from: http://www.pmf.sc.gov.br/arquivos/arquivos/pdf/08_07_2011_17.07.00.039ed840ff1279c6bfd18e17e23bae19.pdf
- Etzkowitz, H. (2003) *Innovation in Industry: The Triple Helix of university-industry-government relations*, Social Science Information. pp 203 - 337. London: Sage 42 (3), pp 294, 296, 305, 325, 332
- Forbes (2012), *Top Startup Incubators And Accelerators: Y Combinator Tops With \$7.8 Billion In Value*, Retrieved from: <https://www.forbes.com/sites/tomiogeron/2012/04/30/top-tech-incubators-as-ranked-by-forbes-y-combinator-tops-with-7-billion-in-value/#a634ec51f372>
- Gatsios, K. (2014), *Universities and entrepreneurship*, Kathimerini newspaper, Retrieved in Greek from: <https://www.kathimerini.gr/785739/article/oikonomia/ellhnikh-oikonomia/apoyh-panepisthmia-kai-epixeirhmatikothta>
- Gasteratos, Ch. (2019), *The Greek Startup Industry: Investments and Exits, 2010-2018* (Report), Marathon Venture Capital, Retrieved from: https://marathon.vc/blog/greek-startup-industry-en?fbclid=IwAR30_ZKwaWyAGvRaOQp437u6UhE-getR0xuVJFYkrkm59jr89hi1oJaPKo
- Gerlach, S. and A. Brem (2015), *What determines a successful business incubator? Introduction to an incubator guide*, International Journal of Entrepreneurial Venturing, Vol. 7, No. 3, pp. 286 – 307
- Gil, J.A., and Cala, A.S. (2004), *Academia and Business: Links and Lags in Spain*, in *Academia-Business Links: European Policy Strategies and Lessons Learnt*, Rödiger Wink (editor), Palgrave Macmillan, New York, ISBN 978-1-4039-3665-3
- Huffman, D., and Quigley, J. (2002), *The role of the university in attracting high tech entrepreneurship: A Silicon Valley tale*, *Ann Reg Sci* **36**, 403–419, Retrieved from: <https://doi.org/10.1007/s001680200104>
- Incubatore del Politecnico di Torino (I3P), Retrieved from: <https://www.i3p.it/>

Kepenek, E.B., and Eser, Z. (2008), Impact of Pre-incubators on Entrepreneurial Activities in Turkey: Problems, Successes, and Policy Recommendations, STPS-WP-16/08, METU TEKPOL Working Paper Series

KTH pre-incubator program, Retrieved from: <https://www.kth.se/en/innovation/forinkubator/kth-innovations-forinkubatorprogram-1.414438>

Kulicke, M. (2014), 15 Years of EXIST: University-based start-up programmes, Fraunhofer-Institut für Systemund Innovationsforschung ISI, Retrieved from: https://www.exist.de/SharedDocs/Downloads/EN/15-years-EXIST-University-based-start-up-programmes.pdf?__blob=publicationFile

Living Labs, European Network of Living Labs, Retrieved from: <https://enoll.org/>

OK!Thess – a pre-incubator for future businesses, Retrieved from: <https://www.interregeurope.eu/innotrans/news/news-article/4566/ok-thess-a-pre-incubator-for-future-businesses/>

O'Shea, R. P., Allen, T. J., Chevalier, A., & Roche, F. (2005), Entrepreneurial orientation, technology transfer and spinoff performance of U.S. Universities, *Research Policy*, 34, 994–1009

Pike, A. (2010), Entrepreneurship Policy Delivery: Key Issues and the UK Experience, Centre for Urban & Regional Development Studies, Newcastle University, UK

Poleć, G. (2019) Germany is a great place for startups: a well-designed startup ecosystem, Retrieved from: <https://codesthq.com/germany-is-a-great-place-for-startups-a-well-designed-startup-ecosystem/>

Polihub, Innovation District and Startup Accelerator, Available at: <https://www.polihub.it/>

Ries, E. (2011), *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*, Crown Publishing Group

Salkowitz, R. (2010), *Young World Rising: How Youth Technology and Entrepreneurship are Changing the World from the Bottom Up*, Wiley Publisher, ISBN-10: 0470417803

Schumpeter, J. A. (1994) [1942], *Capitalism, Socialism and Democracy*, London: Routledge, pp. 82–83. ISBN 978-0-415-10762-4

Seedcamp incubator, Available at: <https://seedcamp.com/>

Setsquared partnership, Available at: <https://www.setsquared.co.uk/>

SetTugade, M.M., & Fredrickson, B.L. (2004), Resilient individuals use positive emotions to bounce back from negative emotional experiences, *Journal of Personality and Social Psychology*, 86(2), 320-333

Tendercapital, 2018, The ten best startup incubators in the world, Retrieved from: <https://tendercapital.com/en/the-ten-best-startup-incubators-in-the-world/>

UBI-Global (2019), World Benchmark 19/20 Report: Data, Insights, and Best Practices of Business Incubators and Accelerators, Retrieved from: <https://ubi-global.com/product/world-benchmark-report-19-20-data-insights-and-best-practices-from-business-incubators-and-accelerators/>

Wang, X., Khanna, D. and Abrahamsson, P. (2016), *Teaching Lean Startup at University: an Experience Report*

Wink, R. (2004), Academia-Business Interactions in Europe: and Introduction, in Academia-Business Links: European Policy Strategies and Lessons Learnt, Palgrave Macmillan, New York, ISBN 978-1-4039-3665-3

Wirsing, B., Traude, A., Steffens, J., Sheen, M., Löffler, B., de Lapparent, D., Broadfoot, C., and J.-L. Alonso-González (2002), *Becoming an entrepreneur for a trial period: the pre-incubation experience*, The International Journal of Entrepreneurship and Innovation, Nov. 2002, p. 265-277.

World Economic Forum (2018), The Future of the Jobs Report, Centre for the New Economy and Society, Retrieved from: http://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf

1871 - Chicago's Technology & Entrepreneurship Centre, Available at: <https://1871.com/>