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Alexander Innovation Zone SA



By

IDIMON CONSULTANTS

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Developed by Idimon Consultans



Thessaloniki
Fillikis Etairias 12 & Tsimiski
TK. 54621
Greece
Tel: +30-2316 018635 Fax: + 30-2316 018634
E-mail: info@thessinnozone.gr

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Authors:		
Ioannis Anastasiadis	email: anastasiadis@idimon.gr	Telephone: +302310 814400
Kostis Ververidis	email: info@idimon.gr	Telephone: +30 2310 814400
Anthi Papadopoulou	email: info@idimon.gr	Telephone: +30 2310 814400
Aikaterini Kaitaftsi	email: info@idimon.gr	Telephone: +30 2310 814400
Maria Giagousiklidou	email: maria@idimon.gr	Telephone: +30 2310 814400

Project Manager:		
Kostas Tramatzas	Email: tramantzas@gmail.com	Telephone: +302316 018635
Approved		Date: February 2023

Project Financial Manager:		
Dimitrios Doinakis	Email: doinakis@thessinnozone.gr	Telephone: +30 2316 019 558
Approved		Date: February 2023

Coordinator of Activity 3.2:		
Grigoris Zarotiadis - AUTH	Email: gzarotia@econ.auth.gr	Telephone: +302461026430
Approved		Date: February 2023

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Introduction

The purpose of this Deliverable is to provide input for the development of a pre-warming strategic action plan in the cross-border reference area.

Objectives of strategic pre-warming are to identify, formulate, analyze and evaluate:

- ⇒ The central idea and the vision
- ⇒ The strategic and specific objectives
- ⇒ The proposed actions
- ⇒ The potential financial sources for the motivation and sustainability of the actions

The supporting material for the development of a Strategic Prewarming Action Plan is accompanied by a relevant SWOT Analysis in the reference area.

INPUTS
FOR AN ACTION PLAN ON C-B
PRE-INCUBATION STRATEGY
FOR SUPPORTING
ENTREPRENEURSHIP

INPUTS FOR AN ACTION PLAN ON C-B PRE-INCUBATION STRATEGY FOR SUPPORTING ENTREPRENEURSHIP

Introduction

Entrepreneurship has never been more important than it is today. The current complex and insecure economic environment requires individuals with capabilities for solving new problems through independent and responsible action (Mittelstädt and Cerri, 2008a; Volkmann et al., 2009). Qualities, such as creativity, problem-solving and a spirit of initiative, can be useful in all aspects of work and daily life (European Commission, 2004b) (2). Europe's competitiveness, innovation and economic growth depends on being able to produce future leaders 'with the skills, attitudes and behaviour to be entrepreneurial and to act at the same time in a socially responsible way' (Volkmann et al., 2009, p. 42).

Definition of entrepreneurship

Entrepreneurship is a multifaceted concept that manifests itself in many different ways. Various definitions are used and no single definition has been generally agreed upon (OECD, 2009b). The European Commission defines entrepreneurship as 'the mindset and process to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organisation' (European Commission, 2003). Eurostat makes a distinction between two different types of entrepreneurs: 'self-employed persons' who do not employ anyone, and 'employers' who have at least one employee. In the context of this study, entrepreneurship is understood broadly as ranging from single projects (that might only involve the entrepreneur on a part-time basis) to major undertakings creating many job opportunities.

Background

Since the Lisbon Council in 2000, entrepreneurship has been increasingly recognized as a competence that should be valued and nurtured within an education and training context. It sits at the heart of the education and training 2020 strategic framework, which cites innovation and creativity, including entrepreneurship, as one of its strategic objectives. A sense of initiative and entrepreneurship is also one of the eight key competences for lifelong learning. However, while there is widespread recognition of the importance of guidance in supporting lifelong learning, European policies rarely refer to the role of guidance in entrepreneurship learning or the development of entrepreneurs' career management skills.

Entrepreneurship learning, supported by guidance, has a role to play in developing entrepreneurial skills; exposure to such support can act as a catalyst to developing an entrepreneurial mindset, irrespective of whether individuals go on to become entrepreneurs. Entrepreneurship education exists within Europe, though is not necessarily available for all: it is ad hoc and comprises 'pockets of excellence' accessible by some, with no provision or support for others. The numbers of new business start-ups in Europe has grown over the past 10-years: there are around 1.7 million more enterprises in 2009 than in 1999 (up from 28.9 million in 1999 to 30.6 million in 2009). While people become entrepreneurs through choice or necessity, the recent financial crisis has acted as a catalyst for people setting up businesses out of necessity. Fear of failure acts as a barrier to business start-up as does a perceived lack of opportunity: less than half of Europeans believe that they have the skills to become an entrepreneur.

Entrepreneurs in Europe are a diverse group, though a 'typical' entrepreneur is male and educated to upper secondary education level. Just over a quarter of entrepreneurs have a basic level of education, while a growing proportion is educated at degree level (up seven percentage

points from 21% in 1999 to 28% in 2009 according to LFS data). On average, less than a third of entrepreneurs are female (30%).

The role of guidance in Training

Entrepreneurship learning is important in IVET as self-employment is a realistic aspiration for students: many VET students often establish their own businesses. Entrepreneurship features in the national curricula for VET, to some extent, in most European countries. Learning opportunities for VET students are delivered in formal and non-formal settings and include simulations, competitions and minenterprises. A key challenge for teachers and trainers is to ensure that they have the skills to understand and teach entrepreneurship as well as to promote it as a real, and realistic, career option for those interested. Ideally all young people in VET should become exposed to entrepreneurial activities during their studies, supported by professional guidance. A growing number of IVET institutions embrace the concept that education can help influence and develop young people's entrepreneurial skills and abilities. Entrepreneurship oriented guidance processes in IVET can also play a key role in helping young people become more aware of their entrepreneurial attributes and skills and see entrepreneurship as a career path. However, across Europe there are differences in the extent to which individual schools and colleges are taking entrepreneurship forward. In some countries, guidance-based interventions are embedded in the curriculum; in others, they depend on the enthusiasm, skills and connections of individual teachers. A lack of resources to support entrepreneurship learning and guidance appears to be a significant issue.

Guidance professionals in many countries are involved in producing material on entrepreneurship, arranging work placements and visits, and are sometimes involved in the development, or implementation, of entrepreneurship education opportunities. Their involvement is typically ad-hoc, playing a supporting rather than leading role. Some guidance professionals do not cover entrepreneurship in their guidance offer. In some cases, there is a lack of policy on promoting entrepreneurship in vocational education, whereas in others its absence is tied to the lack of curricula-based career guidance for IVET students.

Although practically all countries agree that guidance as an integral element in entrepreneurship education is vital for Europe to foster future entrepreneurial activity, there is consensus among stakeholders that many guidance practitioners working in IVET institutions do not have the necessary competences or experience to support students who are interested in becoming entrepreneurs. Few training programmes seek to develop the entrepreneurial skills of guidance professionals, who could benefit from targeted training programmes. Also, the labour market knowhow of guidance counsellors needs to be further strengthened in relation to entrepreneurship.

Non-formal guidance

Non-formal guidance methods are more apparent in VET schools concerning entrepreneurship than formal guidance services. Non-formal guidance providers include entrepreneurs, experienced people from the business world, teachers, peer students and even parents. Involving entrepreneurs in the guidance process itself is one of the most effective ways of helping students to understand what a career as an entrepreneur means. However, while examples of successful practice have been identified, too few placement and shadowing schemes target entrepreneurs specifically; instead they focus on employers in general.

Role models underpin most successful guidance-based interventions in this field. However, these are too few despite their benefits being clear. Entrepreneurs' own accounts of their career journeys inspire young people, especially those with lower levels of educational attainment, who tend to respond very positively to the presentations of entrepreneurs and their journeys. The role models themselves also gain from the experience.

Guidance building entrepreneurial foundations and skills

Guidance offered in IVET can also play a role in helping students build a foundation for entrepreneurial activity. Such guidance can help students develop a sense of initiative, confidence and a 'can-do' attitude. This type of support provides a taste of being an entrepreneur without going into 'business mechanics'. Alongside this it is crucial that teachers and guidance practitioners also inform about the various risks involved in becoming an entrepreneur to provide the students with a realistic landscape for their career orientation.

Innovation camps and a range of different mini-company approaches help students develop business mechanics; they allow students to experience how companies are actually launched and operated. Business planning/ideas competitions are often used alongside both innovation camps and mini-company programmes to motivate young people taking part in these programmes. Private sector involvement is crucial for innovation camps and mini companies.

Their involvement is imperative in terms of providing sponsorship but also through the 'free of charge' non-formal guidance they provide. To keep entrepreneurs and private sector involved, the programmes must also remain practical and action-oriented; private sector interest tends to decline when programmes become too 'academic'. The mini-company approach in IVET is well researched. The business startup rates of mini-company participants are typically twice as high as those for nonparticipants. Studies across the world show similar results, demonstrating that the approach works regardless of the cultural or economic context.

Anecdotal evidence suggests that under-achieving students can excel in mini-company programmes, succeeding in practical assignments such as sales. Often these students make a connection between the academic curriculum and what they wish to discover about the workplace. Mini-companies help them broaden their horizons and allow them to develop skills and knowledge pertinent to the world of work.

The role of guidance in Higher Education

Until recently, entrepreneurship was not considered a 'sufficiently' academic topic to be taught in Higher Education Institutions (HEI), nor were universities considered the best source of support for individuals who want to start their own business. However, the research findings demonstrate that HEIs can offer support to students that enables them to pursue business ventures and also become more entrepreneurial in their approach to life and work more generally.

The past decade has seen an exponential rise in entrepreneurial learning opportunities in European HEIs, though coverage remains somewhat patchy. Particular issues that warrant attention include the following:

- ⇒ providing access to entrepreneurship learning for all students: more than half of Europe's students in higher education have no access to entrepreneurship education, indicating that there is a massive gap to be filled;
- ⇒ taking entrepreneurship learning out of business schools, promoting interdisciplinary approaches and developing entrepreneurship skills also among 'hard science', arts, social science and humanities students;
- ⇒ understanding how a holistic, institutional approach to entrepreneurship learning can be established in HEIs as well as transferred to other HEIs.

Formal vs. non-formal guidance services

HEI career guidance services are more active concerning entrepreneurship than their counterparts in compulsory education and IVET. However, most HEI career centres are typically more focused on providing information to students about employment rather than self-employment. While some business support is available, guidance professionals themselves do not necessarily feel that they are well-equipped to provide this form of assistance to students. Guidance for entrepreneurship is more commonly present in Western rather than Eastern European countries. Significant progress has occurred in the last two years in many Eastern European HEIs, though financial shortcomings remain a real problem, accentuated by the economic crisis. Some non-formal guidance activities are available in most European countries, although the range of activities and quality of support varies significantly both between and within countries. European funding has played an important part in enabling many European countries to invest more in enterprise support.

Integrating enterprise support provision with the career service offer is one way of mainstreaming entrepreneurship as a career option. The approach means that career services staff are exposed to expertise in entrepreneurship and students are informed about available enterprise support and related training. There should be practical ways (e.g. in-service training) for guidance professionals working in the HE sector to improve know-how, skills and competences linked to entrepreneurial activity as well as to labour market information.

Successful non-formal guidance approaches include peer-to-peer methods (e.g. student entrepreneur clubs, student enterprise ambassadors and opportunities offered by new media). These type of activity rely largely on the individual students' own initiative and curiosity to learn more about entrepreneurship from, and together with, fellow students. However, these methods have made a real and immediate impact on entrepreneurial education in the HEIs that have used them.

Opportunities offered by HEIs for entrepreneurial career exploration

Group projects, case studies and assignments for entrepreneurs and small businesses are increasingly used in higher education. Such activities allow students access to the world of work; they see how their personality matches a career as an entrepreneur as the practical assignments can get them to think about their personality and demands and rewards associated with entrepreneurship.

Internships also provide a means through which students can explore their career options, especially when placements are organized in start-up companies and are supported by pre- and post-placement evaluations. But anecdotal evidence suggests that the use of real life enterprise assignments can discourage some students from embarking on a career as an entrepreneur as they can experience the negative aspects of entrepreneurship. However, while some students may choose not to pursue entrepreneurial opportunities themselves, they can develop key competences: initiative, communication, teamwork skills, and taking responsibility for their own learning.

Dedicated enterprise programmes and activities focused on building the confidence and self-efficacy of HE students are still few and far between. Such developments are generally the 'by-product' of extra-curricular activities rather than its primary focus. There should be a move towards supporting self-directed learning which gives students the opportunity to work more autonomously on authentic problems and hands-on tasks, at the same providing them with learning aid contextualized to their project and/or assignment.

Business planning/ideas competitions and awards are an established feature of European HEIs. They help young people pursue their entrepreneurial ideas and ambitions. They also act as an

effective promotional tool as they provide a means of raising awareness of entrepreneurialism: award ceremonies are normally associated with high profile events or prizes.

Entrepreneurship degrees are primarily the domain of business schools. However, some HEIs have taken an interdisciplinary approach to entrepreneurship learning, engaging students across a range of faculties. While specialized courses offered to humanities and social science students remain rare, examples can be found of experiential entrepreneurial training embedded in the curriculum for all science, engineering, humanities and social science students.

Pre start-up support

Pre start-up support that aims to create growth companies and commercialise research, is important for HEIs. They need to deliver business support to students with advanced business ideas. Business incubators and HE entrepreneurship centres offer a range of technical, practical and financial support, alongside advice and guidance. Incubators/enterprise centres were found in most European countries.

Business advisors employed by career services can support students and graduates through the business planning process, helping them to understand the strengths and weaknesses of their business idea, find investment finance, and understand the principles of intellectual property and company formation. Few examples of HEIs were identified which provide this support in a systematic manner; those which have a unified careers service/enterprise support unit appear to have cohesive approaches.

Supporting career management of aspiring and new entrepreneurs

Career management skills (CMS) support individuals in processing educational and occupational information as well as in applying it to career-related decisions, choices and transitions. Such skills can be helpful for novice and prospective entrepreneurs to understand and appreciate their potential as an entrepreneur and to become more familiar with how entrepreneurs network, think and learn. CMS also helps individuals improve their ability to deal with change, overcome problems and become more aware of the opportunities for help, advice, grants, loans and what needs to be done to access them. Career management skills are important to new business formation, sustainability and growth.

For an individual entrepreneur, CMS can contribute to identifying the set of skills and competences needed for founding and running a company as well as mapping out the related learning goals to improve entrepreneurial capacity and to unleash business potential. There is a range of self-management and guidance strategies, tools and practices available to support the career development of aspiring and new entrepreneurs. Much of the guidance is non-formal, delivered by individuals with enterprise rather than career guidance expertise. Online based business guidance and support tools are also emerging as a resource efficient 'instant' source of information/advice. The main issue for an aspiring and/or new entrepreneur is to become well informed about the guidance support available for developing his/her career management capacities, and to have an easy access to such services.

Successful practices

Mentoring is one of the most successful practices for improving CMS, though such practice is not widely available across Europe. Through the mentoring relationship, aspiring and new entrepreneurs are able to develop both professionally and personally. Mentors encourage novice entrepreneurs to think objectively about and learn from their own actions so they are able to change their behavior if required or identify pertinent lessons. Mentoring allows

entrepreneurs to examine their companies, or prospective companies, from a more objective standpoint, while continuing to play a role as a leader and think about its development. Mentoring is particularly useful in the transfer of knowledge about the business world and the development of entrepreneurial skills. In some cases, private companies independently provide this type of support in an ad hoc manner.

Networking also helps aspiring and new entrepreneurs to identify opportunities and understand the 'bigger picture', e.g. the workings of the economy or the opportunities and challenges facing an employer or organization. Peer-to-peer learning opportunities provide opportunities to share experiences, discuss practical ways of solving problems and access information about training and support services.

Support and guidance for migrant entrepreneurs is being encouraged in response to political trends and social developments: migrants typically establish businesses through necessity rather than choice. Migrants require coaching and mentoring support from professionals with up-to-date institutional and administrative knowledge of the host society, rather than informal networks of personal contacts who might not have accurate information. Community based 'business incubators' help migrants who are already entrepreneurs to expand their business and bring it into the mainstream successfully.

Challenges involved with the delivery of career management skills

Funding, finding skilled mentors and longitudinal research evidence are key challenges that limit the expansion of mentoring opportunities. The cost of guidance and advice offered by entrepreneurial mentors is a complex matter. Mentoring schemes differ in that mentors can be paid or they can offer their services free of charge. Some findings suggest that mentee commitment is better guaranteed when paying a fee for this type of service (a practice used often in the UK and Ireland) whereas others (especially the Nordic countries) advocate mentoring based on voluntary support. It is important to tap into the potential offered by business experts (on a voluntary basis or for a small fee), especially given that large numbers of successful entrepreneurs will be retiring over the next 10 years. Quality research evidence that demonstrates that mentoring represents value for money is also needed to communicate the long-term value and impact of this type of activity. While all parties involved in mentoring initiatives are convinced that they are good value for money, it takes time and thorough research to demonstrate the longer-term 'effects' in monetary terms.

Online support brings potential disadvantages, rarely offering a substitute for face-to-face interaction, especially if the guidance needs of an individual are complex. Online tools cannot provide the same depth of enquiry as face-to-face interventions. As such, online business guidance and support tools should be seen as complementary to other forms of support, though their role might continue to grow in the future as young people increasingly operate 'online'.

Both European and Member State policies increasingly emphasize the importance of providing targeted and tailored entrepreneurship support and guidance to women. Courses teaching entrepreneurship skills to women and internet resources and databases of support services seem to be widely available in Europe. It seems, however, that the kind of face-to-face, customer-focused and relational support that women would prefer are rare. Many national agencies focusing on women entrepreneurs do not necessarily have sufficient regional/local ('grass-root') presence to reach out to women.

Conclusions

There has been a considerable shift across Europe in relation to entrepreneurship in recent years and there is clear evidence that education and guidance have roles to play in supporting

Europe's future entrepreneurs. Assisting individuals to think creatively and embrace innovation is essential to developing the future workforce. Not everyone needs to become an entrepreneur, yet all members of society need to be more entrepreneurial.

Getting people to face challenges and uncertainty in the world of work with entrepreneurial spirit will provide the European economy with independent and creative thinkers who can 'think outside of the box', respond to challenges and adapt to change. In line with the concept of lifelong learning, entrepreneurial guidance and learning must be seen as a lifelong process of developing individuals' confidence, skills, attitudes and behaviors. This study confirms the findings of previous research: it is important to familiarize children and young people with entrepreneurial attitudes and skills as early as possible. Entrepreneurship should be integrated into the education system at primary and secondary levels as well as in higher and adult and continuing education. Guidance professionals and teachers operating in all learning contexts need to be confident in dealing with entrepreneurialism in order to provide appropriate information, advice and support.

Formal and non-formal guidance in HE and IVET

Various guidance-based approaches are being implemented in European countries to help young people consider entrepreneurship as a career option. Guidance is also increasingly being embedded in the entrepreneurship learning processes. The high level of interactivity in entrepreneurship education, and the focus on solving real-life challenges faced by companies and entrepreneurs, allows students to explore entrepreneurialism as a career option. Learners have access to a range of different guidance and learning experiences: they can see how their personality, skills and core attributes match entrepreneur profiles; and they can participate in practical assignments, exposing them to the demands and rewards associated with entrepreneurship.

Guidance for an entrepreneurial career is seen to play an even greater role in today's society. VET and HE institutions are helping young people develop entrepreneurial attitudes (e.g. creativity, flexibility and responsibility) and skills (e.g. identification of opportunities, team work, etc.). Schools, colleges and universities, therefore, need to be entrepreneurial in their approach to preparing individuals for the future, an idea promoted by the Oslo Agenda for Entrepreneurship Education (2006).

To date, HE institutions and their formal career guidance services have been much more active than IVET establishments in supporting entrepreneurship learning, even though fewer than half of HE students are exposed to entrepreneurship learning opportunities. While recent EU policies on VET and HE have emphasized the importance of career guidance, there appears to be a gap between formal careers guidance and the entrepreneurship agenda, possibly accounting for the lack of formal careers guidance for entrepreneurship and the array of non-formal guidance in place. Guidance provided through non-formal channels is also more widespread across Europe than formal guidance. Non-formal guidance still lacks consistency in terms of its quality and number of activities on offer across Member States.

Engaging young people in entrepreneurial activities

The research identifies a number of lessons for guidance in engaging young people in entrepreneurship learning and related activities. Awareness raising and information giving (i.e. providing printed and digital information and guidance on becoming an entrepreneur) is still the most common method of engagement for VET and HE institutions across Europe. However, while such methods are common and have an important part to play in information-dissemination, they may not necessarily be the most effective method of engaging students in

entrepreneurial learning. Non-formal guidance methods, utilising the ‘power of recommendation’ in the form of student ambassadors and student led clubs and networks, prove very successful at informing, and thereby engaging, students in entrepreneurship learning. In some universities, up to 80% of learners have been engaged through this method. Awareness-raising through taster sessions about entrepreneurship provide an alternative method for informing young people about entrepreneurial concepts and approaches. Guidance services have an important role to play in guiding interested young people from such familiarisation activities towards entrepreneurship education that will allow them to deepen their knowledge and develop the entrepreneurial ability to identify and capitalise on business opportunities, to launch a business and manage its growth.

Although some of the newer media methods are criticised by some, case studies indicate that social networking sites are another successful way of reaching out to the wider student population, and several universities are looking further into this form of recruitment. Some online-based guidance platforms have been created for students and aspiring entrepreneurs to assist networking, and to provide support. However, evidence suggests that real value resides in person to-person interaction and, while online services within VET/HE can support entrepreneurial activities, they cannot replace one-to-one support. Role models and mentors underpin most successful guidance orientated entrepreneurship programmes; students want to see, and get to know, those who have success stories to tell. The involvement of entrepreneurs themselves is critical.

Extracurricular activities can serve a dual purpose and are useful where entrepreneurship is not embedded in curricula. However, the focus should shift from extra-curricular ‘add-ons’ to a model of education in which entrepreneurship is embedded in the curriculum itself. There has also been a real increase in entrepreneurial publicity campaigns and TV/radio programmes attracting mass audiences; these present ordinary people pursuing entrepreneurial goals. Despite criticism due to a lack of assessment of their methods or educational value, these activities have a significant symbolic value in fostering people’s aspirations, raising awareness about entrepreneurship, showing ‘ordinary’ people that everyone has the potential to be an entrepreneur and also presenting lessons about entrepreneurship.

Key lessons

Business involvement in entrepreneurial initiatives at all levels has been generally patchy and unstructured. However evidence indicates that there is a growing interest from companies, entrepreneurs and business professionals in engaging in entrepreneurial ventures, moving towards the strengthening of links between education, business, research and innovation desired by the Europe 2020 Strategy. Resources need to be dedicated to identifying, and then engaging, business, especially business owners, to ensure that their involvement benefits the entrepreneurship agenda.

A key lesson generated through the dialogue between entrepreneurs and aspiring entrepreneurs is the fact that there are no linear pathways or privileged routes that must be taken to achieve one’s career goals, but that pathways can be diverse and sometimes unexpected. Many organisations outside mainstream public education have played a key role over the years in introducing and supporting the entrepreneurship agenda of VET and HE institutes. Examples include associations representing entrepreneurs and/or SMEs, or chambers of commerce; the financial investment made by some such organisations is impressive (e.g. the Nuits de l’Orientation initiative funded by the French Chambers of Commerce and Industry). The level of investment afforded can be a proxy for the importance attributed by such organisations to activity in this field. However, such commitment is not evident uniformly across Europe. International organisations such as Ja-Ye and EuroPEN have also made significant investments and their role in the provision of entrepreneurship education has been immense.

Future challenges

It is important to recognise that it would be a significant task to create universal access to entrepreneurship education and guidance. Ensuring that teachers involved in entrepreneurship education are trained/retrained and supported to apply the experiential, hands-on approach required to deliver entrepreneurship education, and have access to guidance materials to support their work, is a major task. While most countries offer teachers some level of training on entrepreneurship, this is generally provided by external organisations and delivered on an ad-hoc basis: it is less likely to be part of a coherent, systematic approach to entrepreneurship training delivery. Looking forward, guidance professionals will also need to be equipped with information and skills about the career opportunities offered by entrepreneurship.

The role of guidance is also limited by the fact that guidance professionals currently have limited contacts with the business world and real entrepreneurs are not adequately included in the promotion of entrepreneurship as a career option in all IVET and HE institutions (though significant development has taken place). Despite a growing focus on entrepreneurship and a range of awarenessraising activities having been implemented, many students are still not always aware of entrepreneurship as a career option. Evidence indicates that many students still prefer more traditional employment positions rather than selfemployment.

Significant anecdotal evidence is available to support the positive effects of guidance-related interventions discussed in this report, but empirical and longitudinal studies are less commonly available. This report has provided examples of evaluation results which are mainly linked to the results of minicompanies, mentoring initiatives and the activities of some individual universities. Demonstrating the impact of specific entrepreneurial learning activities, as well as the impact of formal guidance related to entrepreneurship, is a key challenge. Impact assessment and evaluation work in this field is hampered by a lack of commonly accepted indicators for success. Most often, entrepreneurshiprelated support programmes are evaluated on the basis of academic knowledge about entrepreneurship, academic performance more generally, business formation and wealth generation, and personal values and aspirations (Volkmann et al., 2009). If the guidance value is to be included, such evaluations should investigate entrepreneurship as a broader concept, including awareness of entrepreneurship as a career option and career aspirations of young and adult learners. They should also explore broader entrepreneurial attitudes, skills and competences.

Recommendations

Policy

A key starting point is the development of a policy agenda and associated policy framework for guidance related to entrepreneurship learning, covering education and training, employment and enterprise development, which promotes:

- ⇒ entrepreneurship as a career option for all, to aid diversification in the population of entrepreneurs;
- ⇒ entrepreneurship as a mandatory element of the career guidance offer at all levels, for all pupils and students, in all types of education and training;
- ⇒ progressive and coordinated curricula for entrepreneurship education, where basic skills are developed in primary and lower secondary education and are further developed through upper secondary, IVET and HE, which is then taken forward by individuals as they enter working life;

⇒ training for career guidance professionals (and other education and training professionals) to ensure they are equipped to support individuals in acquiring entrepreneurial skills/competences.

As emphasised in the 2008 Council Resolution on better integrating lifelong guidance into lifelong learning strategies, entrepreneurship guidance and learning cannot operate in a vacuum: it has to be intrinsically linked to the employment and enterprise development policy agendas.

Practice

As part of this policy framework, schools, VET and HE institutions need to be encouraged to provide learning environments that develop students' entrepreneurial skills and competences and embrace entrepreneurial principles across the whole curriculum: developing initiative, confidence, self-efficacy, creativity, responsibility and determination. Measures taken to support the development of entrepreneurship skills and their application in the world of work need to be complemented by appropriate start-up support. Appropriate media need to be used to promote entrepreneurship to students and workers interested in establishing their own businesses.

Also, guidance practitioners and education and training professionals need to ensure that individuals interested in entrepreneurship have access to credible role models and possible mentors, hence links need to be established with appropriate business people: former students, local entrepreneurs, etc. Such role models can explain the path they took to entrepreneurship, what it entailed and how their studies linked to self-employment, enabling aspiring entrepreneurs to understand the challenges they might face. Schools, authorities and project promoters should therefore seek to tap into the willingness of many experienced and/or retired entrepreneurs, to volunteer their time to act as a role model or mentor.

In the meanwhile, the types of extra-curricula activities described in this report should continue to play a key part in helping to develop entrepreneurship. Cross-disciplinary initiatives enable students to draw on the expertise of colleagues with different outlooks and skill sets and thereby help to build entrepreneurial characteristics such as teamwork and creativity. A 'meeting of minds' that brings together academic theory on entrepreneurship and practical experience is necessary, so theory and practice become intertwined. Practical experience is crucial and allowing students time in businesses learning from entrepreneurs as well as bringing entrepreneurs into education and training institutions provides the necessary exposure to understand day-to-day business practices. Many underachieving students excel in practical, entrepreneurship-oriented activities. Work placements and internships in SMEs, and start-up companies in particular, can also be useful for stimulating interest in business formation.

In pursuing an entrepreneurial policy agenda, it is paramount that careers guidance and education and training professionals are equipped with the necessary skills and knowledge to support students. Such skills and knowledge need to underpin their day-to-day activities, so they should be built into initial and continuing training. Guidance services, including those aimed at supporting aspiring and new entrepreneurs, should be accessible to everyone. They also should take into consideration the specific barriers to entrepreneurship faced by individuals from disadvantaged backgrounds and groups currently underrepresented in the entrepreneur community.

This study also reinforces the recommendations of the 2008 Council Resolution on lifelong guidance in that it emphasises the importance of equipping individuals with skills to manage their careers throughout their lives. Career management skills can help prospective and new entrepreneurs to survive and succeed in a challenging business world. Mentoring between new

and experienced entrepreneurs is one of the most effective ways of equipping novice entrepreneurs with skills and competences to manage not only their new business but also their career. Networking and peer learning and support opportunities for new entrepreneurs should also be promoted.

Definitions

Entrepreneurship and entrepreneurs

Entrepreneurship is a multifaceted concept that manifests itself in many different ways. This means that various definitions have emerged and no single definition has been generally agreed upon (OECD, 2009b). Well known academics such as Richard Cantillon, Jean Baptiste Say, Alfred Marshall and Joseph Schumpeter have established the following definitions (OECD, 2009b, p. 8):

- ⇒ entrepreneurs are those persons (business owners) who seek to generate value through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets;
- ⇒ entrepreneurial activity is enterprising human action in pursuit of the generation of value through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets;
- ⇒ entrepreneurship is the phenomenon associated with entrepreneurial activity.
- ⇒ The European Commission definition makes a particular reference to entrepreneurship as a mindset. It has defined entrepreneurship as ‘the mindset and process to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organisation’.
- ⇒ The term self-employed is often also used to describe entrepreneurs. However, Eurostat makes a distinction between two different types of entrepreneurs: ‘self-employed persons’ who do not employ anyone, and ‘employers’ who have at least one employee ⁽⁴⁾:
- ⇒ self-employed persons not employing any employees are defined as persons who work in their own business, professional practice or farm for the purpose of earning a profit, and who employ no other persons;
- ⇒ employers employing one or more employees are defined as persons who work in their own business, professional practice or farm for the purpose of earning a profit, and who employ at least one other person.

Hence, it is worth clarifying that in this study the term ‘entrepreneur’ refers to all individuals who have a business or businesses that take on financial risks, as opposed to working for an employer. This includes owners of businesses with or without employees. Therefore, entrepreneurship in the context of this study ranges in scale from solo projects (that might only involve the entrepreneur on a part-time basis) to major undertakings creating many job opportunities.

New entrepreneurs (also known as novice and nascent entrepreneurs) are those business owners who have recently set up a business (i.e. have had their own business for up to two years). Aspiring entrepreneurs (also known as prospective, ‘wanna-be’, and would-be entrepreneurs) are those who are thinking, or are in the process, of launching their own business.

Entrepreneurship learning

Most of the literature refers to education and training related to entrepreneurship as entrepreneurship education. For this study the term ‘entrepreneurship learning’ has been used to cover all entrepreneurship education and training which promotes creativity, innovation and business start-up. The term entrepreneurship education is often associated with general

business or economic studies, whereas the definition of entrepreneurship learning is a broader concept which embraces learning that builds 'knowledge and skills about, or for the purpose of, entrepreneurship' (Martínez et al., 2010, p. 11). Thus, entrepreneurship learning covers, for example:

- ⇒ education about being enterprising and entrepreneurial in the more general sense;
- ⇒ education about entrepreneurship, including the context for and philosophy behind entrepreneurship;
- ⇒ training linked to starting a business.

IVET and HE

Initial vocational education and training (IVET) refers to upper secondary level vocational education (ISCED 3). Higher education (HE) refers to tertiary level studies (ISCED 5 and 6); studies of both academic (universities) and vocational character (e.g. polytechnics and technical higher education institutions).

Career management skills

Career management skills (CMS) relate to a wider view of a person's development, to the development of 'meta-competences' that are not occupation-specific but are transferable, thus helping individuals to manage better their learning and work. The European Lifelong Guidance Policy Network (Sultana, 2009) has proposed the following definition: 'Career management skills refer to a whole range of competences which provide structured ways for individuals and groups to gather, analyse, synthesise and organise self, educational and occupational information, as well as the skills to make and implement decisions and transitions.'

Guidance

In this study guidance is understood as a broad framework of support. The Council of the European Union's definition of guidance refers to services designed to assist individuals of any age to make occupational, training and educational choices and to manage their careers (Council of the European Union, 2004). It covers individual and collective activities relating to information-giving, counselling, competence assessment, support, and the teaching of decision-making and career management skills.

Guidance in the context of entrepreneurship can be provided by three groups of individuals:

- ⇒ formal guidance is provided by trained career guidance counsellors and other guidance professionals. Such professionals can work at: education and training institutions; business support bodies; private organisations; public authorities, such as the public employment services (PES); chambers of commerce; and associations representing entrepreneurs;
- ⇒ non-formal guidance refers to information, advice and support provided by individuals with significant support in business formation. This includes: business coaches; mentors; senior managers of companies and other experienced business professionals; experienced and successful entrepreneurs; and former (i.e. retired) entrepreneurs;
- ⇒ informal guidance covers guidance and other support given by family members, colleagues and peers.

Analytical framework

Guidance is a broad framework for different support mechanisms and can be provided through formal, non-formal and informal channels. Taking into account the guidance context, the following analytical framework describes the different forms of guidance relationships and activities that have been analysed as part of this study (see Figure 1).

Figure 1. **Analytical framework**

Formal guidance
Formal guidance offered by trained guidance professionals working either in chambers of commerce, associations of entrepreneurs, PES, etc., or within education (VET and HE institutions)
Non-formal guidance
Mentoring and business coaching Practical teaching methods, including assignments for companies or entrepreneurs, and mini and virtual companies Online services, including interactive career assessment tests for entrepreneurs, business support tools, web platforms and virtual entrepreneur communities Business incubators Community based holistic interventions for hard-to-reach groups Engagement with entrepreneurs through lectures by and meetings with successful businessowners Entrepreneurship centres Awareness raising activities, including dedicated days, meetings, weeks and festivals on entrepreneurship, enterprise ambassadors and role models, enterprise awards and competitions and other media activities on entrepreneurship (e.g. TV and radio programmes, and professional magazines dealing with entrepreneurship) Work placements, company visits and shadowing opportunities Private sector interventions
Informal guidance
Networks of entrepreneurs and other peer learning opportunities

Methodology

This report is based on a three-stage research process that used secondary research, primary research and comparative analysis. The key methodological tools used included literature reviews, mapping, interviews and case studies. Two surveys were also carried out: a telephone-based interview of entrepreneurship education experts and, to validate the findings of the previous research phases, an online survey targeted at Ministry level guidance experts to inform the study about the most up-to-date developments in guidance and entrepreneurship learning in initial vocational education and training (VET) and in higher education (HE).

The research process began with a thorough review of international, European, national and regional publications which documented entrepreneurship and entrepreneurship education in Europe. Approximately 250 publications were reviewed and examples of good practice were selected. The primary research stage began with a survey of entrepreneurship education experts. This included a round of semi-structured telephone interviews with entrepreneurship education experts from VET and HE sectors, in addition to representatives from associations of entrepreneurs and/or chambers of commerce. A small number of European level experts and stakeholders were also interviewed. In total, 71 expert interviews were carried out and three thematic databases were created to store the interview and the literature review findings.

The findings from the literature review and sourced through the interviews were used to select examples and themes for case studies: 26 were prepared on different themes. The case studies took on different formats: some were in-depth case studies of individual projects or practices within specific IVET or HE institutes, while others were composite case studies into specific themes. In-depth case studies were prepared from 10 countries, including Belgium, Bulgaria, Finland, Ireland, France, Norway, Portugal, Spain, Sweden and the UK. The thematic case studies explored a variety of issues:

- ⇒ the guidance value of the mini-company approach;
- ⇒ guidance for women and migrant entrepreneurs;

- ⇒ the role of PES in supporting entrepreneurship;
- ⇒ business idea/plan competitions;
- ⇒ entrepreneurial awareness-raising activities;
- ⇒ online career assessment tests for aspiring and novice entrepreneurs;
- ⇒ business incubators;
- ⇒ the capacity of VET teachers to deliver entrepreneurship learning.

The composite case studies include shorter project and practice descriptions from most of the study countries and a special case study of the European wide entrepreneurship programme, Erasmus for young entrepreneurs, was also undertaken. To investigate the views of policy-makers and practitioners with a guidance remit, an online survey was launched on IVET and HE.

Background

The purpose of this background section is sixfold. This chapter aims to provide information on:

- ⇒ the EU policy context for entrepreneurship education and guidance in Europe;
- ⇒ entrepreneurship in Europe, in terms of the number and profile of entrepreneurs;
- ⇒ entrepreneurial aspirations and the status of entrepreneurship as a career option;
- ⇒ entrepreneurial skills of Europeans, in particular their preparedness to pursue entrepreneurial activities;
- ⇒ entrepreneurship learning in Europe, especially within IVET and HE;
- ⇒ a summary of the key issues and the way in which they are linked to the guidance context.

Policy context

As a response to the pressures on economies to compete and innovate, over the last few years policy agendas at different levels have recognised the need to develop a strong base of new and innovative entrepreneurs. There has indeed been growing recognition in the EU policy agenda of the importance of entrepreneurship and entrepreneurship education. This is apparent in both economic and employment policies, as well as from education and training policy developments. EU level guidance policies are also starting to acknowledge the importance of guidance for entrepreneurship, although the direct link between guidance and entrepreneurship remains weak, in some case non-existent, in most European countries.

EU policy linkages to entrepreneurship learning

The first EU level developments related to entrepreneurship learning date back to 1997 and the BEST Task Force comprising entrepreneurs, public administrators and academics. It identified education for the creation and promotion of an entrepreneurial spirit as one of the key recommendations (Rodríguez, 2009). In 2000, the Lisbon European Council identified entrepreneurship as one of the five areas of 'new basic skills' for the knowledge-based economy (European Council, 2000). The Lisbon conclusions underlined that entrepreneurship is a competence that society as a whole should value and that a spirit of enterprise is required. Education should provide opportunities to acquire skills needed to set up and run a business. Since the Lisbon Strategy there has been a constant increase in the number of references to entrepreneurship and entrepreneurship education in Commission communications. As an example, the European Charter for Small Enterprises was adopted in 2000 within the context of the Lisbon Strategy. It commits Member States to 'nurture entrepreneurial spirit and new skills from an earlier age'. It recognises the need for 'general knowledge about business and entrepreneurship ... to be taught at all levels' along with 'specific business-related modules' to be an 'essential ingredient' of education at secondary level and above (European Commission, 2000).

In 2004 the Commission published an EU action plan on entrepreneurship that stated that entrepreneurship is 'a major driver of innovation, competitiveness and growth' (European Commission, 2004a). The action plan sets out five strategic policy areas, two of which are directly related to this study: fuelling entrepreneurial mindsets and encouraging more people to become entrepreneurs, particularly women and people from ethnic minorities. It highlights the need for individuals to match their interests, skills and personal situation with the right entrepreneurial activity, such as part-time, cooperative ventures or expansion-driven. Entrepreneurship education is seen as a key element in developing entrepreneurial skills and encouraging young people and adults to become entrepreneurs.

The European Commission communication on 'fostering entrepreneurial mindsets through education and learning' noted that formal education in Europe has not generally supported entrepreneurship and self-employment. It identified the need for cooperation between different ministries, particularly those responsible for education and enterprise, and relevant stakeholders from the business world, in order to develop and implement effective entrepreneurship education (European Commission, 2006b). Education systems can have an important impact on the success of entrepreneurship in the EU, as individuals are shaped by attitudes and cultural references at an early age. Education can contribute to encouraging entrepreneurship, by fostering the right mindset, by raising awareness of career opportunities as an entrepreneur or a self-employed person, and by providing the relevant business skills (European Commission, 2004b). By promoting entrepreneurship throughout the education system, young people will be encouraged to see that entrepreneurial activities and self-employment can lead to success and that they can start-up their own business venture if they wish.

The Oslo agenda for entrepreneurship education sought to promote entrepreneurial mindsets in society through education and learning, in particular by fostering entrepreneurial mindsets of young people through education at all levels, from primary school to university. It is a detailed catalogue of actions that national policy-makers can choose from and adapt to their particular circumstances (European Commission, 2006b and 2006c). As part of its activities, a European conference on entrepreneurship education was held in Oslo in October 2006 to exchange experiences and good practices, and to discuss how to move forward in promoting entrepreneurship education more systematically, based on concrete evidence and recommendations.

The 'Think small first' principle of the Small Business Act for Europe (European Commission, 2008b) recommends that entrepreneurship is introduced as a key competence in school curricula, that entrepreneurship is part of teacher training and that cooperation between education and businesses and non-profit organisations is increased to bring in content and practice from business life.

The economic crisis and the resulting high levels of unemployment across Europe have further emphasised the need for sustainable job creation and for increased EU competitiveness in the face of strong international competition for jobs and markets. The European Economic Recovery Plan 2008 highlights the need to encourage entrepreneurship as a way of supporting economic growth and promoting active inclusion by reintegrating unemployed workers back into the labour market (European Commission, 2008b). The recent EU communication on a shared commitment for employment (European Commission, 2009a) also promotes entrepreneurship education as a key aspect in supporting unemployed individuals and young people to set up their own business or micro-enterprise.

The 2009 Council Conclusions on a strategic framework for European cooperation in education and training ('ET 2020') quote 'enhancing creativity and innovation, including entrepreneurship, at all levels of education and training' as one of its key strategic objectives (Council of the European Union, 2009). The framework states that innovation and creativity are critical for enterprise development and the EU's international competitiveness. Moreover, partnership between the world of enterprise and different levels and sectors of education, training and research can help to ensure better focus on the skills and competences required in the labour market and on fostering innovation and entrepreneurship in all forms of learning.

Consequently, the European Commission has included a 'sense of initiative and entrepreneurship' in a new framework of eight key competences for lifelong learning (Council of the European Union, 2009). In common with the other transversal key competences, this is strongly process-orientated. It refers to an individual's ability to turn ideas into action and the

ability to plan and manage projects to achieve objectives which may be social as well as commercial. This competence is also underpinned by a varied body of knowledge which is open to a range of interpretation: understanding the workings of the economy, as well as the specific demands and opportunities of employers. This approach reflects the ethics of business and the potential of enterprises to be a force for good, for example through fair trade or through social enterprise. Personal and interpersonal skills are also part of this competence, including the ability to lead and delegate, analyse, communicate, debrief, evaluate and record, effective representation and negotiation, and the ability to work both as an individual and collaboratively in teams.

The medium term forecast for skills supply and demand in Europe (up to 2020) suggests that transversal competences such as entrepreneurship are important for helping people to adapt more quickly to structural changes and ensure they are fit for occupational mobility (Cedefop, 2010). The Commission (European Commission, 2010d) intends to examine the possibility to step up the promotion of entrepreneurship mobility for young people, in particular by increasing Erasmus work placement mobility, promoting entrepreneurship education in all levels of the education system, enhancing business participation in Marie Curie actions, and by supporting the Erasmus for young entrepreneurs initiative.

Recent policies on VET and HE also acknowledge the role of education for entrepreneurship. The Commission's Communication on European cooperation in vocational education and training states that 'education for entrepreneurship ... should be encouraged and accessible to all VET students, across all curricula and fields of study' (European Commission, 2010c, p. 10). The Bruges Communiqué (2010) addresses the importance of promoting entrepreneurship in IVET and CVET in close cooperation with employers, VET providers and national business support services, and highlights the need to encourage business start-ups for VET graduates as well as promoting learning mobility for young entrepreneurs. In relation to HE, the modernisation agenda for universities stresses the importance of improving the career prospects of researchers at all stages of their career by adding entrepreneurial skills to scientific expertise. It also urges universities to develop entrepreneurial, management and innovation skills and make sure they become an integral part of graduate education, research training and lifelong learning strategies for university staff (European Commission, 2006b). Finally, the Europe 2020 Strategy outlines the Commission's commitment to strengthening links between education, business, research and innovation. It also urges Member States to focus school curricula on creativity, innovation, and entrepreneurship (European Commission, 2010b).

EU policy linked to guidance and entrepreneurship

An important part of supporting 'a sense of initiative and entrepreneurship' (Key competences for lifelong learning) is ensuring entrepreneurship education teaches young people and other individuals skills that allow them to manage their careers, identify their strengths and weaknesses and know where to obtain career and business information. It is increasingly recognised that to foster sustainable entrepreneurship, there must be greater provision of guidance and advice in entrepreneurship education and in the career management and development of entrepreneurs and the self-employed. Starting up an own business can be a daunting prospect for an individual and access to even the most basic guidance and support (such as help in finding out where to go to get advice on venture capital) can make a significant difference to an individual's self-confidence and motivation.

Despite widespread recognition of the importance of guidance throughout life and lifelong learning, European policies rarely refer to the role that lifelong guidance can play in entrepreneurship learning or in the development of career management skills of entrepreneurs in the EU. For example the 2004 Council resolution on strengthening policies, systems and

practices in the field of guidance throughout life in Europe (Council of the European Union, 2004) does not mention entrepreneurship at all.

One of the exceptions is the 2008 Council Resolution on better integrating lifelong guidance into lifelong learning strategies, which states that guidance plays a decisive role in the major decisions that individuals take throughout their lives (Council of the European Union, 2008b). This can help to empower individuals to manage their own career paths within the context of their own personal situation and the labour market, as well as support them in achieving a better balance between their personal and professional lives. The resolution identifies four priority areas, one of which is to 'encourage the lifelong acquisition of career management skills', which includes the key competences 'sense of initiative' and 'entrepreneurship'. The International Labour Organisation, as part of its 2004 Recommendation concerning human resources development: education, training and lifelong learning, suggested that members should 'provide information and guidance on entrepreneurship, promote entrepreneurial skills, and raise awareness among educators and trainers of the important role of enterprises, among others, in creating growth and decent jobs' (International Labour Organisation, 2004). The expert group report on New skills for new jobs (European Commission, 2010e) stresses the guidance provider role of the public employment services also in terms of designing their training schemes and services in order to stimulate entrepreneurship and self-employment.

Recent EU policies on VET and HE emphasise the importance of career guidance, but do not usually link it to the entrepreneurship agenda. For example, in 2006 the Council Conclusions on the future priorities for enhanced European cooperation in VET reiterated the need for 'improved guidance throughout life to take better account of the opportunities and requirements of VET and of working life, including increased career guidance and advice in schools and for families, in order to ensure informed choice' (Council of the European Union, 2006); it did not explicitly refer to the need for more career guidance for entrepreneurship. Similarly, there was no special mention of entrepreneurship guidance in the 2009 Communiqué of the Conference on the Bologna Process 2020, where the Ministers responsible for higher education in the 46 countries of the Bologna Process declared that 'higher education institutions, together with governments, government agencies and employers, shall improve the provision, accessibility and quality of their careers and employment related guidance services to students and alumni' (European Ministers Responsible for Higher Education, 2009).

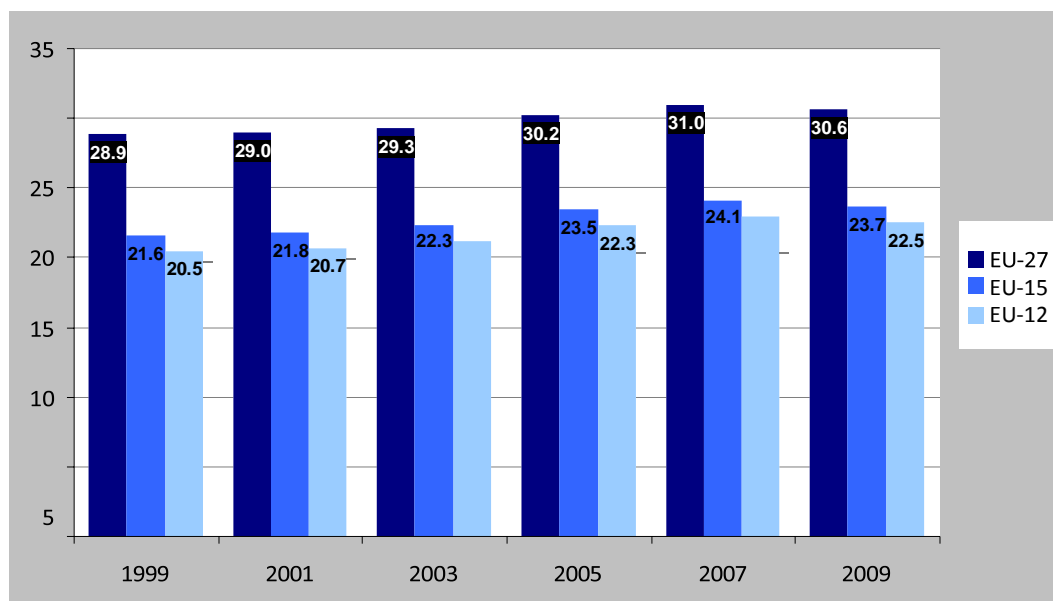
Entrepreneurship in Europe

It is important to examine entrepreneurial activity in Europe to understand differences between countries and groups of individuals which are more or less likely to pursue an entrepreneurial career. This is particularly important as, for a long time, Europe has been far behind the US in entrepreneurial activity (European Commission, 2003; European Commission, 2004a; Volkmann et al., 2010).

Entrepreneurial activity in Europe

Many people have the ambition of setting up and running their own business and today more people than ever have decided to do so. There are many Europeans who wish to grasp the opportunity (and risk) of working for themselves and to enjoy the benefits derived from being their own boss. According to Eurostat (2010), there were over 30 million entrepreneurs in the European Union in 2009, which represents an increase of nearly two million since 1999 (see Figure 3). Italy has the highest number of entrepreneurs in Europe (5 million), followed by Germany (4 million) and the UK (3.6 million).

Figure 3. Number of entrepreneurs across the EU-27 (figures indicated in millions)



Source: Eurostat, 2010.

Includes statistics for: a) Self-employed persons not employing any employees are defined as persons who work in their own business, professional practice or farm for the purpose of earning a profit, and who employ no other persons; and b) Employers employing one or more employees are defined as persons who work in their own business, professional practice or farm for the purpose of earning a profit, and who employ at least one other person.

However, not all entrepreneurs become entrepreneurs out of choice. Many are not the type who wishes to capitalise on an opportunity, but instead, they have become entrepreneurs out of necessity. Though European countries have low levels of necessity driven entrepreneurship in comparison to countries in Africa and Asia, the recent financial crisis has prompted an increase in necessity-driven entrepreneurial activity. In 2009, the share of necessity, as opposed to opportunity driven entrepreneurs ranged between 7% and 32% across Europe (Bosma and Levie, 2009) and a year later the figures for necessity driven entrepreneurship were 7% and 31% (Kelley et al., 2010) ⁽⁷⁾. Out of the 15 (2009) and 16 (2010) countries surveyed, Latvia (2009) and Ireland (2010) record the highest percent of necessity driven entrepreneurship in Europe, with 32% and 31% of all new entrepreneurs having set up their company out of need. The lowest share of necessity driven entrepreneurs in 2010 can be found in Iceland (7%), Denmark and the Netherlands both with 8%.

As indicated in Figure 3, there was a 6% increase in the number of entrepreneurs across Europe between 1999 and 2009. The most significant change occurred in Slovakia where there was a 133% increase over the 10-year period compared to a reduction in Lithuania of 39% (see Table 1). With the exception of the Czech Republic and Slovakia, there was a general reduction in Eastern European countries. Most Western European countries have seen a clear growth in the number of entrepreneurs, with the Netherlands leading the way with a 35% increase.

Table 1. Change in number of entrepreneurs between 1999 and 2009 across Europe

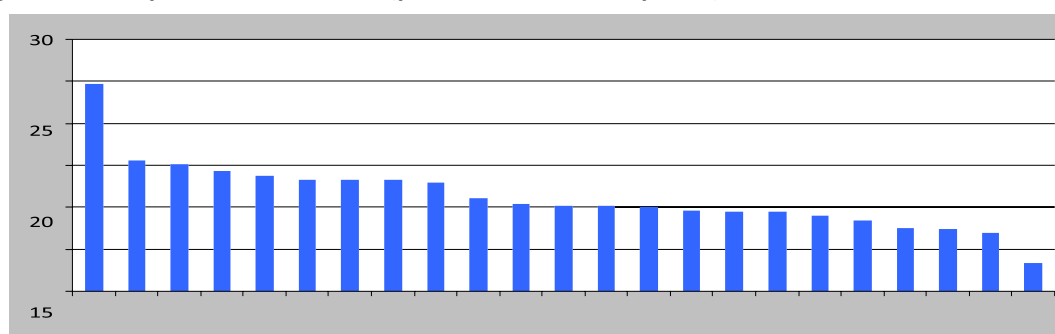
	Countries (% change between 1999 and 2009)
Decline (negative growth of more than 2%)	LT (-39%), IS (-26%), HU (-20%), PT (-12%), RO (-10%), PL (-10%), BU (-9%), LV (-8%), SI (-4%)
Stable (growth of +/-2%)	EE (1%), BE (2%), SE (2%)

Incline (growth of over 2%)	FI (4%), DK (4%), EL (5%), IT (6%), ES (8%), LU (9%), CY (9%), FR (10%), IE (12%), AT (13%), DE (15%), NO (15%), UK (15%), CZ (19%), MT (25%), NL (35%), SK (133%)
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Source: Eurostat, 2010.

Across the EU-27, about 80% of citizens feel that it is difficult to start up a business due to a lack of available financial support; this was highest in Bulgaria, Greece and Latvia (91-92%), and lowest in Finland (56%), Austria and the Netherlands both with 63%. (The Gallup Organization, 2009). It is also important to look into the enterprise birth and success rates to understand the entrepreneurial landscape in Europe. Americans are involved in three times as many new entrepreneurial ventures as Europeans, with European firms generally starting smaller, growing more slowly, and dying faster than their counterparts in the United States (European Commission, 2003; Volkmann et al., 2009). To create a strong base of innovative entrepreneurs, policies need to focus on supporting new business creation as well as supporting and guiding new businesses in their early stages.

Figure 4. **Enterprise births in 2007 (per 100 active enterprises)**



Profile of entrepreneurs in Europe

European entrepreneurs are a heterogeneous group (European Commission, 2003). They come from diverse backgrounds and represent people from all walks of life. However, a typical entrepreneur in Europe is male and educated to upper secondary level. A recent Swedish survey showed that a total of 94% of the survey respondents associated the word entrepreneur with a man, rather than a woman (Tillväxtverket, 2009).

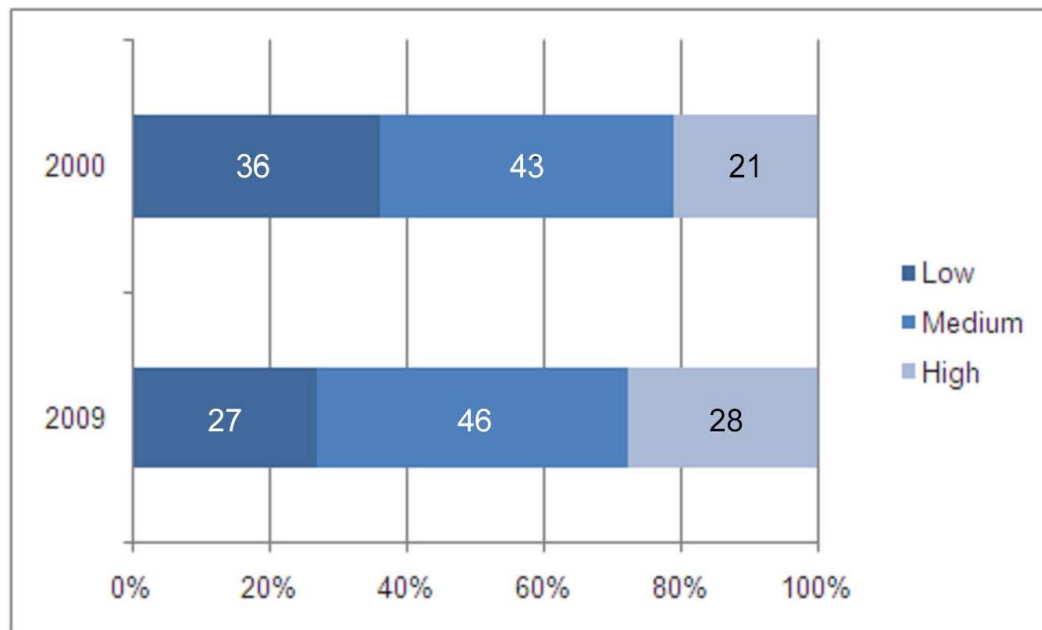
The gender gap is very clear. According to Eurostat data (2010), in 2009, 70% of EU entrepreneurs were male, compared to just 30% of females. In Portugal, 40% of entrepreneurs are female, the highest across Europe. There are also higher levels of female entrepreneurs in Lithuania (38%) and Latvia (37%). Conversely, in Ireland and Malta, just 19% and 17% of entrepreneurs are female. The proportion of entrepreneurs who are female has remained relatively constant since 1999.

There are many reasons for why fewer women than men wish to set up and run their own business. The Eurobarometer household surveys on entrepreneurship have found that women seem to be less attracted by the idea of becoming entrepreneurs, and many have never thought about setting up a business: according to the survey 39% of women prefer to be self-employed compared to 51% of men (The Gallup Organization, 2009).

Men's and women's motivations for becoming entrepreneurs are also often different. For women, the motivations to avoid unemployment, to combine work and private life and the age of any children seem to be more important than for men (Schrör, 2006). Women also experience more difficulties than men in dealing with banks and entering informal financial networks (GHK and Technopolis, 2008). The lack of access to networks that provide information, advice, and finance and business contacts are another barrier (Allen, et al., 2008). The fact that women have less managerial experience, training and skills than men when they start as entrepreneurs is also a challenge (The Gallup Organization, 2009). The lack of visible female role models in business may also hinder women seeing entrepreneurship as a viable career option.

A growing share of European entrepreneurs are highly educated; just over a quarter (28%) of European entrepreneurs are educated to a tertiary level (see Figure 6). This illustrates an increase of 32% from 2000. Conversely, while one-third of entrepreneurs had only a basic education in 2000, by 2009 this had decreased to just over one quarter, due to a growth in those with higher levels of education.

Figure 6. Education level of European entrepreneurs (EU-27), 2000-09



Source: Eurostat, 2010.

Young Europeans are seen to have particularly strong entrepreneurial tendencies (Volkman et al., 2009). Some of the key barriers to entry, such as those linked to geography, have been removed with ICT developments; as global popular culture continues to be centred on youth, many young people have been able to exploit their fluency in digital technology to create successful businesses in music, video games, internet retail and other industries (ibid.).

Entrepreneurship is also common among many migrant communities as it can contribute to reducing social exclusion and raising living standards (CEEDR, 2000). Studies show that, in certain EU countries, migrants demonstrate notably higher rates of self-employment than the native population (see Table 2). This is evident in Austria, Belgium, the Czech Republic, Denmark, Finland, France, Hungary, Latvia, Norway, Slovenia, Sweden and the United Kingdom. The opposite is true for Estonia, Ireland, Greece, Spain, Italy, Cyprus and Portugal.

Table 2. Percentage of workers aged 15-64 years in self-employment by country of birth, 2009

Country	Natives	Foreign-born	Country	Natives	Foreign-born
Austria	8.4%	9.4%	Latvia	7.2%	8.5%
Belgium	12.3%	14.5%	Lithuania	6.5%	n.a.
Bulgaria	8.6%	n.a.	Luxembourg	6.6%	6.5%
Cyprus	17.1%	10.5%	Malta	12.4%	n.a.
Czech Republic	15.6%	22.7%	Netherlands	11.6%	11.6%
Denmark	7.3%	11.1%	Norway	6.0%	7.0%
Estonia	7.5%	7.0%	Poland	11.5%	n.a.
Finland	10.2%	13.4%	Portugal	14.5%	12.6%
France	8.5%	11.2%	Romania	7.2%	n.a.
Greece	25.8%	10.4%	Slovenia	8.3%	9.1%

Hungary	10.8%	15.4%	Spain	15.6%	10.4%
Iceland	10.4%	n.a.	Sweden	8.4%	10.6%
Ireland	14.0%	9.4%	UK	12.0%	14.7%
Italy	22.6%	15.6%			

Source: Cedefop's calculations, based on Eurostat, Labour Force Survey, date of extraction 8 March 2011.

Agriculture, fishery and forestry are excluded from the calculations. Various studies note differences between ethnicities in their likelihood of involvement in entrepreneurial activities. For example, in Germany, France and Romania, Turkish migrants are notable for their involvement in entrepreneurial activities, and in the UK the Chinese, Indians and Pakistanis are the main entrepreneurial immigrant groups (Triodos Facet, 2008). Employment background also matters to entrepreneurial activity in Europe. For example, the likelihood of being involved in entrepreneurial activity is three to four times higher for those women who also are employed in a wage job (whether full or part time) compared to those who are not working, are retired, or are students (Allen et al., 2008). When compared to non-entrepreneurs, both female and male entrepreneurs in Europe tend to be more confident in their own skills, are more likely to know other entrepreneurs, and are more alert to the existence of unexploited opportunities than individuals who indicate no entrepreneurial activity (Allen et al., 2008).

Entrepreneurial aspirations and career option

The status of entrepreneurship, and the attractiveness of it as a career choice, has an obvious effect on the entrepreneurial aspirations of individuals. Entrepreneurship has long been praised in countries like the US, but in others there are many, especially older people, who still view it more sceptically (Volkmann et al., 2009). Some regard it as an unsafe and risky option, and less socially rewarding than some other career choices (European Commission, 2004b). It is therefore important to shed light on the views of Europeans on entrepreneurship as it has an impact on the guidance needs of prospective entrepreneurs and on the way in which education and guidance systems should approach the issue.

The 2009 Eurobarometer survey ⁽⁸⁾ on entrepreneurship indicates that Europeans still prefer a career as an employee as opposed to an entrepreneur: surveys indicate that slightly more Europeans wish to be employed (49%) than self-employed (45%) (The Gallup Organization, 2009). There has been no change in the number of Europeans wishing to become self-employed since the levels recorded in 2004. About half (50% in 2009) ⁽⁹⁾ have never even thought about starting their own business.

Although entrepreneurs have a positive image across all of the 28 European countries surveyed, there has been a reduction in the attractiveness of becoming an entrepreneur; in 2007, only 30% of non-self-employed respondents responded positively to whether it was desirable to become self-employed, a three percentage point reduction from 2004. However, it is interesting to note that there are significant differences between the older Member States and the new Member States: in 2007, only 28% of EU-15 citizens found self-employment an attractive prospect in comparison to 40% in NMS10.

One significant potential for Europe is the fact that young people in the EU-25 are more attracted to self-employment than their older counterparts; over half (51%) of 15-24 year olds and half of those still in education favoured self-employment (The Gallup Organization, 2007). This can be seen most strongly among the NMS10 where 62% of 15-24 year olds favoured an entrepreneurial route. In contrast, across the EU-25, very few people aged 55 years and over were interested in following an entrepreneurial pathway over the next five years (13%).

Business formation skills

Surveys indicate that most Europeans do not feel ready to start their own business venture. Only around 40% of Europeans feel that they have the skills necessary to start a business (Allen et al., 2008; Bosma and Levie, 2009). Residents of Greece (58%), Slovenia (52%) and Iceland (50%) are more likely to believe that they had the entrepreneurial skills required. Conversely, only one in four felt that they had the requisite skills in France.

In addition to skills, the availability of opportunities for setting up businesses plays a factor in their aspirations. Less than one third of Europeans feel that there are opportunities to start a firm in the area where they live (30%) (Allen et al., 2008; Bosma and Levie, 2009); across innovation-driven economies more broadly, only one-fifth of inhabitants think such opportunities exist. In Belgium (15%) and Spain (16%), a lower proportion of inhabitants feel that entrepreneurial opportunity exists while almost half of Norwegians think that opportunities are to be had in starting up a business (49%).

Around a third (35%) of Europeans who feel that there are opportunities to set up a business in their area, state that a fear of failure would prevent them doing so. The fear of failure is less prevalent in Belgium (25%), Norway (25%) and Finland (26%), but much higher in Greece (45%), Spain (45%) and France (47%). Also, the economic crisis plays a role as the attitudes of early-stage entrepreneurs towards starting a new business were more pessimistic in 2010 compared to the year before. More than half of the entrepreneurs stated that turbulent economic conditions can diminish new start-ups and reduce risk-taking. The critical attitudes were highly visible in Greece (76%), Spain (72%) and Portugal (62%). (Kelley et al, 2010).

Population figures for people who have received entrepreneurial (business-creation) training vary throughout Europe ⁽¹¹⁾. Greece, France, Italy and the United Kingdom show similar levels for working-age adults who have received education in starting a business (around 17-19%) (Martínez et al., 2010). Spain, Denmark and Germany show slightly higher levels (21-22%) and Croatia, Hungary, Ireland, Iceland, and Latvia even higher (25-29%). Belgium, Slovenia and Finland had the highest percentage of working-adults with training in business-formation (33% of the Belgian, 36% of the Slovenian and 49% of the Finnish population). By contrast, only 8% of Romania's adult population have received training in starting a business.

Entrepreneurship learning in Europe

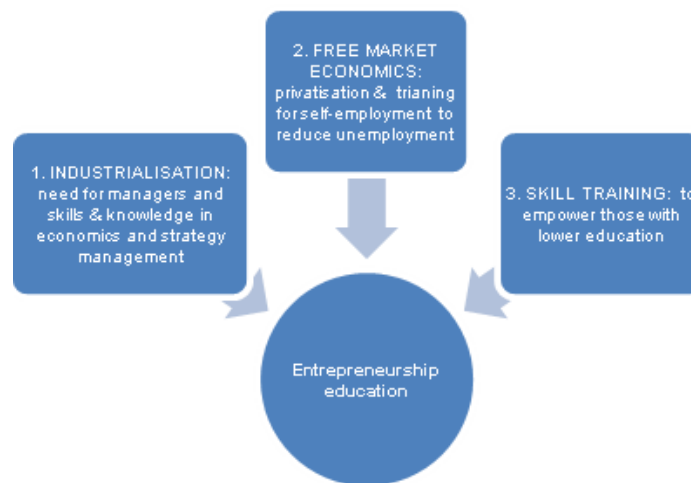
Introduction

The impact of entrepreneurship learning on individual attitudes, actions and aspirations linked to entrepreneurship is of particular interest to policy-makers and practitioners of education and economic development. It is generally believed that individuals who perceive they have the skills and knowledge to start a business are more likely to do so.

Entrepreneurship education started over a century ago, with organisations such as Junior Achievement as pioneers (Volkmann et al., 2009, p. 19). The first programme was introduced by Harvard University in 1945 to stimulate the USA post-war economy (Mitra and Manimala, 2008, p. 46), followed by an MBA established in 1947 and entitled Management of new enterprises (Katz, 2003). Three distinct ideas (see Figure 10) have notably shaped the development of entrepreneurship education since. An early influence was the need for efficient and effective managers who had the skills to motivate and manage staff in large companies. The prevalent economic thinking was to capitalise on economies of scale, seeing people as a resource to be managed.

From the 1970s onwards there were successive privatisations and entrepreneurship was seen as a way to address high levels of unemployment. Entrepreneurship education was extended from purely management training to include training for self-employment. More recently, entrepreneurship education has been related to personal development and a way to empower those with lower education to participate in the labour market.

Figure 10. Ideas that have influenced the development of entrepreneurship education



Source: Volkmann et al., 2009.

It becomes clear from the evolution of entrepreneurship learning in Europe that there has been a long debate about whether entrepreneurship can be taught or, more importantly, learned. However, it is today strongly believed that education, inclusive of entrepreneurship education, has a part to play in shaping people's attitudes and developing their skills. It is also believed that 'the earlier and more widespread the exposure to entrepreneurship and innovation, the more likely students will become entrepreneurial, in one form or another, at some stage in their lives' (Volkmann et al., 2009, p. 10; European Commission, 2004b; Martínez et al., 2010; Rodríguez, 2009). That early exposure to entrepreneurship education should continue 'throughout an individual's lifelong learning path', from primary and secondary level, to further and higher education, and reach out to the socially and economically excluded as well.

For these reasons, entrepreneurship education is now a prominent focus of government activity across Europe. Member States agree that entrepreneurship learning should develop both general competences, e.g. self-confidence, adaptability, risk-assessment, creativity, and specific business skills and knowledge that are needed to start up a new business venture (European Commission, 2004b; European Commission, 2006b; McCoshan et al., 2010, p. ii; Rodríguez, 2009). It should also develop entrepreneurial drive among students, and build the ability of students to identify and exploit opportunities for entrepreneurial purposes. The skill building side of entrepreneurial learning should not only aim to build the skills to plan and launch a company but also to manage its growth. Ethical and social dimensions related to responsible entrepreneurial activity should also be taken into account. Entrepreneurship

learning should also raise individuals' awareness of entrepreneurship as a career choice, with the message being that 'you can become not only an employee, but also an entrepreneur' (European Commission, 2004b, p. 6). Entrepreneurship is today seen as a key competence for all, and is linked to individual's ability to turn ideas into action. Such skills and attitudes are directly linked to concepts such as creativity, sense of initiative, innovation, pro-activity, determination, independence, responsibility, risk acceptance and the ability to plan and manage projects.

Across Europe, entrepreneurship is being taught through four main channels:

- ⇒ as a separate subject/course/qualification, with a focus on learning the skills and know-how of setting up and running a business, or having a more theoretical focus;
- ⇒ as an extra-curricular, usually voluntary/elective, subject;
- ⇒ as a mainstream subject in the curriculum, typically focusing on the development of transversal competences related to entrepreneurship such as initiative, confidence and creativity;
- ⇒ as a non-formal course delivered in the adult education or private sphere.

So far, entrepreneurship learning practice in Europe tends to be ad hoc. Some schools provide no entrepreneurship education at all and most students do not yet have the opportunity of taking part in entrepreneurship courses and programmes (European Commission, 2004b; McCoshan et al., 2010). There are pockets of excellence in terms of countries and individual schools, and other education and training institutions, but overall the provision varies vastly in quantity and quality. The main shortcoming is that entrepreneurship learning is still not a mainstream part of the curriculum in most countries (European Commission, 2004b; European Commission, 2006b; Mendibil, 2006), and therefore 'has relied heavily on the enthusiasm and commitment of individual teachers and schools' (McCoshan et al., 2010, p. ii).

This also means that third sector organisations, such as Ja-Ye, European and Jade, have become important partners for schools, training institutions and authorities by providing significant expertise and alternative methods to teaching entrepreneurship, mainly through mini and virtual companies, business competitions and other awareness-raising activities. They have also had an important impact in creating close linkages to private companies, which often act as partners, sponsors, mentors and jurors in entrepreneurial activities run by these organisations. This has also meant that many entrepreneurial activities in Europe have been driven by external actors rather than the education system itself (European Commission, 2004b).

The key reason for the ad hoc approach to entrepreneurship learning in Europe is the lack of appropriate national strategies; the inclusion of entrepreneurship in the curriculum and/or national strategy is usually a good indicator of political commitment. In 2007, only six Member States had embedded entrepreneurship in the national curriculum for compulsory education. These included Spain, Ireland, Cyprus, Poland, Finland and the UK (Rodríguez, 2009). The situation had improved quite considerably by 2009 with more countries having incorporated entrepreneurship in the curriculum (e.g. Austria, Hungary) (McCoshan et al., 2010). Further, around a third of European countries had created a strategy on entrepreneurship learning (see Table 3) and a further nine countries were in the process of doing so. A number of other countries had integrated entrepreneurship in other key strategies, such as the one on lifelong learning (e.g. Bulgaria, Czech Republic, Estonia, Latvia and Luxembourg).

Table 3. National strategies for entrepreneurship learning

National strategy in place	National strategy planned
Belgium (Flanders), Denmark, Finland, Lithuania, Netherlands, Norway, Portugal, Sweden and UK	Austria, Belgium (Wallonia), Estonia, Iceland, Ireland, Malta, Poland, Slovenia and Spain

Source: McCoshan et al., 2010.

Entrepreneurial learning pedagogy is typically characterised by interactive and experiential methods, which require students to take an active role in the learning process, which is based on real-life situations and simulations. These include: group learning and assignments; interactive methods with businesses and entrepreneurs, including visits to companies; practical, hands-on learning (trial and error); developing creativity; problem-solving; business simulations and games; student run businesses; and business competitions. New teaching pedagogies and cross-disciplinary content present challenges for educators and institutions.

Entrepreneurship learning in IVET

Entrepreneurship is a particularly important issue for the providers of vocational education and training because the vocational nature of learning means that entrepreneurship, self-employment in particular, is a very realistic aspiration for many of their learners. This is the case, for example, for hairdressers, plumbers and electricians; many students from those fields end up setting up their own business.

It is not surprising that entrepreneurship plays a bigger part in the agenda of IVET institutes than for providers of general education. It is included in the national curricula for VET in most European countries, at least to some extent (European Commission, 2010a): included, are Austria, Cyprus, Czech Republic, Estonia, Germany, Hungary, Luxembourg, Norway, Poland, Slovenia, Slovakia and Spain. As an example, in Luxembourg, entrepreneurship education is embedded in the curriculum for agricultural studies. In some of those countries (such as Spain, Estonia and Poland) participation is compulsory, but in most cases entrepreneurship is an optional subject or is compulsory only in some parts of the vocational education system and not in others (ibid.).

France is the only country where entrepreneurship is very closely linked to career guidance provision, though it is not included in national curriculum. Entrepreneurship is not included in the national curriculum for VET in countries like Italy but legislation invites schools to promote a link with the labour market and there are many entrepreneurship programmes with a local/regional focus.

Qualification guidelines include different elements of the key competence ‘a sense of initiative and entrepreneurship’ in some countries (for example, Finland, Hungary, Lithuania, Netherlands, Norway, Slovenia and Slovakia) (GHK, 2009). National framework documents on VET in Lithuania state that entrepreneurship should be integrated into all programmes; however, there are no practical guidelines for this. As a result, entrepreneurship is not mentioned in training programmes offered by VET schools, and students who graduate from a vocational school normally do not possess any specific entrepreneurial competence.

Specific modules are included in apprenticeships or other vocational qualifications in a few countries (Belgium (Flanders), Spain, Hungary and Finland). Methodology which promotes interaction and discovery is stressed as an important vehicle for developing sense of initiative and entrepreneurship in Estonia and Sweden (ibid.).

At least nine countries (Estonia, Spain, Cyprus, Luxembourg, Hungary, Austria, Poland, Romania and the UK) report that nearly all (90-100%) VET students participate in entrepreneurship programmes at some point during their VET studies (ibid). In some other countries the share of beneficiaries is much smaller, making just 5-15% of all IVET students (e.g. Bulgaria).

Entrepreneurship learning in IVET is delivered in both formal and non-formal settings (European Commission, 2006a). Overall it is recognised that for successful delivery, it must include some real life 'immersion' into the project, and a variety of techniques have commonly been used. These include simulations, student competitions and mini-enterprises, as well as through contact with real entrepreneurs, either through guest lectures, visits or even collaborations (Onstenk, 2003). Most commonly used methods in VET include lectures, computer simulations and business games, student companies, project and group work, company visits and work placements. Less frequently mentioned techniques include coaching and mentoring, role play, discussions and brainstorming, and case studies.

One of the key challenges concerns IVET teachers. There is a need to improve the ability of teachers and trainers to understand and to teach entrepreneurship. A lack of trained and motivated teachers is a barrier to the implementation of entrepreneurship programmes and courses (European Commission, 2004b). Teachers, specifically, need to be trained in the following areas to deliver entrepreneurship education (European Commission, 2010a):

- ⇒ project management skills (e.g. planning, setting personal targets, evaluating);
- ⇒ pedagogical skills (e.g. suggesting and guiding rather than giving instruction);
- ⇒ personal skills (e.g. active listening, negotiation, team work).

Entrepreneurship learning in HE

The first entrepreneurship education programme was introduced by Harvard University in 1945 to stimulate the USA's post-war economy. Other universities followed suit and the concept of entrepreneurship education was born. From the early 1970s, there was dynamic development and from the 1980s onwards entrepreneurship education spread to Northern Europe, then to Central and Southern Europe and to the rest of the world from the mid-1990s (Volkman et al., 2009).

However, the development of entrepreneurship education was much slower in Europe than in the USA (albeit with a number of notable exceptions). In most Western European countries relevant degrees and modules were developed only in the late 1990s and the majority of these were primarily linked to business schools. Entrepreneurship learning is still a relatively new phenomenon in many European countries, particularly in Eastern Europe. A report by the OECD commenting on entrepreneurship education in Europe, noted that, 'entrepreneurship education is still in its infancy' (Potter, 2008).

Over the past decade, nevertheless, there has been an exponential rise in the number of higher education institutions (HEIs) offering entrepreneurial learning opportunities. As Wilson (2004) identifies, out of the 70 (approx.) entrepreneurship centres ⁽¹⁵⁾ in Europe, the majority were established between 2000 and 2005. In Germany, for example, the number of chairs in entrepreneurship rose from 1 in 1998 to 58 in 2008 (Achleitner et al., 2007; European Commission, 2008a). Similarly, entrepreneurship education has significantly grown between 2005 and 2008 in Ireland; some 26 HEIs deliver approximately 400 modules relating to entrepreneurship and a further 22 Centres for Enterprise and/or Innovation are also involved in such activities (Cooney and Murray, 2008). In more general terms, the European Commission (DG Enterprise and Industry) study confirmed the position of Germany and the UK as strong performers in entrepreneurship education, with the situation being much weaker in countries like Czech Republic, Estonia and Latvia (European Commission, 2008a).

Significant for this study is that more than half of Europe's HE students do not have access to entrepreneurship education, indicating that there is scope to extend it further within HEIs across Europe. The study states that, despite the growing number of initiatives on entrepreneurship in Europe, more than half of Europe's students in HEIs still do not have access to entrepreneurship education. This means that approximately 11 out of the 21 million HE students in Europe do not have the opportunity to engage in curricular or extra-curricular activities in this field. The same survey suggested that in those institutions where entrepreneurship education is available, approximately half of the students were engaged in some kind of entrepreneurial education activity. This implies that approximately five million students in Europe are engaged in entrepreneurship education.

Interviews carried out for this study with national entrepreneurship experts revealed that while some HE qualifications in entrepreneurship are available in most European countries, the quantity and availability of these qualifications varies widely between countries. For example, Romania only has two degrees available whereas in Norway, entrepreneurship education is reported as being 'fairly well established'. In France, Latvia, Lithuania and Poland, national experts reported that modules on entrepreneurship were available, but that no degree courses were in place. In Hungary and Iceland only business school students have the opportunity to specialise in entrepreneurship.

Entrepreneurship education is still more commonly available in business schools than in other departments. For instance, 61% of entrepreneurship modules in England are taught in business schools, whereas 9% are taught in engineering departments and only 1% in health and medicine (National Council for Graduate Entrepreneurship (NCGE), 2007). Similar results were reported in Spain, where more than half of the modules were taught in economic and business sciences and the rest were taught in technology, social sciences and health sciences.

A number of sources, however, have pointed out that business schools are not the most appropriate places to teach entrepreneurship (European Commission, 2008; Potter, 2008, p. 53). Entrepreneurial ideas often originate in the departments of science, engineering or technology and the introduction of entrepreneurship courses with interdisciplinary orientation can create opportunities for collaboration between business experts and those from other departments. Such an approach supports joint technological developments, innovations and commercialisation, and collaboration can ultimately lead to new high-growth ventures or spin-offs from universities and colleges. In the US, approximately 74% of universities and colleges offer entrepreneurship programmes to their total student population (Volkman et al., 2009).

A number of universities in Europe have started to take an interdisciplinary approach by embedding entrepreneurship into their curricula. Most often this takes the form of an elective modular approach, which has created new opportunities to exploit business ideas generated, for example, in science and humanities departments. Queen's University, Belfast provides one of the best examples of this approach: since 2000 the university has established a pioneering model of entrepreneurship education within the curriculum and entrepreneurship education is currently available for all humanities, social sciences and hard sciences students.

Interdisciplinary programmes are more commonly available in West European countries (e.g. Belgium, Denmark, France, Ireland, Iceland, Portugal, Spain, Sweden, United Kingdom) than in Eastern Europe and tend to be found in Science and Engineering departments. In other countries such initiatives are relatively new (Greece), rare (Lithuania, Hungary, Poland, Romania) or non-existent (Latvia, Malta, Slovenia, Slovakia). There have been improvements in the delivery of entrepreneurship education in Central and

Eastern Europe in recent years. In Latvia, for example, efforts have been made to include entrepreneurship education in the curricula of all universities and polytechnics. The Latvian government has set a target of integrating an entrepreneurship module (96 hours of learning) into all its study programmes, including those of humanities, social and natural sciences.

Similar improvements are also under way in other East European countries (Lithuania, Poland, Slovenia and Slovakia). However, in other new Member States (Malta and Romania) less progress has been made towards the inclusion of entrepreneurship in the curricula of HEIs.

Within this context, HEIs have a particularly important role in promoting high-growth entrepreneurship, as high growth entrepreneurs are better educated than other entrepreneurs and the general population (Volkman et al., 2009). Research carried out in Germany has shown that enterprises started by individuals with university degrees tend to grow faster than enterprises founded by non-academics (Volkman et al., 2009).

Finally, several studies identify that there is limited supply of well qualified entrepreneurship teachers and entrepreneurs who can act as role models for students (European Commission, 2008a; Potter, 2008). This is one of the key barriers to further development of entrepreneurial learning in HE.

Summary

Since the Lisbon Council in 2000, entrepreneurship is increasingly recognised as a competence that should be valued and nurtured within an education and training context. It sits at the heart of the education and training 2020 strategic framework, which cites innovation and creativity, including entrepreneurship, as one of its strategic objectives. A sense of initiative and entrepreneurship is also one of the eight key competences for lifelong learning. However, while there is widespread recognition of the importance of guidance in supporting lifelong learning, European policies rarely refer to the role of guidance in entrepreneurship learning or the development of entrepreneurs' career management skills.

Entrepreneurship learning supported by guidance, has a role to play in developing entrepreneurial skills; exposure to such support can act as a catalyst in developing an entrepreneurial mindset, irrespective of whether individuals go on to become entrepreneurs. Entrepreneurship education exists within Europe, though is not necessarily available for all: it is ad hoc and comprises 'pockets of excellence' accessible by some, with no provision or support for others. Political will is important in driving entrepreneurship learning: only around a third of European countries have strategies to support its implementation, though such strategies were under development in a further nine countries. Such strategies are crucial in helping to stimulate new business formation, as well as drive the inclusion of entrepreneurship learning in education and training curricula.

While acknowledging that business start-up is risky, surveys find that individuals' perceptions need to change to support the development of entrepreneurial skills and competences. The numbers of new business start-ups in Europe has grown over the past 10 years. While people become entrepreneurs through choice or necessity, the recent financial crisis has acted as a catalyst for people setting up businesses out of necessity. Fear of failure acts as a barrier to business start-up as does a perceived lack of opportunity: less than half of Europeans believe that they have the skills to become an entrepreneur.

Entrepreneurs in Europe are a diverse group, though a 'typical' entrepreneur is male and educated to upper secondary education level. Just over a quarter of entrepreneurs have a basic level of education, while a growing proportion is educated at degree level. On average, less than a third of entrepreneurs are female (30%).

Entrepreneurship learning is important in IVET as self-employment is a realistic aspiration for students: many VET students often establish their own businesses. Entrepreneurship features in the national curricula for VET in most European countries. Learning opportunities for VET students are delivered in formal and non-formal settings that include simulations, competitions and mini- enterprises. A key challenge for teachers and trainers is to ensure that they have the skills to understand and teach entrepreneurship.

The past decade has seen an exponential rise in entrepreneurial learning opportunities in European HEIs, though coverage remains patchy. Particular issues that warrant attention include:

- ⇒ providing access to entrepreneurship learning for all students: more than half of Europe's students in higher education have no access to entrepreneurship education, indicating that there is a massive gap to be filled;
- ⇒ taking entrepreneurship learning out of business schools, promoting interdisciplinary approaches and developing entrepreneurship skills among 'hard science', arts, social science and humanities students;
- ⇒ understanding how examples such as Queen's University, Belfast, which takes a holistic, institutional approach to entrepreneurship learning, can be transferred to other HEIs.

The rise in the total number of entrepreneurs in Europe, as well as a rise in the numbers of entrepreneurs educated at medium and high levels, indicates that IVET and HE provide a fertile ground for new and emerging talent. Providing wider access to entrepreneurship learning could have a positive effect on business formation rates in the coming years if IVET providers and HEIs are equipped to support students.

SWOT ANALYSIS

SWOT Analysis

This section discusses the advantages of both side of the Greek-Bulgarian border.

STRENGTHS

- The C-B area and the Metropolitan city of Thessaloniki in particular, have a recognised strategic geographical position, which it to develop as an important European and Balkan business centre, logistics node, etc.
- The area consecrates a broad range of economical activities covering all sectors which provide the region with plenty of growth opportunities. RCM has high regional diversification in terms of natural resources, culture and structure of economy.
- Strong tradition of the region in food & beverage, textiles, chemicals and metals sectors.
- Exports contribute a high percentage of the GDP in the c-b area and therefore form a potential source for growth particularly for the food, chemicals and metals sector.
- Thessaloniki is the clear regional champion concentrating 65% of regional GDP and many other qualitative elements for growth.
- Thessaloniki continuously attracts population from other local areas and regions, has one of the biggest universities in the country and a very high ratio of higher education graduates per capita.
- The area has a high concentration of R&D organisations and innovative entrepreneurship activities (critical mass exists).
- Innovation support establishments (Alexander Innovation Zone, Technopolis, Thermi Link) and four business incubators have been established in the area (mainly in the city of Thessaloniki), which makes the capital of RCM a unique case of potentially “innovation city” in Greece and Balkans.
- Attractive location for international business
- High potential for the development of environment friendly economic activities such as tourism, organic agriculture
- Diversified economic structure of the local economy
- Strong Tourist industry
- Good quality of infrastructure (energy, telecommunication, transport)
- Strong economic base in trade and services
- High quality human capital
- Strong scientific base
- Fast growing small business
- Effective regional administration
- Existing experience of local authorities in identifying and implementing joint cross border projects in different sectors
- Strong Cultural industry (museums, theaters)
- Strong economic base in labor-intensive industry
- Favorable business climate
- Strong economic base in capital-intensive industry
- Strong presence of foreign firms
- Strong economic base in high-tech industry

WEAKNESSES

- The relatively high unemployment rate compared to EU average deteriorates the “attractiveness” of the region for work (the region is considered to be suffering from brain-drain phenomenon).
- The R&D sector although developed in terms of figures, institutionally and in terms of knowledge areas seems to be highly fragmented. There are high coordination and consensus building needs for a regional innovation policy.
- Historically public organisations dominate in the regional R&D activities, which might lack the required culture, flexibility and quick response for commercial exploitation of research outputs.
- R&D activities in region are mainly governed and planned by central government (ministries, etc). There is a lack of a strong local regional council or other regional bodies to plan innovation policy in local terms taking into account local needs and institutions.
- Although the area has shown a high number of R&D and innovation support organizations and high input innovation indexes (R&D spending, number of researchers, etc) there is still a lack of a unique identity and image for innovation profile in the region (possible lack of a “champion” sector)
- A high number of small SMEs, who lack R&D potential, dominates the regional business profile (low absorptive capacity for innovation adoption and know-how, technology transfer from business sector)
- Although SMEs business activity is geographically spread across the c-b region, R&D organisations are highly concentrated in the Thessaloniki area. This structural element doesn’t give the same opportunities to all SMEs in terms of technology and knowledge transfer (regional inequality).
- Most R&D employment and R&D expenditure concern higher education and government (public research centres) while business receive the lowest percentages (research and technology-based innovation with many negative multiplying effects for business).
- SMEs of the c-b region emphasize on innovation related to broadening their products or services rather than to increasing quality or widening their market share.
- Low competitiveness of local enterprises due to insufficient knowledge of modern technologies and limited access to innovation; scarce managerial and entrepreneurial skills; lack of skilled workers
- Low level of business cooperation
- Weak network of business support organizations
- Differences in legal frameworks and laws, hence hindering cross border business cooperation Lack of internal financial resources for funding and co-funding CB projects
- Poor regional administration
- Weak internationalization and low added value of exported industries
- Poor infrastructure connection between cross border regions
- Collapse of industry – too many empty factories
- Potential beneficiaries from the private and public sectors have limited capacity in project identification and preparation, strategic planning and project implementation
- Lack of experience in project proposal development and project implementation

OPPORTUNITIES

- Strategic geographical position of the region of Central Macedonia and the recent modernisation of its transport infrastructures, enable primary and secondary (manufacturing) sectors to better integrate with other consumer markets in EU and Balkans (crucial success factor for these sectors).
- Due to area's proximity with new Balkan markets, there are many opportunities for other B2B services like warehouses, logistics, supply chains, etc. to grow in the region.
- New knowledge intensive sectors like Biotechnology, medicines as well as other branches of ICT sector, seems promising and feasible for the region (low investment sectors). However, extra support measures and regional consensus are required.
- Recent political developments in the Balkans area (EU enlargement) will lead to the creation of new markets for the area's companies. This is particularly important for many companies who have already invested in the Balkans area.
- Compared to other neighbouring regions, Thessaloniki enjoys many conditions and comparative advantages to evolve into a metropolitan centre for S.E. Europe.
- New types of innovation funding mechanisms (new public funds, private VC funds and innovative ideas competitions) have emerged to form a new market for innovation growth in Greece.
- Region's economy is mature and integrated. It is exposed to many foreign markets and has the required critical mass in most production factors in all levels (primary, secondary and tertiary sectors).
- Use international connections to 'learn' from others and gain know-how
- On-going cross border cooperation activities
- Cooperation in the field of processing high quality agricultural products
- Establish better connections with the other metropolitan areas in the Balkan region
- Investments to add value to some agricultural products (i.e. wine)
- Creating and developing integrated tourism products including mountain, coastal and lake areas
- Regional branding of some local products
- Creating new instruments that will contribute to development of the business environment
- Attract FDI in industrial sectors seeking low cost areas
- Export high quality products to international markets
- Strong export potential of agricultural products
- Become a multi-cultural region and use ethnic differences as an asset in the international markets

THREATS

- Exercise of political power is highly concentrated in the Capital cities, which doesn't easily allow other regions to plan their own future with their own terms and peculiarities. In addition, this creates a number of issues, including the appropriate planning of local and regional innovation policies.
- Recent studies reveal deeper regional inequalities in terms of GDP per capita.
- Complex legislation and tax national system regulating innovation and other business issues (instability and frequent changes).
- Due to limited private R&D spending, the great majority of innovation funding in the area originates from public sources (mainly Structural Funds). Therefore, innovation is considered more a project-based behaviour and effort than a continuous culture.
- Whatever are the real regional competences in terms of selected sectors, at policy making level are still unknown to the public (a regional innovation vision and clear identity is missing or is not clear to all stakeholders)
- Another possible threat for the area originates from neighbouring Balkan regions that have far lower labour costs. This is particular threat for labour intensive sectors like textiles and other manufacturing sectors.
- The country's brain drain phenomenon affects also the region.
- To stay competitive, apart from being continuously innovative, manufacturing companies in the area must change their production settings and improve their effectiveness and efficiency in terms of cost and quality (crucial success factors in the sector).
- Long terms delays for important development projects and infrastructures, like Thessaloniki's metro, airport and port modernisation, can strongly and negatively affect main axes of local and regional growth.
- Lack of national funds for capital investments in infrastructure development
- Failure of economic policies and a new recession
- Lack of favourable legislation for establishing CB cooperation
- Inability to attract FDI
- Low recognition of natural resources' potential for economic development
- Lack of investments causing persistence of obsolete technologies and increasing barriers to access innovation
- A new wave of emigrants (skilled, young and educated) leave the area
- Persistence of an incomplete legal framework to support market economy
- Inability of local firms to compete with the more experienced international firms
- Central government does not support the cross border initiatives
- Unwillingness to cooperate with Cross Border areas
- Lack of technological know-how and labour skills necessary to respond to the market demand for high-quality services and products
- Cooperation barriers due to linguistic and cultural differences
- Inability to 'learn' and adjust to the new conditions as fast as necessary

CAPITALIZING ON THE FOCUS GROUP IMPLEMENTED WITHIN THE D.3.1.1

CAPITALIZING ON THE FOCUS GROUP IMPLEMENTED WITHIN D3.1.1

The current section capitalizes on the Focus Group implemented within the Context of D3.1.1, in order to feed the development of the c-b Action Plan with empirical evidence.

In particular, the specific analysis intends to derive lessons learned messages from the focus group 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 and inputs to PB2 who is leading the Deliverable 3.1.2 which aspires to develop an Action Plan on the cross-border Pre-Incubation Strategy. The relative analysis is based on primary data extracted from the debate taken place during the focus.

The 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:

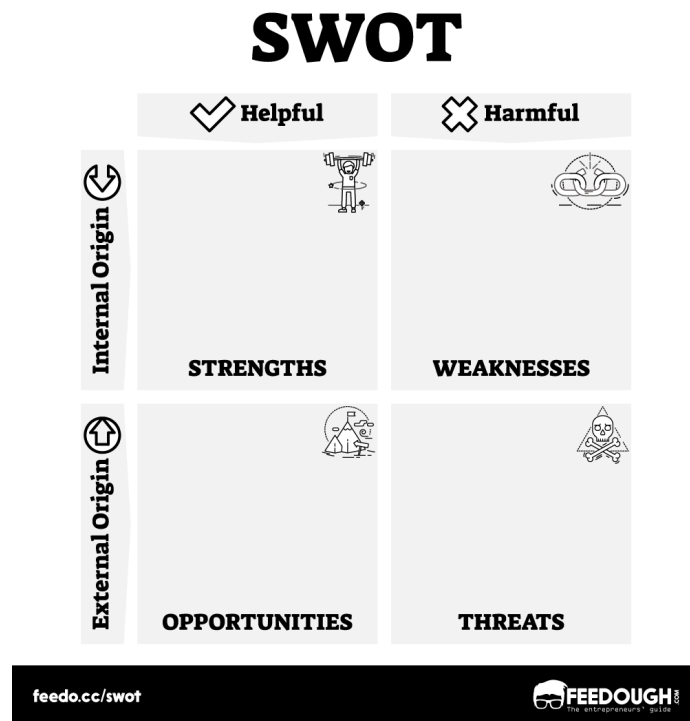
1. What do you think are the **key elements** that characterize the incubation & pre-incubation environment of the area?
2. What are the **biggest challenges** for the new start-ups in the area?
3. What needs to change in order to **improve the business environment** for a new entrepreneur?
4. Who do 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 your 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?

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 and Deliverable 3.1.2.

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.

**A DRAFT ACTION PLAN
TO BE TAKEN INTO ACCOUNT BY
PARTNER 2**

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The proposed Action Plan is articulated upon the following two (2) pillars:

- (1) Business Environment
- (2) Supporting Entrepreneurship and access to finance

The two Pillars are further analyzed into Thematic Priorities and Specific Objectives, as follows.

PILLAR 1 BUSINESS ENVIRONMENT

Thematic Priority 1.1 Starting Up & Establishment of a Business

Specific Objective 1.1.1	More flexible procedural requirements and removal of the restrictions on new start-ups
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Justification /Expected Results

Creation of new more flexible form of company bearing minimum capital, operational freedom and minimum procedural requirements for capital increase and entry of new shareholders, will enhance entrepreneurship in the cross-border area and improve the business environment.

Specific Objective 1.1.2	Amendment of the Strategic Framework for Spatial Planning, geo-info policy and simplifications
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Justification /Expected Results

Amendments of the Strategic Framework for Spatial Planning, establishment of national geo-information policy and placing emphasis on simplification and acceleration of the required procedures, will enhance business environment. Within the same line the particular actions aim to insert flexibility, acceleration and simplification in planning and land-use legislation to facilitate business development and investment.

Specific Objective 1.1.3	Transaction with the Public Sector and development projects
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Justification /Expected Results

It is identified complicated procedure for participation of companies in public procurement and disproportionately long period between the notice for the competition and the execution and payment of public contracts. Regional development programmes are frequently adopted without consultations with local entrepreneurs. As a consequence, they fail to properly respond to the actual needs of entrepreneurs in the region. On the one hand officials responsible for these programmes do not encourage entrepreneurs to become involved in their development. On the other, business people often do not want to do it, as they do not believe that their actions may bring desired results. Regional development programmes should be designed and implemented in cooperation with entrepreneurs.

Specific Objective 1.1.4	Simplification and information on labour & insurance matters
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Justification /Expected Results

The particular actions aim to tackle (a) the requirement to provide public departments with the same information more than once Time (b) the delay in processing applications for refunds from social security funds, (c) the complicated staff recruitment procedure and (d) the consuming/complicated procedures for highly qualified employees invited from third countries.

PILLAR 1	BUSINESS ENVIRONMENT
Thematic Priority 1.2	Cooperation between research and academic institutions and SMEs

Specific Objective 1.2.1	Development of cooperation between R&D institutions and SMEs
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Justification /Expected Results

Scientific and education activities of universities and R&D institutions are often dissociated from the business reality. Therefore, numerous innovative ideas that are developed by research workers and students as a part of their dissertations face limited possibilities for commercialization. The problem of limited propagation of research results occurs in most EU countries and in the particular cross border area as well. Despite the fact that research establishments implement a large number of research projects in innovations, efficient cooperation models are lacking. Moreover, due to the limited and uncoordinated flow of information among universities and industry, many of these solutions do not stand chances for commercialization. There is a need for definition of the most effective cooperation models for research institutions and business constitutes one of the key success factors for development of innovation culture in economy.

Specific Objective 1.2.2	Increasing the scope of research and development cooperation between enterprises and higher education establishments/R&D institutions.
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Justification /Expected Results

Investments in cooperation with higher education and R&D institutions should bring clear benefits for companies. In the particular region current cooperation between these stakeholders results only from the profit and loss balance for enterprises. Regional and state policies lack clear incentives for such cooperation. Bureaucratic procedures applied by universities and R&D institutions as well as bureaucracy at the national stage frequently discourage entrepreneurs from cooperation with academic and research institutions. Science and Technological Parks should gather innovation centres, business and technology incubators, technology transfer centres, start-ups and spin-offs. Their development should be among the priorities of regional authorities. This type of cooperation between research and business partners constitutes the most efficient form of technology transfer to SMEs.

Specific Objective 1.2.3	Establishment of a support system for talented students and research workers
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Justification /Expected Results

Large corporations and concerns have developed effective solutions to identify and recruit the most talented students already at the early stages of their education. This leads to brain drain, leaving local SMEs without valuable and innovative employees. As a result, their market position becomes further weakened when competing with large companies.

Specific Objective 1.2.4 Connecting entrepreneurship with education

Justification /Expected Results

Taking into consideration that authors of innovative solutions frequently lack sufficient business skills, there is a need to connect entrepreneurship with education system and training. Among the expected results of such strategy is the streamlining commercialization of innovative solutions developed in higher education establishments and R&D centres.

PILLAR 1

BUSINESS ENVIRONMENT

Thematic Priority 1.3 Attracting FDI and accelerating growth process

Specific Objective 1.3.1 Mechanisms for attracting foreign companies

Justification /Expected Results

One of the most important challenges relate to development of a system of incentives and reliefs aimed not only at attracting investors but also at fostering close cooperation between investors, local higher education establishments and R&D centres. In the particulra cross border area there is insufficient cooperation between local authorities and entrepreneurs that operate in the region or originate from it. Such cooperation frequently results in solutions contributing to the region's economic development. Expected results involve among other: - Attracting domestic and foreign investors interested in doing business in close cooperation with local higher education institutions and R&D centres. - Development of the region's image as a business-friendly place. - Ensuring jobs in the region for talented graduates of local higher education units. - Development of business-related services. - Fostering business community focused on enhancing regional development.- Smaller companies form unions/associations in order to increase their effectiveness in gaining new customers and to become more competitive in comparison with other regions.

Specific Objective 1.3.2 Enhancement of Multi-Stakeholder Collaboration

Justification /Expected Results

The promotion of cross border entrepreneurship requires multi-stakeholder coordination, clear goals and refined business action plan that will ensure the active participation of key actors from both sides of the border. Even though some initiatives have been taken place in the past, cross-border business and development cooperation is still in early stages with limited coordination between stakeholders and limited benefits for both sides of borders. The two sides of the borders have not been able to develop strong and long term linkages and interactions with each other based on mutual proximity, existing specializations and comparative advantages and common objectives that would generate benefits to the regional economies counterbalancing the unfavorable effects of structure and geography. The expected outputs involve among others: - Advocate for the inclusion of cross-border issues in national, regional and local agencies strategic and business plans. - Enhance awareness of cross-border issues within stakeholders through considering cross- regular and targeted communication. - Develop and implement systems to better identify, analyse and resolve cross-border issues. - Provide advice on complex and / or sensitive issues.

Specific Objective 1.3.3 More resilient cross-border communities

Justification /Expected Results

There is a need to engage and consult with cross-border residents, businesses and communities, and local and regional authorities as well as with government agencies, to identify priority cross-border anomalies that most disadvantage, divide or restrict cross-border communities and business. Inclusive border communities should advocate for 'whole of Region' involvement in the analysis of cross-border issues.

Specific Objective 1.3.4 SME Network and Cooperation Management

Justification /Expected Results

Focus on investing in development of these branches of production and services that already display a high level of market competitiveness. It is identified an unwillingness to search for new market niches and to develop products and services that will create new consumer needs. It is recorded also an insufficient utilisation of the region's potential and its characteristic, unique values in development of product and service offer. All in all there is a low innovativeness in organisation of production and sales as well as management and promotion of products and services in the sectors perceived as traditions, e.g. agriculture. Based on the above it is expected an increasing regional competitiveness by exploiting the region's potential lying in its unique resources.

PILLAR 2

SUPPORTING ENTREPRENEURSHIP & ACCESS TO FINANCE

Thematic Priority 2.1 Promotion of the innovation culture and development

Specific Objective 2.1.1 Promotion of values referring to the idea of innovativeness

Justification /Expected Results

Many entrepreneurs in the cross border area still remain unfamiliar with the idea of innovativeness. There is a lack of socially widespread models of innovation culture that would translate into higher innovativeness in the local economy. Another addressed is the fact that entrepreneurs sometimes consider investments in innovations as unaffordable and do not perceive them as profitable. One of the reasons behind the limited interest among entrepreneurs from many regions in innovativeness is that innovations are frequently associated with highly advanced technologies. As a consequence, investments in innovations are seen as inappropriate for their companies or sectors.

Specific Objective 2.1.2 Development of a cross border regional innovation support system

Justification /Expected Results

Lack of access to capital markets and difficult access to potential investors remain among the main barriers limiting entrepreneurs that develop innovative products. The chain of institutions involved in regional innovation support systems frequently does not include a platform for exchanging information between entrepreneurs/originators and potential investors in the particular area. This platform could prove helpful in defining the needs and objectives of both sides. It should include an independent team of experts that would conduct objective supervision of the dialogue between entrepreneurs and investors in order to protect the interests of both sides and ensure high quality of the initiated investment process. Entrepreneurs frequently do not know which institution they should turn to in order to obtain support in assessing the innovation potential of their solutions. They may also be distrustful and unwilling to present their ideas to a wider number of commercial investors. There is lack of coordination between measures implemented in the cross border region under various projects aimed at entrepreneurship enhancement and a lack of a cohesive system for aggregation of conclusions from their results. A knowledge transfer platform will aggregate knowledge on the most efficient solutions and promote this information among entrepreneurs and business environment institutions. Within their projects companies focus on short-term objectives. They are reluctant to become involved in long-term projects, where tangible results appear only in a more distant perspective. Results of completed projects are not utilised in subsequent projects. Values developed within projects often vanish once projects are completed.

PILLAR 2

SUPPORTING ENTREPRENEURSHIP & ACCESS TO FINANCE

Thematic Priority 2.2

Increasing SMEs' access to foreign markets & enhancing entrepreneurs' qualifications

Specific Objective 2.2.1

Enhancing entrepreneurs' qualifications, knowledge and skills in the area of modern corporate management and development

Justification /Expected Results

It is identified an insufficient managerial skills of entrepreneurs, in particular with regard to sales, marketing and strategic corporate development planning, constitute another significant barrier for successful development and operation of SMEs. In small enterprises, in particular those operating on rural areas or in traditional sectors, utilisation of modern communication forms is very limited. Many entrepreneurs are unaware of the benefits to be derived from modern communication solutions. This results from limited skills in the area and insufficient access to good examples. Moreover, fierce competition between companies

operating on the same markets and offering identical products and services constitutes one of the main factors discouraging enterprises from forming associations.

Specific Objective 2.2.2 Encouraging local entrepreneurs to foster business relations between regional SMEs and foreign partners or clients

Justification /Expected Results

It is known that there is a lack of wider relations with foreign companies in the particular area often restricts SMEs' possibilities in accessing modern technologies and know-how. The ability to function in an international context considerably increases the chances that a particular company will implement innovations. Closure on local markets constitutes one of the main reasons behind limited possibilities for developing long-term solutions. Currently entrepreneurs have limited access to up-to-date information about changes in market trends and market expectations. They rarely modify their products and services in response to changes in market trends. This makes them more vulnerable to the impacts of the economic crisis.

PILLAR 2 SUPPORTING ENTREPRENEURSHIP & ACCESS TO FINANCE

Thematic Priority 2.3 Promotion of the clustering and cooperation concept

Specific Objective 2.3.1 Enhancing cooperation between companies and increasing SMEs' potential to establish cluster cooperation models.

Justification /Expected Results

In the cross border area the concept of cooperation between companies operating on similar markets in order to achieve common objectives is completely unknown or it is treated even as a threat due to compromising protection of intellectual property, markets and tools that enterprises have developed in order to safeguard and strengthen their market position. Companies operating on highly competitive markets want to protect their know-how, fearing unfair behaviour of their competitors. This strong competitiveness of enterprises results from cultural factors and the level of economic development in the region. Local companies should be acquainted with the idea of clusters by means of measures that take into account local conditions. EU cluster promotion projects often present good practices from other countries, utilise information in English or refer to models that do not have their counterparts in the local economy, which frequently fails to sufficiently motivate local entrepreneurs. It is identified a Lack of models for successful development and implementation of innovative solutions in cooperation with other players and the resulting low ability of companies to absorb such solutions. There is also a lack of dialogue between respective subjects that are potentially interested in development of clusters constitutes one of the key barriers in promotion of cluster cooperation

Specific Objective 2.3.2 Establishment of a support system to ensure cluster development stability at early stages

Justification /Expected Results

Due to strong competition in many sectors and lack of willingness to start cooperation, companies are not motivated to form associations or to invest in cluster development. Therefore, initiation of cluster process often requires that business environment institutions provide ready-made solutions, i.e. cooperation models and a list of benefits derived from clustering. The first stage of cluster establishment, i.e. preparation of its development strategy, requires multifaceted analytical work. Cluster participants frequently do not pay sufficient attention to these measures, which may have serious consequences for the cluster's functioning in the future.

Specific Objective 2.3.3 Support for the existing clusters and entrepreneurs' networks

Justification /Expected Results

Regional authorities frequently do not pay sufficient attention to supporting clusters that operate in their area of jurisdiction. There is a lack of programmes targeted at promotion in the country and abroad as well as a lack of dedicated financial tools supporting development of already existing clusters. It is found low involvement of local clusters or other associations of entrepreneurs in contacts with clusters from other countries plus low engagement in international cooperation. There is also an underestimation of the benefits from cooperation with experienced partners from more developed regions. Due to the limited dialogue and information sharing between the representatives of regional and national clusters there is a lack of coordinated measures and lobbying initiatives for strengthening the role of entrepreneurs' groups in the state economy.

PILLAR 2

SUPPORTING ENTREPRENEURSHIP & ACCESS TO FINANCE

Thematic Priority 2.4 Supporting Entrepreneurship in key sectors

Specific Objective 2.4.1 Tourism

Justification /Expected Results

Due to tourist potentials of the Region and the development of infrastructure, there has been a notable growth on demands and capacity over the recent years. Actually, the incomes from this sector are still a minor contribution. Improvements within the touristic sector will affect on a substantial increase in local income.

Specific Objective 2.4.2 Agriculture

Justification /Expected Results

The Primary sector, although important for the Regional economy, demonstrates a rather low productivity. Taking into consideration the importance of the agriculture sector—including both agriculture and livestock, development of strategies with the participation of all actors including governmental structures, private sector organizations, and local and international non-governmental organizations is indispensable for the development of this sector. Coordination of actions and projects should aim at increasing the capacities necessary to improve the quality of agricultural and livestock products and introduction of bio-products that are in demand. Agriculture and animal husbandry: represents a significant portion of the regional economic activity, with sizable growth potential, if combined with modern ICT tools. The Region could focus on distinct products that exhibit proven demand from international markets. The related business units should be encouraged to become more efficient by accommodating modern control, administration, and monitoring, marketing, and logistics tools. Added value bio-agricultural and alternative agriculture producers can benefit from internet-based marketplace participation, to widen their distribution channels and optimise branding, procurement, packaging etc. Farmers and livestock unit owners could also be supported to optimise their production activity, by employing modern control and monitoring tools, especially in reducing the cost of energy by using alternative methods, like geothermal resources or biogas.

Specific Objective 2.4.3 Culture

Justification /Expected Results

Although tourism represents a small portion of the current economic activity, it should be underpinned, due to the fact that the Region has numerous areas of natural beauty and unexploited archaeological and religious sites, capable of attracting a significant number of visitors. SMEs should be motivated to exploit modern technology and synergies to maximize the outreach of the Region, minimise management and advertising costs, and thus create more and better jobs. The cross border region has very interesting cultural heritage and a variety of monuments. Archaeological sites in different areas and from different ages, plenty of churches mainly from the Byzantine times and traditional settlements with specific characteristics of the architecture in Macedonia, configure significant poles of interest. Combining the natural with historical and cultural heritage the region is an attractive area for visitors and tourists, by promoting and exploiting its sources.

Specific Objective 2.4.4 Energy

Justification /Expected Results

It is very important to create a network of renewable energy groups, consisting of companies, research institutions, non-governmental organisations and public authorities in order to offer complete services such as advising, recommending, and specialized services such as strategic and analyzes formulation. For this reason it is absolutely necessary to involve other stakeholders in the network in order to create the necessary critical mass. The Region produces a high portion of the national electricity demand, particularly in the Greek side. This huge industry requires several support and maintenance services, offered by SMEs, to cover specialised needs of the production sites. The Region would provide incentives to attract the ICT related SMEs, able to improve the employment profile of the Region.

PILLAR 2**SUPPORTING ENTREPRENEURSHIP & ACCESS TO FINANCE****Thematic Priority 2.5** Access to Finance**Specific Objective 2.5.1** Development of an efficient financing system supporting innovative solutions**Justification /Expected Results**

Many innovative ideas are not implemented due to insufficient capital already at the stage of conceptual work. Knowledge about availability of various forms of financing for innovative projects is not widespread and is usually restricted to a narrow group of specialists.

Specific Objective 2.5.2 Increasing SMEs' access to information on the available forms and rules of financing for development processes and innovative projects.**Justification /Expected Results**

In the cross border area SMEs finance their development projects mainly from their own resources. Utilisation of external funds is usually hindered by entrepreneurs' limited knowledge on the forms and rules of such funding and possible benefits to be derived from it.

Specific Objective 2.5.3 Coordination of activities undertaken by various institutions and increasing professional qualifications**Justification /Expected Results**

Cooperation between institutions offering financial support, e.g. seed capital funds, venture capital funds and technology transfer institutions, remains insufficient, which leads to a lack of a uniform information system that would clearly define the possibilities, rules and procedures in financing of commercial projects. Moreover, evidence shows insufficient qualifications of people responsible for providing advisory services for entrepreneurs in such areas as: professional knowledge, strategic thinking and interpersonal competence. This makes these services less professional, which in turn, has a significant impact on the functioning of the whole support system.

Specific Objective 2.5.4 Long term financing for innovative projects implemented jointly by research and business stakeholders**Justification /Expected Results**

Considering the long time necessary for concept development, research, prototype testing, modification and commercialization, innovative initiatives can be implemented only in a very long time frame. This significantly reduces the availability of commercial financing, as the results are distant in time and face a significant risk. The Lisbon Strategy, currently named Europe 2020, defines the desirable level of expenditures for R&D at 3% of GDP. In Greece and Bulgaria the actual expenses are much lower.

CONSISTENCY ANALYSIS IN RELATION TO THE THREE MAJOR STRATEGIES

CONSISTENCY ANALYSIS IN RELATION TO THE THREE MAJOR STRATEGIES

The consistency analysis took into account the three following strategies:

- (1) The Regional Operation Programme 2021-2027 of Central Macedonia
- (2) The Regional Innovation Strategy of Central Macedonia
- (3) The Integrated Sustainable Urban Development of Thessaloniki

The Regional Operation Programme 2021-2027 of Central Macedonia

The relevant analysis assessed Policy Objectives and Specific Objectives, that are directly related with entrepreneurship and innovation. In more detail, it is evaluated the consistency of the proposed action plan against the following Policy Objectives and Specific Objectives.

1st Policy Objective

A more competitive and smarter Europe by promoting innovative and smart economic transformation and regional ICT connectivity.

Specific objectives

RSO1.1. Developing and enhancing research and innovation capacities and the uptake of advanced technologies.

RSO1.2. Reaping the benefits of digitisation for citizens, companies, research organisations and public authorities.

RSO1.3. Enhancing sustainable growth and competitiveness of SMEs and job creation in SMEs, including by productive investments.

4th Policy Objective

A more social and inclusive Europe implementing the European Pillar of Social Rights

Specific objectives

ESO4.3. Promoting a gender-balanced labour market participation, equal working conditions, and a better work-life balance including through access to affordable childcare, and care for dependent persons.

ESO4.8. Fostering active inclusion with a view to promoting equal opportunities, non-discrimination and active participation, and improving employability, in particular for disadvantaged groups.

The Regional Innovation Strategy of Central Macedonia

The analysis of this major strategic document is based upon the two following groups of sectors:

1st The 'Champion Sectors'

- C.1 Agrofood
- C.2 Construction Materials
- C.3 Textile & Clothing
- C.4 Tourism

2nd The Horizontal Technological sectors:

- T.1 Information & Communication Technologies
- T.2 Energy Technologies
- T.3 Environmental Technologies
- T.4 Transport & Logistics Technologies

The Integrated Sustainable Urban Development of Thessaloniki

The relevant analysis took into consideration the following four Strategic Axes:

1. Thessaloniki competitive and innovative
2. Thessaloniki coherent
3. Green and resilient Thessaloniki
4. Thessaloniki efficient

Methodological approach

To assess the degree of consistency with the proposed action plan, the research team recommended a panel of five (5) experts who had accumulated experience in the issues of entrepreneurship, innovation and development strategy. All experts were informed in detail about the findings of the empirical research and the rationale of the Co-Working project. The results of each individual assessment were discussed within a focus group meeting aiming to achieve the necessary consensus and convergence of opinions.

The following section presents the Consistency Table of the planned Pre-incubator services with the Research & Innovation Entrepreneurship Strategies. The degree of relevance is plotted on a scale of 1 to 10 with 1 indicating no relevance at all and 10 maximum relevance.

CONSISTENCY ANALYSIS AGAINST THE REGIONAL OPERATION PROGRAMME 2021-2027 IN CENTRAL MACEDONIA

Consistency of the Action Plan with the Regional Operation Programme 2021-2027, CENTRAL MACEDONIA		Policy Objective 1			Policy Objective 4		FINAL AGGREGATION
		Developing and enhancing research and innovation capacities	Reaping the benefits of digitisation	Enhancing sustainable growth and competitiveness of SMEs and job creation	Promoting a gender- balanced labour market participation, equal working conditions	Fostering active inclusion, promoting equal opportunities & non- discrimination	
		RSO1.1	RSO1.2	RSO1.3	ESO4.3	ESO4.8	
PILLAR 1	BUSINESS ENVIRONMENT						
T. P. 1.1	Starting Up & Establishment of a Business	7	6	7	3	4	5.40
T. P. 1.2	Cooperation between research and academic institutions and SMEs	9	6	8	6	6	7.00
T. P. 1.3	Attracting FDI and accelerating growth process	6	4	9	3	4	5.2
PILLAR 1	SUPPORTING ENTREPRENEURSHIP & ACCESS TO FINANCE						
T. P. 2.1	Promotion of the innovation culture and development	7	9	7	7	8	7.6
T. P. 2.2	Increasing SMEs’ access to foreign markets & enhancing entrepreneurs’ qualifications	8	7	8	7	7	7.40
T. P. 2.3	Promotion of the clustering and cooperation concept	5	6	9	6	7	6.60
T. P. 2.4	Supporting Entrepreneurship in key sectors	6	8	7	7	7	7.00
T. P. 2.5	Access to Finance	7	7	8	7	8	7.4

CONSISTENCY ANALYSIS AGAINST THE REGIONAL INNOVATION STRATEGY IN CENTRAL MACEDONIA

Consistency of the Action Plan with the Regional Innovation Strategy of CENTRAL MACEDONIA		Chambions' Sectors				Horizontal Sectors				FINAL AGGREGATION
		Agrofood	Construction Materials	Textile & Clothing	Tourism	Information & Communication	Energy Technologies	Environmental Technologies	Promoting sustainable employment and mobility	
		C.1	C.2	C.3	C.4	T.1	T.2	T.3	T.4	
PILLAR 1	BUSINESS ENVIRONMENT									
T. P. 1.1	Starting Up & Establishment of a Business	7	7	6	8	8	7	7	8	7.25
T. P. 1.2	Cooperation between research and academic institutions and SMEs	8	8	7	8	8	8	7	8	7.75
T. P. 1.3	Attracting FDI and accelerating growth process	8	8	7	9	9	9	9	7	8.25
PILLAR 2	SUPPORTING ENTREPRENEURSHIP & ACCESS TO FINANCE									
T. P. 2.1	Promotion of the innovation culture and development	8	7	6	9	8	7	7	6	7.25
T. P. 2.2	Increasing SMEs’ access to foreign markets & enhancing entrepreneurs’ qualifications	7	5	5	8	7	6	6	5	6.13
T. P. 2.3	Promotion of the clustering and cooperation concept	9	7	7	8	8	7	6	5	7.13
T. P. 2.4	Supporting Entrepreneurship in key sectors	8	5	2	10	7	4	6	8	6.25
T. P. 2.5	Access to Finance	7	7	6	8	9	7	7	6	7.13

CONSISTENCY ANALYSIS AGAINST THE INTEGRATED SUSTAINABLE URBAN DEVELOPMENT OF THESSALONIKI

Consistency of the Action Plan with the Integrated Sustainable Urban Development of THESSALONIKI		Strategic Axes				FINAL AGGREGATION
		Thessaloniki Competitive & Innovative	Thessaloniki Coherent	Thessaloniki Green & Resilient	Thessaloniki Efficient	
		SA.1	SA.2	SA.3	SA.4	
PILLAR 1	BUSINESS ENVIRONMENT					
T. P. 1.1	Starting Up & Establishment of a Business	8	4	7	8	6.75
T. P. 1.2	Cooperation between research and academic institutions and SMEs	8	6	7	8	7.25
T. P. 1.3	Attracting FDI and accelerating growth process	6	5	6	8	6.25
PILLAR 2	SUPPORTING ENTREPRENEURSHIP & ACCESS TO FINANCE					
T. P. 2.1	Promotion of the innovation culture and development	9	7	8	8	8.00
T. P. 2.2	Increasing SMEs' access to foreign markets & enhancing entrepreneurs' qualifications	6	5	6	8	6.25
T. P. 2.3	Promotion of the clustering and cooperation concept	8	6	7	8	7.25
T. P. 2.4	Supporting Entrepreneurship in key sectors	9	8	9	7	8.25
T. P. 2.5	Access to Finance	7	8	8	8	7.75

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