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COMMON NEEDS ANALYSIS REPORT ON THE CURRENT INNOVATION POTENTIAL AND TECHNOLOGICAL DEVELOPMENT OF SMES IN THE TARGET CROSS-BORDER AREA OF BULGARIA AND MACEDONIA

Activity 3 – Research and needs analysis of the current innovation environment in the target cross-border region

Innofoster

Improving competitiveness of SMEs of the CB region by fostering and promotion of non-technological innovations

Association Business Information and Consulting Center - Sandanski

Sandanski, Bulgaria

May, 2017

This project is co-funded by European Union through the Interreg - IPA CBC Programme Bulgaria-The former Yugoslav Republic of Macedonia

CONTENTS

Introduction

Innovation has been recognized by the European Community as key driver of economic growth. The European Union's growth strategy Europe 2020 [1] **where the EU is seen to become a smart, sustainable and inclusive economy is built upon five ambitious objectives - on employment, innovation, education, social inclusion and climate/energy - to be reached by 2020.** These three mutually reinforcing priorities should help the EU and the Member States deliver high levels of employment, productivity and social cohesion. The fundamental importance of the innovative development of enterprises is emphasized in all Community funded programmes and initiatives including some of the most resourceful Framework programmes such as the Horizon 2020 and the innovative concept for regional development based on *smart specialization*[2].

The economy of the cross-border region of Bulgaria and Macedonia, which represents the target area of the present research and needs analysis has suffered greatly from the increasing regional disproportions in terms of economic, social and educational development. According to the conducted territorial analysis for the needs of the new IPA CBC Programme between Bulgaria and Macedonia 2014 - 2020[3] the cross-border region is characterized by a concentration of population, economic and social activities in several regional centres and numerous sparsely populated rural and peripheral areas in the mountains and closer to the border. The regional disparities are reflected in the demographic, economic and employment trends as the regional environment is defined by the decreasing birth rates and ageing population. Unemployment levels remain high in the areas outside bigger cities. Poverty levels, especially in the cross-border region of the the former Yugoslav Republic of Macedonia are also worrying.

As a result of the above trends, the cross-border economy has specialized in sectors and activities which require comparatively low qualification and technologies and exports mainly low added value products. The majority of existing SMEs have low level of technological development and limited potential for applied research. SMEs do not have knowledge and lack experience in introducing innovations, which causes potential loss of markets. In addition, SMEs lack finances for education of their staff (both managerial / administrative and manufacturing) to promote, develop and introduce innovations. Another major obstacle represents the lack of understanding of main factors that drive and hinder innovations (including non-technological ones) in the CB region (e.g. ability of SMEs to adapt to different client demands; cost factors; R&D incentives; property rights; legislation; organizational and marketing changes, etc.).
Given the importance of the development of the local cross-border economy and the need to reduce regional imbalances, there is clearly a need to increase the productivity of local SMEs by preparing them for the contemporary challenges related and by acknowledging the specific mindset of local

[1] http://ec.europa.eu/europe2020/index_en.htm
[2] http://s3platform.jrc.ec.europa.eu/home
[3] http://07-13.ipa-cbc-007.eu/upload/docs/2015-08/Interreg_IPA_CBC_CCI2014TC16I5CB006.pdf

entrepreneurs (e.g. lack of vision, resilience to change, scepticism to innovation, etc.) by providing them with various solutions related to raising their awareness and improving their skills for introducing and developing different kinds of innovations that are applicable to their needs and appropriate for their potentials.

In this regards the present research aims to study the local innovation environment of the cross-border region of both countries, as well as the innovation support and development policies that are available to SMEs. The research work is carried out within the framework of project "Improving competitiveness of SMEs of the CB region by fostering and promotion of non-technological innovations" **(INNOFOSTER)**. The project is a joint INTERREG Cross-border Cooperation Programme Bulgaria – the former Yugoslav Republic of Macedonia initiative that aims to improve the competitiveness of SMEs of the cross-border region by fostering and promoting the adoption of non-technological innovations. The action will also work to strengthen cross-border links between SMEs and business support organizations in the cross-border region of Bulgaria and Macedonia. The project started in October 2016 and will end in Janury 2018. It is led and coordinated by Association Business Information and Consulting Center – Sandanski, Bulgaria in partnership with Centre for Development and Promotion "Promo Idea" – Strumitsa, Macedonia. The funding for the joint initiative is provided under the First call for proposals of the INTERREG IPA CBC Bulgaria – the former Yugoslav Republic of Macedonia Programme (CCI Number: 2014TC16I5CB006).

Research objectives

The current document represents the main result of Activity 3 - Research and needs analysis of the current innovation environment in the target cross-border region and constitutes one the main outputs of the project implementation. It represents the findings of a comprehensive research of the on the current innovation potential and technological development of SMEs in the target cross-border area of Bulgaria (District of Blagoevgrad) and Macedonia (Southeast Planning Region).

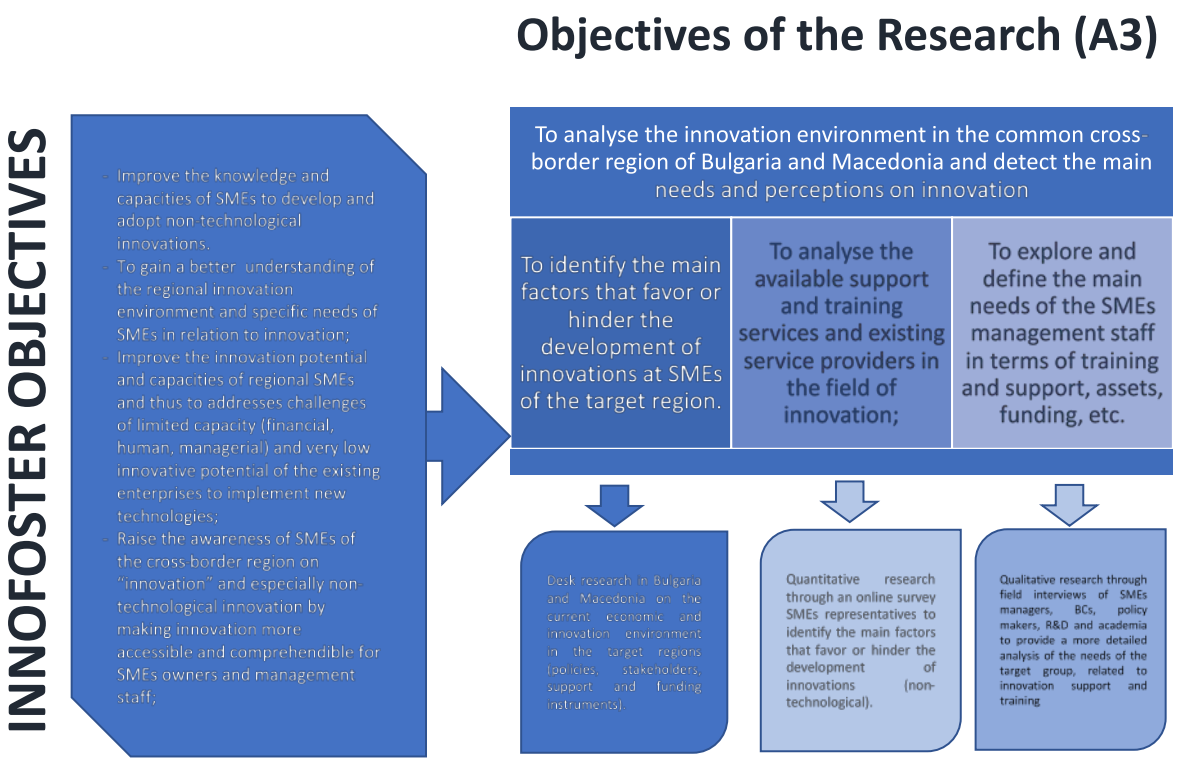
The main objective of the research was to define the main characteristics of the local environment in the target cross-border region of Bulgaria and Macedonia and the innovation needs and key issues that are present for small enterprises in the region. The gathered information will aid the project team to better understand the needs of the business in the field of innovation management, perception and development in order to provide them with various support tools and trainings that will improve their competences and knowledge in this area. It will also provide an overview of the situation of the political framework, support policies and main funding instruments that are available for SMEs in support of their innovation potential and activities.

The findings of the present Report could also serve as a valuable asset for designing future innovation strategies and measures that could be introduced in the target cross-border region of both countries in relation to innovation and SMEs development. The research activities are developed in the following objective framework (provided in Table 1). The **main objective** of the analysis is:

⇒ To analyse the innovation environment in the common cross-border region of Bulgaria and Macedonia and detect the main needs and perceptions of local SMEs on innovation management and development.

For that reason, the research work and activities will be focused around two **operational objectives:**

- ❖ To identify the main factors that favour or hinder the development of innovations (non-technological) at SMEs of the target cross-border region;
- ❖ To analyse the available support and training services and existing service providers in the field of innovation;
- ❖ To explore and define the main needs of management staff of local SMEs in terms of innovation training and support (e.g. soft and hard skills), assets, funding, etc.



Each of these objectives is related to the strategic objectives of project INNOFOSTER:

- To improve the knowledge and capacities of SMEs to develop and adopt non-technological innovations.
- To gain a better understanding of the regional innovation environment and specific needs of SMEs in relation to innovation;

- Improve the innovation potential and capacities of regional SMEs and thus to addresses challenges of limited capacity (financial, human, managerial) and very low innovative potential of the existing enterprises to implement new technologies;
- Raise the awareness of SMEs of the cross-border region on “innovation” and especially non-technological innovation by making innovation more accessible and comprehendible for SMEs owners and management staff;

1 Desk research on the current innovation environment in the target cross-border area of Bulgaria and Macedonia

1.1 General descriptions and definitions of innovation

In the process of the present research the following key terms have been utilized.

Knowledge based economy[4]

The knowledge-based economy is an expression coined to describe trends in the most advanced economies towards greater dependence on knowledge, information and high skill levels, and an increasing need for ready access to all of these.

Today, knowledge in all its forms plays a crucial role in economic processes. Nations which develop and manage effectively their knowledge assets perform better. Firms with more knowledge systematically outperform those with less. Individuals with more knowledge get better paid jobs. This strategic role of knowledge underlies increasing investments in research and development (R&D), education and training, and other intangible investments.

Within the knowledge-based economy, innovation is seen to play a central role. At the macro-level, innovations are the dominant factor in national economic growth and international patterns of trade. At the micro-level – within firms – R&D is seen as enhancing a firm's capacity to absorb and make use of new knowledge of all kinds, not just technological knowledge. Whereas innovations are able to generate competitive advantages in the medium and long term, to innovate is essential for the sustainability of the companies and the countries in the future. Those who innovate are at an advantage over the others.[5]

Other factors which influence firms' abilities to learn are also seen to be of fundamental importance. Ease of communication, effective channels of information, skills transmission and the accumulation of knowledge, within organisations and between them, are highly important. In particular, management and an appropriate strategic outlook are key factors. They determine much of the scope for the external linkages and the positive attitudes inside firms that promote receptivity to the adoption of improved practices and improved technology.

Smart Specialization

Smart Specialisation or RIS3 (Research and Innovation strategies for Smart Specialisation) is a strategic framework for economic development based on targeted support for research and innovation. The basic concept of the smart specialization strategies is to invest into the strengths of each region so that investments in the new programming period related to R&D and innovations will be utilized in the most effective way. Given the limited availability of resources and the need to develop a critical mass

[4] *Oslo manual, Organisation for Economic Co-operation and Development (OECD), 2005*
[5] http://bgi.inventta.net/en/innovation/

of resources and competencies to compete internationally, a strategy of "smart specialization" provides a sound basis for building up the national system of innovation.

Smart specialisation strategy means putting in place a process whereby such a dynamics of new specialty development can be facilitated thanks to targeted government intervention in order to support in a preferential way the most promising new activities in terms of discovery, spillovers and structural changes.

Such process involves:

- to identify focal points where the connection between research and industry (or agriculture or services) is crucial to open a new activity;
- to support the development of these new activities (priorities), by achieving critical mass (networks, clusters) and helping coordination between complementary investments; and
- to measure progress (innovation, job, structural change).

Through the implementation of the smart specialization approach it is expected that by 2020 there will be 15 000 new products to market, 140 000 newly established start-ups and 350 000 new jobs.[6]

Economics of innovation

Innovation is at the heart of economic change. In Schumpeter's words, "radical" innovations shape big changes in the world, whereas "incremental" innovations fill in the process of change continuously. Schumpeter proposed a list of various types of innovations[7]:

1. Introduction of a new product or a qualitative change in an existing product;
2. Process innovation new to an industry;
3. The opening of a new market;
4. Development of new sources of supply for raw materials or other inputs; and
5. Changes in industrial organisation.

The first two types refer to technological innovations, while the other three types refer to non-technological innovations (see below). It is crucial to know why technological change occurs, why firms innovate. In general there are two reasons:

- To seek rents (higher mark-up; gain market share; set higher price) and
- To defend their competitive position as well as to seek competitive advantage.

Innovative firm

Innovations are important because they allow companies to access new markets, increase revenues, perform new partnerships, learn new knowledge and increase the value of their brands. The innovative firm has a number of characteristic features which can be grouped into two major categories of skills:

[6] http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017DC0376
[7] Schumpeter, J. (1934), *The Theory of Economic Development*, Harvard University Press, Cambridge, Massachusetts.

- **Strategic skills:** long-term view; ability to identify and even anticipate market trends; willingness and ability to collect, process, and assimilate technological and economic information;
- **Organisational skills:** taste for and mastery of risk; internal co-operation between the various operational departments, and external co-operation with public research, consultancies, customers and supplier; involvement of the whole of the firm in the process of change, and investment in human resources.

Small and medium sized enterprises are located at the center of the innovation dynamo. It is through them that technologies, inventions and products come to market. There is no way to become an innovative company without giving proper attention to innovation. Companies must understand what innovation is and what are the dynamics involved in the innovation process. From there, they can define a strategy aligned with the objectives of the organization and its vision. Thus, it is possible to identify other essential concepts for companies to become innovative. An attention to the future is a requirement for the company to innovate. The next step is to develop and internalize management tools of the innovation process. These solutions must be tailored to each situation. The size of the company, its sector of activity, culture and organizational structure, the agent system in which it is inserted, its future vision and ambitions should be taken into consideration. To help companies develop models of Technological Innovation Management adequate to their reality, a number of services can be utilized such as ranging seminars to raise awareness about the importance of the theme, complex studies and analyzes that help organizations to structure all its innovation actions, etc.

The theme around innovation is complex. It also allows interpretations and adaptations. Innovate involves a series of technological, market and management expertise. For one to understand the concept of innovation and practice it takes time, dedication and investment. However, what can be observed is that companies that became truly innovative have not looked back since.[8]

Innovation eco-system

In general, companies are at the core of the innovation system. However, the interaction between partners is essential. Without it, the innovations are hampered. These partners have diverse functions, from conducting external R&D of products and processes, to the implementation of investments or subsidies, going through prototype development, market research and production scheduling. Thus, a set of institutions form what are known as **innovation eco-system**: universities, research centers, fostering agencies, investors, government, companies' customers, suppliers, competitors or other partners.

[8] http://bgi.inventta.net/en/innovation/

Definition of innovation [9]

Innovation, *according to the definition provided by the Oslo Manual (OECD/Eurostat, 2005)*, consists in *"the implementation of a new or significantly improved product, a new process, a new marketing method or a new organisational method in business practices, workplace organisation or external relations. Innovation therefore goes beyond R&D and covers a broad range of activities that help firms become more productive and competitive".*

> Innovative enterprises are business entities that have introduced product/process innovation or business entities that had some ongoing/unfinished innovation or have abandoned the innovation activities in the reference period and/or business entities that have introduced organisational or marketing innovation.

Innovation is a process that is largely associated with entrepreneurship, or, as one of the most famous scientists in this area Peter Drucker says, *"Innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service. It is capable of being presented as a discipline, capable of being learned, capable of being practiced. Entrepreneurs need to search purposefully for the sources of innovation, the changes and their symptoms that indicate opportunities for successful innovation. And they need to know and to apply the principles of successful innovation"*.[10]

The present research activities that have been carried out in the framework of project "Improving competitiveness of SMEs of the CB region by fostering and promotion of non-technological innovations (INNOFOSTER)" are focused in two different aspects: analysis of the local environment and analysis of the specific needs (i.e. training and support) of SMEs of the target cross-border region (District of Blagoevgrad in Bulgaria and the Southeast Planning Region in Macedonia). The outline ***map***[11]in Figure 2 labels these four general domains of the ***innovation policy terrain*** as follows[12]:

[9] State Statistical Office of the Republic of Macedonia
[10] Drucker, P., Innovation and Entrepreneurship, 1985.
[11] This approach to mapping innovation policy issues has its antecedents in a method discussed in Department of Industry, Science and Technology (1996), *Australian Business Innovation: A Strategic Analysis – Measures of Science and Innovation 5*, Australian Government Publishing Service, Canberra.
[12] OCDE (2005).: The measurements of scientific and technological activities - Guidelines for collecting and interpreting innovation. Oslo Manual. OCDE Publications Service, Paris

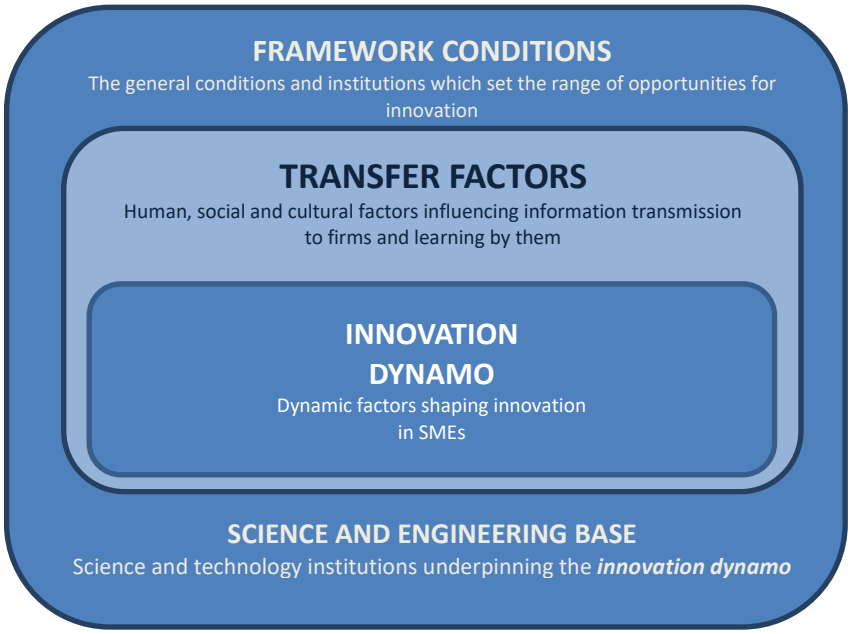


Figure 2: Innovation policy environment

According to the model presented in Figure 2 the innovation policy terrain is focused around the following main domains:

- **Framework conditions of the broader national and structural factors** within which companies in a certain area can maneuver and change (e.g. legislative settings, economic and market structure, financial and educational systems and infrastructure).
- **Existing science and engineering infrastructure** – the accumulated knowledge, resources and potential of the science and technology institutions that lay in the core of the business innovation in a region. The main elements of the science and engineering base include: the vocational training and the university systems; the support infrastructure for R&D activities; the funding programmes and institutions in support of research;
- **Transfer factors** which strongly influences the linkages, flows of information and skills, and absorption of learning. Those factors that are essential to business innovation are determined to a great extent by the existing social and cultural characteristics of the population. Some of the most important transfer factors include the formal and informal linkages between companies (e.g. networks, clusters, etc.), international links, degree of mobility of experts, as well as the access to public R&D capabilities.
- **Innovation dynamo** – it covers the complex system of dynamic factors within or nearby the company which have very strong influence on its innovative potential or activities. The last of the main domains is the most complex ones and it is placed at the center of the Map of innovation as it recognizes the importance of the company itself for an economy to be innovative. The innovation capability of a company is partly embedded in its labor force. Skilled staff are a key asset for each innovative company. The structure of the company is also of vital

importance. The structure of the labor force, the financial structure, the strategy for market performance, tacking competitors, etc. form the internal structure and organization of the company. Many of those aspects are complimentary one to each other.

The present desk research aims to gather information which covers the first three of the main domains that form the innovation environment as the final domain has been researched mainly in the quantitative and qualitative phase of the research process (see Figure 1).

1.2 Description and definition of non-technological innovations

The main topic of the research and the project has provided the funding for its implementation was related to the uphold and fostering of non-technological innovations among SMEs of the cross-border region of Bulgaria and Macedonia. In this regards a more detailed introduction into the specifics of non-technological innovation is necessary.

Innovation has both technological and non-technological aspects. Non-technological innovations are comprised of: **(1) Marketing innovations and (2) Organisational innovations.** Technological innovations are usually associated with product and process innovations. The main starting point for separating between the two types is of course the different role of technology. While technological innovations are typically characterized by developing or using new technologies (i.e. new technical knowledge and technical inventions), non-technological innovations do not necessarily involve a change in technology, or the adoption of new technology, but may solely rest on the use of new business methods, new organizational concepts or other immaterial ways of changing business activities. The commercialization of a new product often requires development of non-technological innovations. That might include the adoption of new marketing methods, but also new production techniques which increase productivity only if supported by organizational changes. According to the popular definition, innovation is a new way of doing something or *"new stuff that is made useful"*[13], and *"there are four different types of innovation"* [14]:

- **Product innovation**: A good or service that is new or significantly improved. This includes significant improvements in technical specifications, components and materials, software in the product, user friendliness or other functional characteristics.
- **Process innovation**: A new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software.
- **Marketing innovation**: A new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.
- **Organisational innovation**: A new organisational method in business practices, workplace organisation or external relations.

Inventta[15], a private consulting company specialized in innovation promotion and consulting for SMEs suggests other division of the different types of innovation. **They separate different types of innovation based on its focal object and its impact.** The focal objectives of innovation include the classic:

- **Product innovation** – which consists of changes in product attributes with a change in how the product is noticed by consumers.

[13] McKeown, Max (2008). *The Truth About Innovation*. London, UK, Prentice Hall.
[14] OCDE.: The measurements of scientific and technological activities. Guidelines for collecting and interpreting innovation. Oslo Manual. OCDE Publications Services 2005
[15] http://bgi.inventta.net/en/

- **Process innovation** – it consists of changes regarding the product or the service production process. It does not necessarily have an impact on the final product but produces benefits in the production process, generally increasing the productivity and reducing costs.
- **Innovation of a business model** - It consists of changes in the business model which means the way the product or the service is offered to the market. It does not necessarily imply changes in the product or even in the production process but in the way as it is brought to the market.

The final type of innovation is described with an example of a consumer that rents a car and pays a monthly fee to use the vehicle. This fee includes insurance, maintenance and replacement by newer model every year. This model is then compared to the traditional business model when the vehicle is sold to the customer, i.e. innovation of the business model.

Based on the impact that it generates innovation could be distinguished as follows:

- **Incremental innovation** – it reflects small continuous improvements in products or product lines. It generally represents small improvements in benefits noticed by the consumer and it does not change significantly the business model or the way the product is consumed.
- **Radical innovation –** it involves a drastic change in the way that the product or the service is consumed. It generally, brings a new paradigm to the market segment that modifies the existing business model. As an example the evaluation of the music CD to digital files in MP3 was provided.

In any case in order to perform innovations it is important for companies to be aware of the importance of innovation in the aspect of the existing competition. Then, companies must understand what innovation is and what its dynamic involves. From there, they can define a strategy aligned with the objectives of the organization and its vision. Thus, it is possible to identify other essential concepts for companies to become innovative (e.g. attention to the future is a requirement for the company to innovate).[16]

There are various similarities between technological and non-technological innovations that could be identified and described as follows:

1) Uncertainty - While uncertainty is common for developing and implementing new technologies, the case is less clear for organisational or marketing innovation since the latter often rests on the adoption of established business methods or marketing practices, supported by specialised consultants who can substantially limit the risk of failure.
2) Investment - Organisational and marketing innovations are likely to differ in this respect since costs for implementing them may be significantly lower and rarely involve fixed investment or long periods between expenditure and return. A special

[16] http://bgi.inventta.net/en/innovation/

case is marketing expenditure for advertising and implementing corporate brand strategies which has own investment characteristics, though these expenditures will constitute marketing innovations only when related to newly introduced market methods.

3) Spillovers – For non-technological innovations, spillovers are less likely to occur: organisational innovations are mostly specific to a firm and difficult to observe externally, though consultants involved in implementing this type of innovation, or employees moving to competitors may transfer experiences on organisational innovations. Marketing innovations may more likely be subject to spillovers, e.g. through the imitation of a new design concept, pricing policy or brand strategy. Similar to new technologies that may be protected by patents, trademarks may serve to some extent as a protection mechanism for marketing innovations.
4) Competitive advantage - Organisational and marketing innovations can potentially act in a similar way like technological innovations. New methods for organising the business may reduce unit costs and exert the same effect on profits as cost-reducing process innovation. The more original and complex these organisational strategies are, the more difficult it will be for competitors to imitate them, thus producing a competitive advantage for the organisational innovator. New marketing methods which contribute to an increased perceived product quality or address new groups of customers not served by the respective type of product so far may generate a temporary monopoly.

In a summary, there are some arguments for considering non-technological innovations as being similar in their economic effects to technological ones, e.g. the effects on temporary extra profits, or the occurrence of spillovers in case of marketing innovation. In some other respects, such as the level of uncertainty involved or the investment nature, non-technological innovations seem to differ substantially.

Technological and non-technological innovations are highly interconnected, as shown by firm-level innovation data.[17] The commercialisation of technological product innovations often requires the development of new marketing methods. Similarly, a new production technique will typically increase productivity only if is supported by changes in organisation. Firm-level innovation data reveal the majority of innovative firms (both large firms and SMEs) introduce technological innovations (i.e. process and product innovations), as well as non-technological innovation (i.e. marketing and organisational innovations) which are named as complementary innovation strategies.

[17] https://www.innovationpolicyplatform.org/content/technological-and-non-technological-innovation

1.3 Brief overview of the economic situation and business environment in Bulgaria and the region of Blagoevgrad

1.3.1 Republic of Bulgaria

Bulgaria is a small open economy located in South-eastern Europe surrounded by five countries (Romania, Greece, Turkey, Serbia and the Former Yugoslav Republic of Macedonia) and the Black Sea. It has an area of 110 910 km^2 and population of approximately 7.7 million.

In 2007 the Republic of Bulgaria became a Member State of the European Union. The country is in a currency board authority (Binding the national currency to the euro) and is characterized by an industrialized, open market economy, a medium-sized private sector and a relatively small domestic market. Over the past several years, Bulgarian economy continues to recover slowly but steadily from the negative effects and the aftermath of the global economic crisis.

Table 1. Key macroeconomic indicators, Republic of Bulgaria, 2011-2016

	2011	2012	2013	2014	2015	2016
Real GDP growth rate (% of change)	1.8	0.8	0.9	1.7	3.0	3.4
GDP per capita (EUR)	5172	5436	5493	5808	6136	6630
Gross fixed capital formation (% of GDP)[18]	20291	21262	21134	21107	21014	19075
Foreign Direct Investments growth (in million EUR)	1 127.6	1 087.0	1 228.7	313.5	1 668.4	634.9
Inflation (average, in %)	4.2	3.0	0.9	-1.4	0.1	0.8
Exports (in million BGN)	39633.6	40622.9	43559.2	43233.5	44949.5	46110.3
Imports (in million BGN)	45778.5	49793.7	50515.4	51097.4	51549.0	51027.9
Unemployment rate (average, %)	11.3	12.3	12.9	11.4	9.1	7.6
Employment rate (average, %)[19]	58.4	58.8	59.5	61.0	62.9	63.4

The recovery pace is slow as it is determined by various growth factors and tendencies in terms of economic activity, internal consumption, foreign trade balance, business capitals and inter-company indebtedness. In the latest edition of the *Global Competitiveness Report of the World Economic*

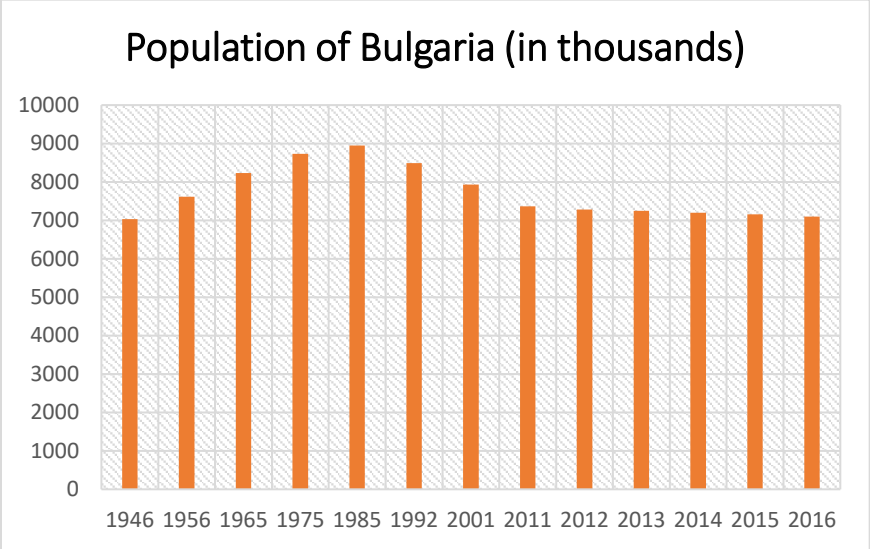
[18] Source: World Bank
[19] Source: National Statistical Institute of Bulgaria

Forum[20], Bulgaria is ranked 50th, moving forward with 4 positions, compared to the previous report. The improved competitiveness of Bulgaria is a result of actions targeted at the areas that are used to assess the Global Competitiveness Index.

Primary industrial exports are textile, specialized machinery and food products. The number of active enterprises in Bulgaria in 2015 was 326 380 as they have provided for almost 1 921 578 jobs. **The number of newly established enterprises** in 2014 was 39 333, as the highest was the number of newly established enterprises was in 2012 - 42 136 and in 2011 - 32109.

The demographic features of Bulgaria remain negative and represent one of the most worrying factors in the recent history of the country as during the period 1990 – 2016 the population of the country is in a constant decline. In the period between the official censuses conducted in 1985 and 2011 the population of the country has diminished by well over 19%. The natural growth in 2016 remained negative (-6,2%) as the fertility rate amounted to 9.2 % in contrast to higher mortality rates of 15.3%.

Table 2. Population trends, Republic of Bulgaria, 1946-2016



In terms of the population structure in 2016, the process of population ageing continued like in most European countries. In 2016, the share of population under 15 years has reached a unprecedented decline down to 14.1%, as the share of population over 65 years increases continuously and it is currently 20.7%. The people in working age represent 60.6% of the total population of the country. Again, the percentage of people in working age continues to slowly decline over the past ten years with a small but steady rate of around 0,5% per year.

The labour market has been experiencing positive trends of development over the past years following the economic crisis. In 2016 the employment rate in Bulgaria continued to rise as it reached 63.4% as the unemployment rate continued to drop (7,6%).

[20] https://www.weforum.org/reports/the-global-competitiveness-report-2016-2017-1

In terms of emigration of highly qualified personnel in the period 2007 – 2016, according to data of various researched more than 10 000 experts and specialists that have graduated in Bulgaria sought their professional realization abroad. The high number of highly educated emigrants increased drastically with the entrance of Bulgaria in the European Union which resulted in opening of the labour markets (e.g. in UK, Germany, Cyprus, Italy and Belgium).

In terms of education, the numerous political efforts to reform and modernize the complex educational system of Bulgaria remain rather inefficient and not supported by the society and the main participants in the educational system. In terms of secondary education there is a decrease in the number of students entering the educational system and surviving its initial stages (VIII – grade and XII – grade). In terms of higher education there is an increase in the number of university students (6%) at the age between 19 – 23 years. However, Bulgaria remains at the top of the EU countries with the highest number of unemployed university graduates.

In terms of bridging the gap between business and education, Bulgaria remains at the bottom of international statistics related to the coherence between demand (by the business) and output (education) of skills and competence that are needed for successful realization at the labour market.

In 2015 the amount of funds allocated for R&D reached 0.96% of the GDP. The main R&D expenses are carried out in the field of medicine, technical and natural sciences (more than 90%). The R&D expenses of enterprises are concentrated mostly in the processing industry as the majority of those expenditures (76%) are carried out in the Southwest Planning Region. The main factor that stimulates the growth of R&D investments by public and private sectors remain the foreign direct investments in research centres, as well as the co-financing of SMEs that participate at the Operational programmes of Bulgaria related to business and innovation support.

In 2015, the number of new patents (another factor for the innovative potential of the national economy) that were issued by the Patent office of the Republic of Bulgaria was only 34. Nevertheless, the number of new patents is constantly growing ever since the entrance of Bulgaria in the European Union in 2007. However, in terms of number of new patents that were issued on an yearly basis, Bulgaria remains at the bottom of the **EU 28** with an average of 6,55 new patent requests annually.

According to data of the latest report of the European Innovation Scoreboard (2017), Bulgaria is considered as a Modest Innovator and it stands at the bottom of the Innovation Scoreboard of the EU-28 along with Romania. Over time, performance has not changed in comparison to 2010 as Bulgaria continues to have an unbalanced and insufficiently developed innovation system, despite of efforts and some positive practices in the area.

In 2016 the share of innovative enterprises in comparison to the overall number of companies in Bulgaria reached 27,4% of which 16,8% have declared that their businesses have introduced a technological innovation and 18,6% have implemented a non-technological innovation. Based on the data it could be concluded that almost one-third of Bulgarian enterprises are innovative as the number of enterprises that have introduced technological and non-technological innovations is almost equal.

However, many experts in the field of innovation management and development still argue on the accuracy of the data coming from the National Statistical Institute due to the nature and specifics of the statistical methodologies. At present those methodologies do not include micro enterprises where a large part of the potential of Bulgarian economy is currently situated.

Almost all enterprises that have introduced technological innovations have implemented those innovations as a result of an innovative partnership / cooperation. However, when comparing the above-mentioned data to EU average, Bulgarian enterprises still lag behind their European partners. For example, the average share of SMEs that have introduced a technological innovation (product or process) amounts to 30.6%, as the similar share in terms of non-technological innovations (e.g. marketing or organizational)

During recent years, the business environment in Bulgaria has considerably improved. Confidence in the implemented policies and in the work of the administration and the legislation increased (the political and legal environment). The trend to reduce the overall tax and social security burden of business continues and the measures to improve the effective functioning of the economic market continue (the economic and competitive environment). Cooperation and partnership between state administration and business are being strengthened. Parallel to external business improvements, methods for stimulating the companies to implement internal changes are necessary. These methods are orientated towards marketing systems and quality management for increasing the flexibility in sales, achieving conformity to quality, new forms of control and organization, productivity, etc.

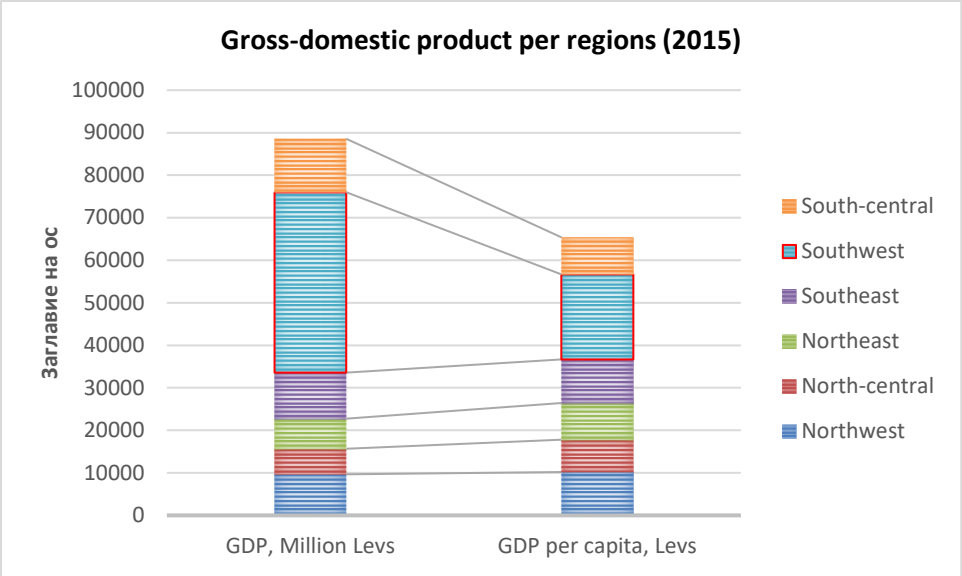
1.3.2 South West Planning Region

In accordance with the membership of Bulgaria in the European Union and the provisions of EC Regulation No. 1059/2003, **currently the country is divided in six planning regions:** 1. North-west planning region; 2. North-central planning region; 3. North-east planning region; **4. South-west planning region;** 5. South-central planning region; 6. South-east planning region. The present analysis covers the needs and demands concerning innovation management and development of enterprises of the region of Blagoevgrad which is a part of the South-west planning region.

The South-west Planning Region (SWPR or Yugozapaden region) is the largest and most economically developed region in Bulgaria. At the same time, it is a specific region in terms of both business and technological development. The specificity of this region is determined largely by the fact that the capital city of Sofia, which boasts a large part of the private businesses, is located on its territory. In addition, the region is located in a border area with the neighbouring countries of Greece, Macedonia and Serbia. Based on the abovementioned facts, as well as due to the vast economical potential that has been concentrated in the region, SWPR provides the largest contribution to GDP (over 49% for 2016). In addition to the vital business community, the region hosts the largest number of universities and research institutions. At the same time the region is characterized with high internal economic

development contrast. In this aspect, there are 2 sub-regions – the district of Sofia and the rest of the region, which includes the districts of Blagoevgrad, Pernik and Kyustendil.

Table 3. GDP contribution by planning regions



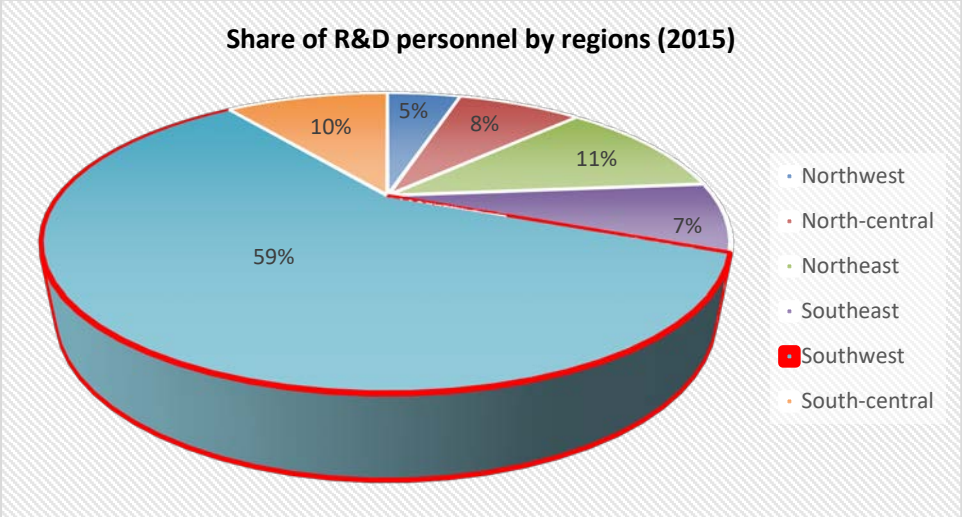
The Southwest Planning Region of Bulgaria has 20,306 square kilometres of area and is second in size of all the planning regions in Bulgaria. The region has the highest number of inhabitants - 2,115,344 people (2016) which represents 29.72% of the entire population of Bulgaria. Additionally, it has the highest employment rate of 68.7% (981,4 thousand people) and the lowest unemployment rate in the country (5.4% according to data for 2016). The major administrative districts are Sofia-city, Sofia region, Pernik, Kyustendil and Blagoevgrad. Although the region is the most advanced Bulgarian region, it lags considerably behind the average innovation development level of other European regions and has considerable intra-regional disparities. In contrast to high levels of economic activity in the capital and its vicinity, peripheral parts are lagging behind in economic development.

The South West Planning Region is the most economically advanced and industrially diverse region in Bulgaria, largely due to the contribution of the capital, Sofia, which is the biggest business and service centre in the country. The region is a national leader in a number of **advanced manufacturing sectors**, such as ICT which is one of the most developed and fast growing industries in Bulgaria which provides for more than 2% of the GDP. According to data of the *Annual Report on The State of the Software Sector in Bulgaria*[21], the ICT sector in Bulgaria employs more than 19000 highly paid professional and it is expected to grow to more than 6% in 2016. Most of the companies and investors in the ICT sector are located in the Southwest region, mainly in and around the capital city of Sofia. Overall, the Sofia region has focused its industrial output towards advanced and specialised machinery and chemical products.

[21] http://www.basscom.org/RapidASPEditor/MyUploadDocs/BASSCOM_Barometer_2016_ENG.pdf

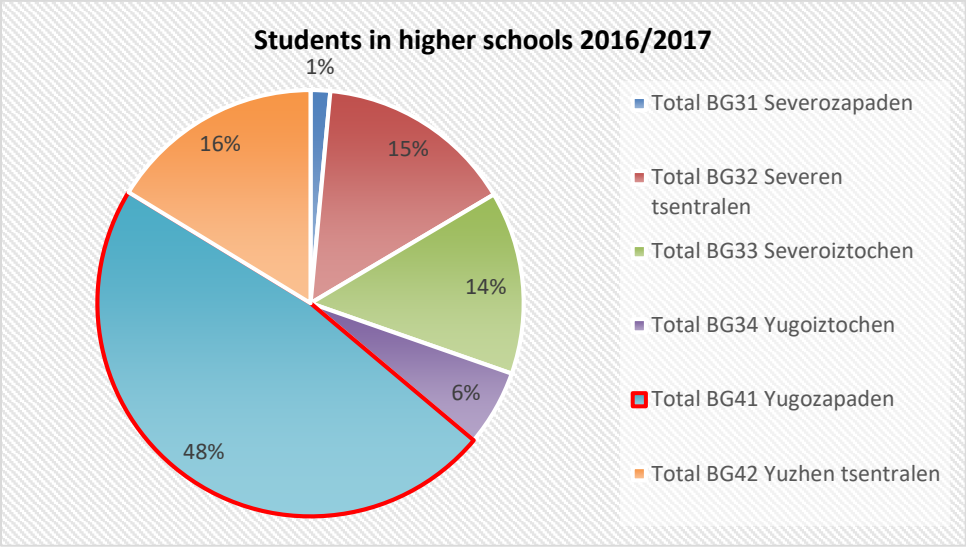
SWPR has gained advantage in the area of technological innovation, and absorbs 83% of all resources, invested in that sector. This can be attributed to the high concentration of scientific and educational institutions, mostly in the capital city of Sofia, as well as the thriving business sector and the highly spread infrastructure and communication links. The region holds the backbone of the national research infrastructure and is the leading region in research and development (R&D) activities. The region provides working and research environment for more than half (58.6%, 2015) of the human resources in science and technology in the country. (Table 4).

Table 4. Share of R&D personnel by regions (2015)



The region hosts some of the most popular and prestigious universities in Bulgaria, such as: Sofia University, the Technical University, the University for National and World Economy, the New Bulgarian University, the Sofia Medical University, the Southwest University "Neofit Rilski", the American University in Bulgaria, etc.

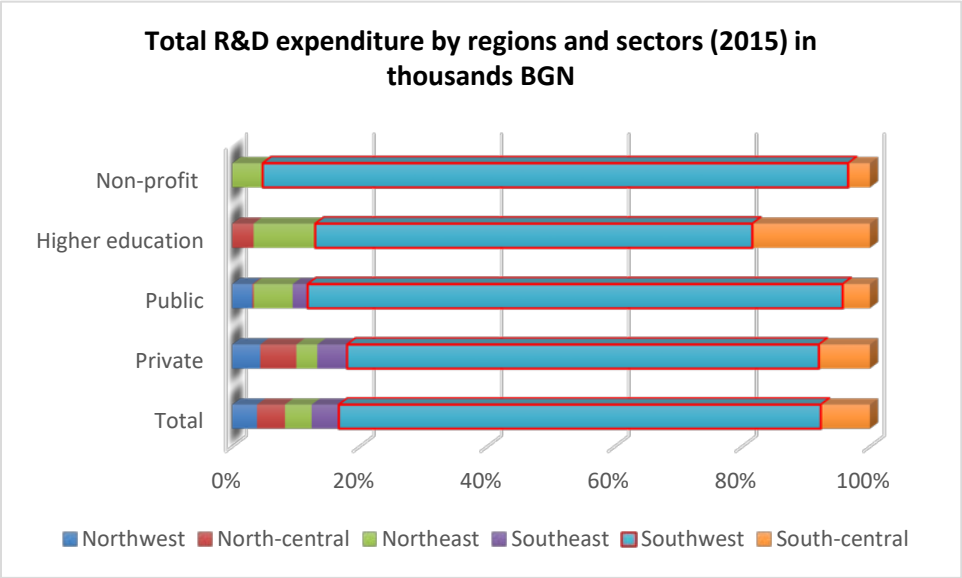
Table 5. Number of students studying in higher education institutions (2016-2017)



In total, there are 29 higher educational institutions in the region as this number is higher than the combined number of universities in all other regions of Bulgaria – 27. The Medical University had the largest number of citations and articles in the country over the period 2012-2016 (Scopus data). The region also ranks first in the number of students - 115,741 or 47.6% of all students in the country are studying in the region (Table 5). It hosts many industrial associations, technology transfer offices and innovation centres, clusters, associations, business support centers, etc.

The region generates 76% of all R&D expenditures amounting to € 434, 838 million (2015). Gross domestic expenditure on research and development (GERD) is 1.52% of the region's GDP, a considerably high rate compared to the average 0.6% for the country but lower than the 1.75% (2016). Most R&D expenditures in the region come from the business sector, with R&D expenditure (BERD) being 73.4% of the total GERD (Table 6).

Table 6. R&D expenditures share by origin and region (2015)



According to the **Regional Innovation Scoreboard 2017**[22], the Southwest region is ranked as a moderate innovator with an innovation performance close to the EU average but with the best performance amongst the other Bulgarian regions. Main weaknesses and challenges that remain to be tackled were related to relatively low number of SMEs introducing marketing or organisational innovations (0.140) and innovating in house (0.194). Moreover, there is a small number of EPO patent applications in the region (0.106).

The main regional strengths that were identified include the high share of population with tertiary education (0.522) which was contributed to the number and the quality of universities in the region. Another strong feature was the employment rate in knowledge-intensive activities (0.513). The data of the 2017 report showed considerable improvement in comparison for the period 2013-2014 when the region was considered as modest innovator and had all performance indicators below the EU average. Moderate and low performing regions were and are still located mostly in Bulgaria, Croatia, Hungary, Poland, Romania, Slovakia, Spain, and the United Kingdom.

1.3.3 Region of Blagoevgrad

The cross-border region of Blagoevgrad represents the target region of the present research. It is the third largest region in Bulgaria **(6449 sq. km.)** after Burgas and Sofia regions and covers **5.8%** of the territory of Bulgaria. The population is **310 321** people or **4,4%** of the whole population of the country. That puts the region of Blagoevgrad in the sixth place by a number of inhabitants in Bulgaria. **The administrative center of the region is the city of Blagoevgrad.** Other important towns in the

[22] http://ec.europa.eu/docsroom/documents/23881

region are Bansko, Gotse Delchev, Melnik, Petrich, Razlog, Sandanski, and Simitli. In general, the region of Blagoevgrad is divided into 14 municipalities, 96 towns and 280 settlements.

As in the rest of Bulgaria, the economy of the region is showing signs of recovery as businesses are growing slowly but steadily and main economic and demographic factors are either improving or are keeping their values in relation to previous years. However, there are many negatives that need to be compensated in order to improve the competitiveness of local enterprises, especially in a region which is mostly relying on the services sector (e.g. tourism, trade, etc.) **(Table 7).**

Table 7. Key Indicators for the District of Blagoevgrad[23]

	2011	2012	2013	2014	2015
GDP per capita (BGN, current prices)	7.363	7.532	7.605	7.567	7.542
Average annual income per household member (BGN)	3.225	3.823	4.132	4.181	4.502
Average annual gross salary (in BGN)	5.990	6.271	6.566	6.818	7.181
Relative share of people living below the national poverty line (%)	12.4	15.3	18.2	17.4	15.1
Annual average economic activity rate of the population aged 15 to 64 (%)	70.5	73.0	73.2	73.0	70.8
Annual average employment rate of the population aged 15 to 64 (%)	64.6	65.4	63.3	62.6	63.4
Annual average unemployment rate of the population aged 15 to 64 (%)	8.4	10.4	13.5	14.1	10.3
Relative share of the population aged 25 to 64 with tertiary education (%)	16.6	17.7	18.0	19.6	19.5
Number of non-financial enterprises per 1,000 people	50	50	53	55	58
Relative share of households with internet access (%)	24.3	42.3	54.9	60.5	61.9
Personnel engaged in R&D	639	-	628	587	613
Expenditure on research and development (R & D)	4339	-	3045	3421	4079
Relative share of enterprises with up to 9 persons employed in total number of	92.1	92.7	92.9	93.4	93.3

[23] The data for the table is based on NSI and Regional Profiles.bg

enterprises in the district (Micro enterprises)					
Relative share of enterprises with 10-49 employees in total number of enterprises in the district (Small enterprises)	6.4	5.9	5.8	5.4	5.6
Relative share of enterprises with 50-249 employees in total number of enterprises in the district	1.4	1.2	1.2	1.1	1.0
Relative share of enterprises with more than 250 employees in total number of enterprises in the district	0.2	0.2	0.1	0.1	0.1

The GDP per capita of the region is in a steady but slow upward trend which influences the overall quality of life and social inclusion indicators.

The employment rate (63,4%) is one of the highest in Bulgaria as it passes the average rate for employment of the country which was 62,9% for 2015. **The unemployment rate** is relatively high (10,1%, 2015) as it passes the country's average (9,1%). The high level of unemployment is resulted by the high contrast in the level of economic development of the different municipalities, part of the region. In terms of economic development, the settlements in the region could be divided in three main groups.

The first group includes the municipalities of Bansko, Blagoevgrad, Gotse Delchev, Razlog, Petrich, Simitli and Sandanski. They have better geographic location and more developed economic and entrepreneurship activities, agriculture, tourism, as well as higher innovation potential. **The second group** includes settlements with moderate economic performance and less-developed economies such as Kresna, Satovcha and Hadzhidimovo. **The third group** includes the municipalities with the highest level of unemployment (Belitsa, Yakoruda, Strumyani and Garmen) where poverty levels are high and unemployment rates reach between 45%-57,6%). The population in those regions is not well-educated which further hinders their employment prospects. All this contributes for the existing imbalance in the economic development of the region which also determines the high levels of internal migration (to bigger cities in the region) and emigration (mainly to countries like Germany, UK and Spain).

In the period 2014 – 2020 the European Union continues to invest in the overall development of the regions of Bulgaria through seven operational programmes which are aimed in solving various problems related to economic development, competitiveness, social inclusion, regional and transport accessibility, etc. According to data of the *Information System for Management and Monitoring of the Funds of the European Union in Bulgaria 2020 (ISUN[24])* as of May 2017 in the region of Blagoevgrad there are projects for more than 130 million BGN currently in a process of implementation. Those

[24] https://eumis2020.government.bg

projects are currently being implemented by different beneficiaries such as municipalities, SMEs, educational and academic institutions, NGO, etc. According to data of the same portal (May 2016) beneficiaries of EU programmes in the region of Blagoevgrad had acquired a total of 185 million BGN, or 590.5 BGN per capita of the annual average population. The municipality of Bansko utilized more than any other community in the region (44.6 million BGN or 3,497 BGN per capita), whereas Hadjidimovo utilized least (812 000 BGN, or 85 BGN per capita). In terms of the amount of foreign investments in the region, by the end of 2015 they amounted to 446 million euro, which was 1426.86 euro per capita vs. average of 6630 euro per capita for the country in 2015.

As mentioned above, the regional economy is mostly relying on the services sector as the **tourism** is very well developed in many of the municipalities of the region (Bansko, Razlog, Sandanski, Gotse Delchev). The favourable natural and ecological characteristics of the region provide opportunities for development of different types of tourism. Moreover, there are many cultural attractions and natural resources in the region, which provide opportunities for diversification of existing tourism products and services. However, at present, the main tourism products are mainly focused on several major sites and areas with a high level of importance and popularity, but there are no integrated products and services based on common (e.g. cross-border area) and diverse (by type) tourist resources.

At present, the main types of tourism in the region of Blagoevgrad include **winter tourism** in the major resorts of Bansko and Razlog, **SPA tourism** in Sandanski, Ognyanovo (Gotse Delchev) and **cultural tourism** in Bansko, Gotse Delchev, Melnik and Blagoevgrad.

Tourism infrastructure in the border region is relatively well developed and has a total of 299 facilities for accommodation of various types. The accommodation facilities in the region have a total of 20,868 establishments (2015). A review of the data on number of tourists visiting the border region shows an increase of the overnight stays and sightseeing tours. In 2015, there's an average growth of nearly 37% compared to 2011.

The industrial profile of the region is determined by high rates of fragmentation in the different communities across the region. For example, in the municipality of Blagoevgrad there are concentrated more than 50 % of current potential of the manufacturing industry in the region (e.g. machinery, light industry, ICT, etc.). Traditionally, the textile, knitwear and clothing industries have been one of the main and most relevant sectors for industrial development with export orientation in regions such as Gotse Delchev, Petrich and Sandanski. Food processing industry is highly developed, including activities relating to the production and processing of meat, processing and preserving of fruit and vegetables, producing of vegetable and animal fats, dairy products, milling products, animal feeds, bakery products, soft drinks and alcohol (Gotse Delchev, Sandanski, Petrich). Municipalities of Bansko and Sandanski have highly developed tourism and therefore rely mostly on the sector of services, as well as construction. Wine industry is also particularly well developed in regions around the towns of Sandanski and Gotse Delchev.

The favorable climatic conditions determine the development of agriculture in the regions based around the river basins of Struma and Mesta (i.e. Sandanski, Petrich, Simitli, Kresna, Strumyani, Gotse

Delchev, Garmen). The administrative center of the region – the town of Blagoevgrad hosts two higher education institutions of national importance - South-west university "Neofit Rilski" — Blagoevgrad and the American University in Bulgaria -Blagoevgrad. Both universities are highly ranked and produce university graduates in fields such as social sciences, law, economics and business administration. There is also a private College of Tourism — Blagoevgrad which is also officially accredited under the National accreditation system of higher education institutions[25].

[25] http://www.mon.bg/?go=page&pageId=8&subpageId=167

1.4 Brief overview of the economic situation and business environment in Macedonia and the Southeast Planning region

1.4.1 Republic of Macedonia

Ranked as the fourth "best reformatory state" out of 178 countries ranked by the World Bank in 2009, Macedonia has undergone considerable economic reform since independence. The country has developed an open economy with trade accounting for more than 90% of GDP in recent years. Since 1996, Macedonia has witnessed steady, though slow, economic growth with GDP growing by 3.1% in 2005. This figure was projected to rise to an average of 5.2% in the 2006–2010 period. The government has proven successful in its efforts to combat inflation, with an inflation rate of only 3% in 2006 and 2% in 2007, and has implemented policies focused on attracting foreign investment and promoting the development of small and medium-sized enterprises (SMEs). The current government introduced a flat tax system with the intention of making the country more attractive to foreign investment. The flat tax rate was 12% in 2007 and was further lowered to 10% in 2008.

Despite these reforms, as of 2005 Macedonia's unemployment rate was 37.2% and as of 2006 its poverty rate was 22%. However, due to a number of employment measures as well as the successful process of attracting multinational corporations, and according to the Macedonian State Statistical Office, country's unemployment rate in the first quarter of 2015 decreased to 27.3%[26].

The key macroeconomic indicators for the Republic of Macedonia in the period 2011-2016 are provided in the Table 8. below.

Table 8. Key macroeconomic indicators, Republic of Macedonia, 2011-2016[27]

	2011	2012	2013	2014	2015	2016
Real GDP growth rate (% of change)	2,3	-0,5	2,9	3,6	3,8	2,4
GDP per capita (EUR)	3665	3680	3948	4141	4377	4759
Gross investments (% of GDP)	26,9	28,9	28,8	30,3	31,1	33,6
Industry, real growth rate (%)	10,2	-6,7	3,7	11,5	6,9	-1,3
Inflation (average, in %)	3,9	3,3	2,8	-0,3	-0,3	-0,2
Exports (annual change in %)	26,8	-2,8	3,6	15,8	9,1	5,9
Imports (annual change in %)	22,1	0,3	-1,7	10,5	5,4	5,3

[26] Source: World Bank data and Wikipedia
[27] Source: Ministry of finance, Macroeconomic indicators, (http://www.finance.gov.mk).

Budget deficit (% of GDP)	-2,5	-3,8	-3,8	-4,2	-3,5	-2,6
Unemployment rate (average, %)	31,4	31,0	29,0	28,0	26,1	23,7
Employment rate (average, %)	38,9	39,0	40,6	41,2	42,1	43,1

In the Table 9. below several indicators are presented which help to make comparison between South-east planning region with the other planning regions.

Table 9. Comparative analysis of the basic economic indicators of the South-east planning region with the other regions[28]

Indicators	**South-east region**	**Skopje region**	**East region**	**Pelagonija region**	**Vardar region**	**South-west region**	**Polog region**	**North-east region**
Number of municipalities	10	17	11	9	9	13	9	6
Number of settlements	188	142	217	343	215	286	184	192
Population, Census 2002	171.416	578.144	181.858	238.136	154.535	221.546	304.125	172.787
Estimate of population, 2015	173.560	619.279	177.145	231.137	153.094	219.891	319.916	176.204
Density of population, 2015	63,4	341,6	50,1	49,0	37,9	65,8	132,4	76,3
Total number of dwellings, Census 2002	59.499	188.394	72.248	93.976	61.367	84.627	78.544	59.488
Average number of persons in a	3,4	3,5	3,1	3,3	3,2	3,8	4,4	3,7

[28] Source: State Statistical Office, Regions in the Republic of Macedonia, 2016

household, Census 2002								
Rate of activity 2015	68,4	54,4	62,5	66,3	60,7	54,9	47,1	54,0
Employment rate, 2015	56,9	40,4	51,6	52,2	45,8	36,2	33,2	30,6
Unemployment rate, 2015	16,7	25,7	17,5	21,1	25,4	33,9	29,6	43,2
Average paid gross salary per employee, 2015	24.829	38.003	23.848	29.794	25.457	28.930	30.276	24.665
Average paid net salary per employee, 2015	16.946	25.861	16.278	20.222	17.402	19.670	20.620	16.848
Number of graduated students, 2015	662	2816	701	971	568	771	1047	580
Number of active business entities, 2015	5889	26197	5692	8071	5470	7127	7554	4139
Number of newly created business entities, 2014	528	2660	532	893	470	757	921	400
Number of closed companies, 2012	773	4332	658	1027	878	1055	855	415
GDP per capita, 2013	266.524	348.915	226.898	243.279	268.819	178.726	118.672	151.462
Number of completed dwellings, 2015	311	2840	314	438	113	500	449	332

Value of completed construction works, 2015, in 000 denars	1.421.037	14.174.250	4.176.346	4.788.052	4.158.385	5.386.551	2.555.666	4.549.361
Number of issued construction permits, 2015	282	947	376	319	280	319	473	147

1.4.2 Southeast Planning Region

Table 9 above shows general indicators for the eight planning regions in the country including the number of municipalities and settlements in each region separately, and basic demographic indicators: total population according the last census conducted in the Republic Macedonia in 2002 and the estimate of the population in 2015, the population density, the total number of dwellings and the average number of residents per dwelling. South-east pegion has ten municipalities and 188 settlements. According the population estimates from 2015, the South-east with 173,560 inhabitants is among the least populated areas (7th). The total number of dwellings according the last census in 2002 is 59499, and the average number of household members is 3.4% which is approximately similar average in other regions except Polog. **With a population density of 63.4 people per km^2, the South-east region is the fifth of the planning regions after Skopje, Polog, Northeast and Southwest.**

From Table 9 above it can be deduced that in 2015, the highest employment rate among the regions in the country has the South-east planning region with 56.9%, which is well above the national average of 42.1%. At the same time, this region has the lowest unemployment rate of 16.7% which is also well below the unemployment rates in other regions, and well below the national average of 26.1%.

Table 10. Gross value added for the most significant sectors in the period 2010 - 2012 in the Republic of Macedonia and in the South-east planning region[29]

The most significant sectors	**2010**		**2011**		**2012**	
	Macedonia	**SE region**	**Macedonia**	**SE region**	**Macedonia**	**SE region**
Agriculture	43.739	13.028	43.895	12.974	40.705	12.515
Industry	81.803	5.232	87.048	6.902	70.198	5.923
Construction	23.902	1.806	29.924	2.553	31.166	2.279

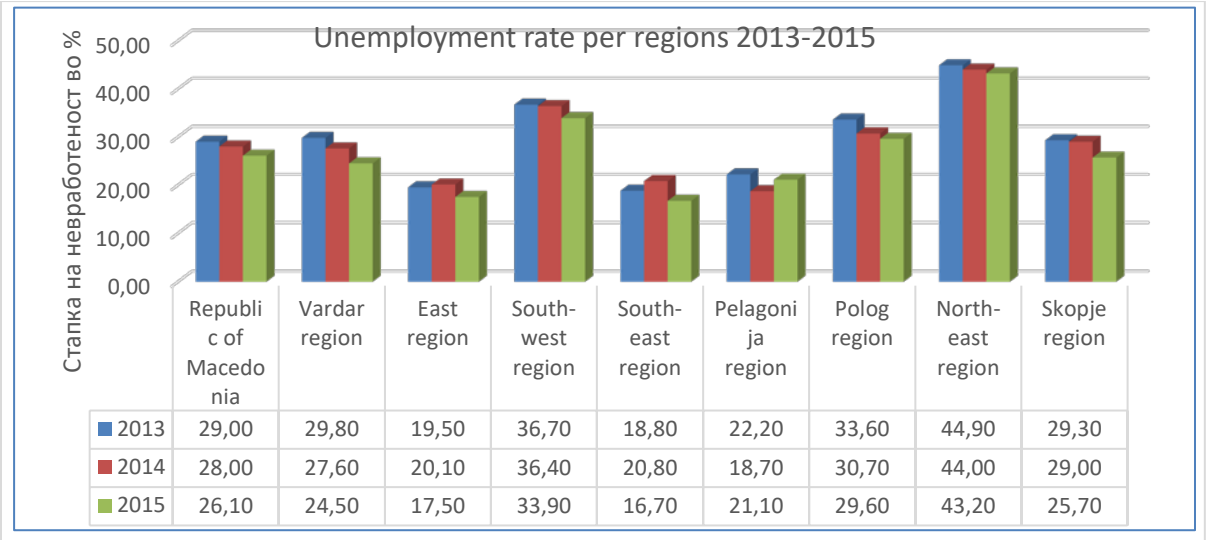
[29] Source: Regional innovation strategy of the South-east planning region, 2016 – 2020

Trade	77.176	4.908	83.316	6.912	85.261	6.441
Other sectors	154.528	8.372	158.208	9.769	168.005	9.299
Total value added	**381.148**	**33.346**	**402.392**	**39.110**	**395.335**	**36.457**

Agriculture is the most important sector for development of the overall economy of the South-east planning region. This conclusion is confirmed by the data presented in the Table 10 above, where agriculture has the highest added value in the GDP structure of the region. This sector participates with 10.3% in the GDP structure at the national level, while it participates with 34.3% in the GDP structure of the South-east planning region, which means that around one third of the total gross value added is created by the agriculture. Namely, in 2010, agriculture participates with 39% in the total GDP of the South-east region, in 2011 the share decreased to 33,2%, while in 2012, this sector participates with 34,3% in the total GDP of the region.

The industry has a relatively variable share in the GDP structure of the region with 15,7% in 2010, 17,6 in 2011 and 16,2% in 2012. That means there is a room for further growth in this sector.

Table 11. Unemployment rate per regions, Macedonia, 2013 - 2015



	Republic of Macedonia	Vardar region	East region	South-west region	South-east region	Pelagonija region	Polog region	North-east region	Skopje region
2013	29,00	29,80	19,50	36,70	18,80	22,20	33,60	44,90	29,30
2014	28,00	27,60	20,10	36,40	20,80	18,70	30,70	44,00	29,00
2015	26,10	24,50	17,50	33,90	16,70	21,10	29,60	43,20	25,70

The Southeast region has the lowest unemployment rate in the period from 2013 to 2015 compared to other regions, and it has decreased from 18.8% to 16.7%.

Comparative analysis of the number of graduated students in 2015 indicates the situation of education in the regions, the structure of the workforce and the available personnel. The following Table 12 shows the number of graduated students per 1000 inhabitants.

Table 12. Number of graduated students per 1000 inhabitants, 2015[30]

Indicators	South-east region	Skopje region	East region	Pelagonija region	Vardar region	South-west region	Polog region	North-east region
Population, Census 2002	171.416	578.144	181.858	238.136	154.535	221.546	304.125	172.787
Estimate of population, 2015	173.560	619.279	177.145	231.137	153.094	219.891	319.916	176.204
Number of graduated students, 2015	662	2816	701	971	568	771	1047	580
Number of graduated students per 1000 inhabitants, 2015	3,8	4,5	4,0	4,2	3,7	3,5	3,3	3,3

According the estimate of the population in 2015 the South-east region is seventh, while according the number of graduated students per 1000 inhabitants, it is fourth. In the Republic of Macedonia 8116 students graduated in 2015 or on average 3,9 graduated students per 1,000 inhabitants. There were 662 graduated students or 3.8% graduated students per 1,000 inhabitants in the South-east region in 2015, compared with Skopje, Pelagonija and East region with 4.5%, 4.2% and 4,0% graduated students per 1000 population respectively. This indicator in the context of the lowest unemployment rate of regions, suggests that young people after completion of secondary education are employed in the agriculture, handycrafts and family businesses. For improving their specialization they use number of formats of non-formal education and additional trainings, courses and handycrafts. However the smaller number of graduated students concerns, because on the one hand there is a greater need for developing an economy based on knowledge and innovation, and on the other hand the potential of the region is limited. This adversely affects the competitiveness of companies and their export potential.

The number of unemployed persons with the lowest level of education ISCED 0-2 in the South-east region has decreased from 7110 to 4716 in the period 2013 – 2015. It is the second lowest after the East region. In the same period, the number of unemployed persons with education level ISCED 3 – 4 in the South-east region has increased from 8561 to 9129 and it is the second lowest of all regions after

[30] Source: State Statistical Office, Regions in the Republic of Macedonia, 2016

the East region. The number of unemployed persons with level of education ISCED 5 and more, has decreased from 2868 to 2285 people and it is the lowest of all regions.

In the Municipality of Strumica more than 30% of the unemployed are young people aged 15 to 29 years. One of the main priorities of the municipality is therefore to develop an entrepreneurial culture among young people and to promote the creation of quality jobs in the municipality through upgrading knowledge and skills of young people and initiating continuous education for their successful employment.

1.5 Innovation environment and conditions – specifics of the environment in the Republic of Bulgaria and in the region of Blagoevgrad

1.5.1 Republic of Bulgaria - National context

According to data of the latest report of the European Innovation Scoreboard (2017), Bulgaria is considered as a Modest Innovator and it stands at the bottom of the Innovation Scoreboard of the EU-28 along with Romania.

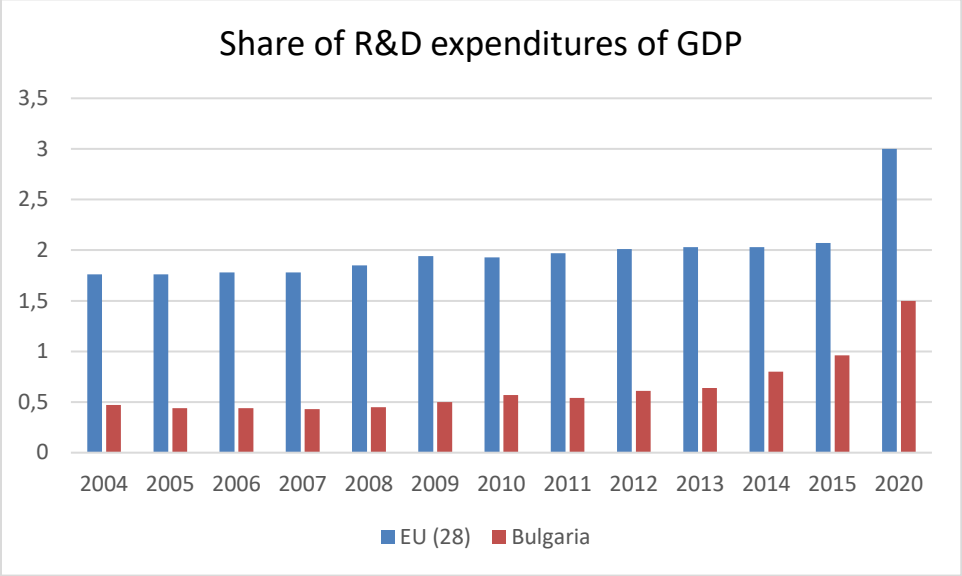
In 2016 the share of innovative enterprises in comparison to the overall number of companies in Bulgaria reached 27,4% of which 16,8% have declared that their businesses have introduced a technological innovation and 18,6% have implemented a non-technological innovation. Based on the data it could be concluded that almost one-third of Bulgarian enterprises are innovative as the number of enterprises that have introduced technological and non-technological innovations is almost equal.

In 2016 the share of innovative enterprises in comparison to the overall number of companies in Bulgaria reached 27,4% of which 16,8% have declared themselves as companies that have introduced a technological innovation and 18,6% have implemented a non-technological innovation. Based on the data it could be concluded that one-third of Bulgarian enterprises are innovative as the number of enterprises that have introduced technological and non-technological innovations is almost equal. Almost all enterprises that have introduced technological innovations have implemented those innovations as a result of an innovative partnership / cooperation. However, when comparing the above-mentioned data to EU average, Bulgarian enterprises still lag behind their European partners. For example, the average share of SMEs that have introduced a technological innovation (product or process) amounts to 30.6%, as the similar share in terms of non-technological innovations (e.g. marketing or organizational). In a more positive aspect, the Bulgarian economy has been developing on a steady and upfront trend in the past several years, as data showed that despite of various hinders and negative factors, Bulgaria has the potential for achieving a positive transformation as its economy has registered a growth of 3% in 2016. Relative strengths of the Bulgarian innovation system are in concentrated in intellectual assets, employment impacts and human resources. Relative weaknesses are in the number and quality of produced innovations, the existing finance and support (including their efficiency and priorities), as well as the current state of development of the R&D sector.

In 2015 the amount of funds allocated for R&D reached 0.96% of the GDP. The main R&D expenses are carried out in the field of medicine, technical and natural sciences (more than 90%). The R&D expenses of enterprises are concentrated mostly in the processing industry as the majority of those expenditures (76%) are carried out in the Southwest Planning Region. The main factor that stimulates the growth of R&D investments by public and private sectors remain the foreign direct investments in research centres, as well as the co-financing of SMEs that participate at the Operational programmes of Bulgaria related to business and innovation support.

Compared to other EU Member States, Bulgaria is still lagging behind in relation **to the share of R&D investment relative to GDP (0.96 %)**, with the exception of Romania (0.38 %), Latvia (0.68%) and Croatia (0.79%). In recent years, there has been an increase in the share of private R&D spending. The increase in total R&D expenditure in 2015 compared to the previous year is mostly attributable to the private sector, where R&D expenditure increased by BGN 109.6 million (34.4%). The business sector continues to be the largest of the four institutional sectors in which R&D is implemented, with a relative share of 73.4% of total R&D expenditure. The second most important contribution has the public sector with 25.0%. Next comes the sector of higher education with 5.4% and last but not least - non-profit organizations - 0.5%. The main factor for increasing R&D investment is related to the increased share of foreign investments (both private and through European funds). The share of foreign sources of funds in R&D funding in Bulgaria has decreased - in 2015 by 43.8% of total R&D expenditure, compared to 51.4 % in 2014. This was resulted mainly from the transitional period of European Programmes.

Table 13. Share of R&D expenditures of GDP (201) [31]



Over time, performance has not changed significantly since 2010 as Bulgaria continues to have an unbalanced and insufficiently developed innovation system, despite efforts and some positive practices in the area. The innovation activity of Bulgarian SMEs in the recent years has been additionally hampered by the effects of the stagnation following the economic crisis of the period 2008 – 2010. During this period, Bulgarian businesses experienced the negative effects of the global economic breakdown through the fall of public and private R&D funding, as well as through the deterioration of the overall business and innovation environment (higher risk aversion, staff cuts, consumer markets stagnation, etc.).

[31] The data for the table is based on NSI and Regional Profiles.bg

As seen from the data provided above and in Chapter 1.3, Bulgaria lags behind the EU average in many sectors that have potential for innovations. The low innovation potential of the economy was one of the main reasons for its slow recovery following the economic crisis and stagnation. However those results were not unexpected, given the low levels of funding for R&D and innovation and the poor linkages between education, research organizations and business (e.g. the inefficiency of the s.c. “knowledge triangle"). In many sectors, the difference between productivity in Bulgaria and the average for the EU is between 5 to 10 times (negative trend).

In the latest edition of the Global Competitiveness Report of the World Economic Forum, Bulgaria is ranked 50th, moving forward with 4 positions, compared to rankings of the previous edition of the report, and with more than 12 positions since 2012[32]. The data shows that Bulgarian economy is show steady progress on the path of recovery from the economic crisis of 2008 and towards integration in the European family. The improved ranking in the Report is a result of the implementation of various policies and measures, as well as the huge amount of public investments (EU origin). According to the report, in terms of technology readiness Bulgaria has moved twelve positions up and occupies 40th position. According to the report, Bulgaria has achieved remarkable results in the fields of access to high-speed internet, broadband internet access and the number of Internet users. However, the most problematic areas over the years remain the corruption, the inadequately educated workforce, insufficient infrastructure, tax rates, and access to financing. It is interesting to point out that those problems have been ongoing over the past 5 years based on the available data of the previous reports. In order to improve its competitiveness, Bulgaria needs to focus its efforts on improving the quality of the labour force (increasing investment in education, with the introduction of mechanisms to accommodate the needs of industry) and on stimulating the vigour in the demand and introduction of new technologies, promoting the absorption of innovations by the market, building capacity to absorb and adapt foreign technologies and knowledge.

According to the *Annual report on the innovation performance of the Bulgarian economy (Innovation.bg)* conducted by the Foundation Applied Research and Communication[33], Bulgarian economy remains at the bottom of European rankings in terms of entrepreneurship and innovation activities. Despite the slow improvement and the various steps in the right direction the share of innovative small and medium sized enterprises remains one of the lowest in Europe – 11,6 % (2015) in comparison to 28,7 % (EU average) and more than 40% in the countries that were considered as innovation leaders.

As stated above the low innovation activity of Bulgarian SMEs is a direct consequence of the flaws in the national innovation system of Bulgaria as only 2,3% of SMEs are currently participating in a partnership related to the implementation of innovative projects and barely 13,6% of SMEs have registered a product or a process innovation (in comparison to the 30,6% of the EU average). In terms of developed and introduced marketing and organizational innovations Bulgaria SMEs lack significantly

[32] http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf
[33] http://www.arcfund.net/index.php?id=2060

from the EU average (36,2%) with only 17,6% of companies that have implemented such non-technological innovations.

The various flows of the Bulgarian entrepreneurial and innovation environment are evident in the results of the first research conducted by the Global Entrepreneurship Monitor[34] for Bulgaria in 2016. The GEM research is one of the largest surveys of the dynamics of entrepreneurial ecosystems globally. In its 2016 edition GEM covered 62 countries (24 of which European). The survey assessed both social perceptions and individual attitudes in terms of entrepreneurship. In addition, the report includes summary of the entrepreneurial activity in each country at different stages of its development as well as the framework conditions of the business ecosystem, which is researched as a dynamic institutional interdependence between the entrepreneurial attitudes, capacities and aspirations of entrepreneurs.

According to the results of the research, in Bulgaria only 5,44% of the adult population are established business owners. In Bulgaria, as people are not willing to engage in new business creation, the society is missing out on the potential benefits that this activity can generate, both directly and indirectly. The predominant part of business activities are carried out in the field of low-tech activities which have insignificant contribution to the country's economy from the point of view of generating long-term employment, developing new products and emerging on international markets.

Only 14.5% of Bulgarian entrepreneurs believe their product is new to all or some customers. Regarding the criterion of innovativeness, Bulgaria falls in the group of economies with low innovation activity of its early-stage ventures. More specifically, in the global GEM ranking of innovativeness of early-stage entrepreneurs **Bulgaria ranks 59th out of 60 world economies, just above Senegal**. Of course, the innovation achievements of the national economy do not depend solely on the innovativeness of its earlystage entrepreneurs and according to the **World Economic Forum's Global Innovation Index 2015**, Bulgaria ranks among the high-achievers in innovation efficiency within its income group (upper middle-income countries). An explanation that can reconcile these two data sources is that Bulgaria has a rather small but vibrant group of innovation-oriented businesses which undertake innovation with a remarkable efficiency. In fact, this pattern of 'elite' innovation suggests that there might be a two-tier population of both early-stage and established businesses: one small group of innovation-active businesses and a much larger group of businesses that do not engage in innovation. The real challenge of the public policy then will be to spread the innovation culture to the second group and thus expand the base on which the international competitiveness of the Bulgarian economy relies.

The Global Competitiveness Report 2016 notes that one of the most striking ways in which the global financial crisis has created new obstacles for doing business is the increased citing of lack of access to finance as one of the most serious problems for businesses in many economies. Obtaining funding is particularly challenging for small and medium-sized enterprises. The GCR reports that access to finance has gone from the seventh-ranked problematic factor for doing business in advanced economies in 2007, to the fourth most pressing concern in 2015. In developing economies as a group, it is the

[34] http://www.gemconsortium.org/

number one concern in 2015 (up from third in 2007). In Bulgaria, access to finance comes as the second most important obstacle for entrepreneurship endeavors after government policies. In Bulgaria, 2.5% of interviewed businesses in the frame of the researched answered affirmatively whether they have provided personal resources in support of somebody else's entrepreneurial plans over the last three years. The problems faced by most of the countries in the European Union are also relevant to Bulgaria. Such problems include not only the shortage of funding but also to the deficits in the institutional system, scientific infrastructure, R&D support policies, as well as the relationship between science and business.

Based on data from different reports, innovation indexes and scoreboards it is evident that Bulgaria performs well in terms of input capacities and indicators and lags significantly in terms of result and performance indicators related to innovation. On this basis, it can be concluded that Bulgaria needs to make more efforts to improve the efficiency of the funds that are being invested in R&D, as well as to increase the incentives that encourage the transfer of R&D to the market. In addition to the economic environment, one of the main reasons for the existing gap between R&D and business is the missing trust between academic and research community, on one hand and the businesses on the other.

According to the *National Strategy for development of R&D*[35] one of the key issues of the R&D system in Bulgaria is the lack of the necessary organizational structures and financial instruments that aim to build and foster the trust and cooperation between institutions that produce R&D and the enterprises that utilize them. Although it has been increasing in the past several years, the demand for R&D from enterprises to the research community remains rather low in comparison with other countries of the EU. As a result of the above mentioned reasons, the market orientation of the research activity is little, which is evidenced by the low flow of scientific results to the business, the small number of patent applications and protected patents, the insufficient private investment and the low innovation activity of the research institutions and businesses. This tendency is further reinforced by the lack of the s.c. spin-offs and spin-outs.

In terms of business-to-business linkages that could improve the overall innovation potential and performance of Bulgarian SMEs (e.g. clusters, business association, etc.) although that there are some positive tendencies there is still much that needs to be done. Existing industrial clusters concentrate on technological activities related to the adaptation and use of already known technologies in their field of business. In respect of the degree of development of Bulgarian industry, it is quite common for them to seek options for competitive advantages, based primarily on adaptation and application of already known technologies rather than investing in expensive projects for research and development. Potential and existing clusters at different stages of their life cycle will need assistance in various areas, including enhancing managerial and entrepreneurial skills and investment support[36]. According to the latest data of the *Executive Agency for Promotion of SMEs*[37], in Bulgaria there are more than 260 registered cluster organizations in Bulgaria. However, the establishment most clusters has resulted of

[35] http://www.strategy.bg/FileHandler.ashx?fileId=1692
[36] Innovation Strategy for Smart Specialization of Bulgaria 2014 - 2020
[37] http://www.sme.government.bg/

the existing financial mechanisms for cluster support. Such mechanisms were targeted to improve the administrative capacity and international performance of existing cluster collaborations under the PHARE Instrument for pre-accession and the *Operational Program "Development of the Competitiveness of the Bulgarian Economy" "(2007 - 2013)* and will continue with the forthcoming *OP "Innovation and Competitiveness "(2014-2020)*.

In order to distinguish between the number of registered clusters and the number of actually working and developing entities the *Executive Agency for Promotion of SMEs* in cooperation with stakeholders and cluster organizations have developed an evaluation and ranking system that has been established for the needs of applying for grants in the frame of the new programming period 2014 – 2020. According to this classification which covers 80 existing clusters, currently in Bulgaria there are 43 clusters in an initial stage of development, 21 developing clusters, 4 developed clusters with experience and sufficient industrial base and prospects, and 12 non-categorized entities.

In a summary, the analysis of the national innovation system of the Republic of Bulgaria revealed the following main challenges:

- **The strategic framework** for the development and support of research and innovation, outlined in numerous national and regional strategy papers, is not comprehensive and integrated, which determines the necessity of frequent amendments to strategic documents with a view to synchronizing priorities, activities and interim indicators. A good step in this direction has been the development of the Innovation Strategy for Smart Specialization of Bulgaria 2014 – 2020 and its annual implementation plan.
- **The macroeconomic, social and demographic environment** in the country is still underdeveloped which hinders the overall development of a working and sustainable innovation system (e.g. innovation dynamo);
- The external evaluations of the Bulgarian **research and innovation system** show that there is an inverse correlation between private and public investment compared to successful European and world models.
- There is no correlation in both the **procedures and the results of the procedures for public funding** of research with the planning of support for innovation.
- **Lack of effective and symbiotic linkages between business community and universities, R&D institutions**. On one hand we have businesses innovating in many cases alone and on the other hand we have the academia and the Bulgarian Science Academy generating innovations and research projects which often never leave the academic community. If just a small percentage of those inventions are commercialized it could generate a lot of profit for the business community in Bulgaria.
- **Lack of awareness on innovation among SME**s at local and regional level (e.g. especially in smaller and remote communities). It is necessary to promote innovations more actively on local, regional and national level in order to increase awareness of SMEs on the benefits of innovations.

- **Low level of innovation performance of Bulgarian SMEs** which has resulted from numerous factors related to the social-economic environments, education, human resources, etc.
- **Unsatisfactory participation** of Bulgaria in the Community programs for R&D and innovation (e.g. Horizon 2020, COSME, etc.);
- **Lack of business-to-business cooperation among SMEs** and targeted investments in the established and well-performing (existing) clusters in Bulgaria. It is necessary that the existing support is targeted to the clusters based on their performance and achieved results (e.g. results driven support).

1.5.2 Regional innovation environment – Blagoevgrad region

The development of the economy, hence the innovation potential of the region of Blagoevgrad is determined by the strategic position of the region (in a cross-border area with Greece and Macedonia), the regional imbalances related to the economic development of the different municipalities – part of the region, as well as the amounts of foreign investments in the region (including European funding).

The region of Blagoevgrad is characterized by a concentration of population, economic and social activities in several regional centres (e.g. Blagoevgrad, Bansko, Sandanski, Petrich and Gotse Delchev) and numerous sparsely populated rural and peripheral areas in the mountains and closer to the borders with neighboring countries. The regional disparities are reflected in the demographic, economic and employment trends as the regional environment is defined by the decreasing birth rates and ageing population. Unemployment levels remain high in the areas outsides bigger cities as the labour mobility is not specific for the region. Poverty levels, especially in the region with mixed population (e.g. Yakoruda, Belitsa, Hadzhidimovo, Garmen, Satovcha) remain relatively high in combination with increasing outward migration to bigger cities and abroad.

As a result, the economy of the region of Blagoevgrad has specialized in sectors and activities which require comparatively low qualification and technologies, and which export mainly low added value products. With a few exceptions, most existing SMEs have low level of technological development and limited potential for applied research. However, in the past several years a lot of funds were invested (funds allocated under the Operational Programmes of Bulgaria as part of the European Union's Cohesion and Agricultural policies) in both the regional development of municipalities, as well as in the technological and human resources development of local SMEs.

Despite of investments and the relatively stable economic and political situation in the region and in Bulgaria in general, the majority of local SMEs do not have the knowledge and lack the experience and know-how for introducing innovations and conducting R&D. In addition, local businesses lack the motivation and attitude to train and constantly invest in the education of their administrative, managerial and technical staff. Another major obstacle represents the lack of understanding of main factors that drive and hinder innovations (e.g. ability of SMEs to adapt to different client demands; cost factors; investment in human capital; cooperation with research and academia institutions; R&D incentives; property rights; legislation, etc.).

R&D expenditures are at the core of determining the innovation potential of a country. Over the past several years there has been a steady increase in the amount of expenditures for R&D in the region of Blagoevgrad (4079 thousand BGN, 2015). However, there has been a decrease in the number of people engaged in R&D in comparison to 2013 with more that 12,5%.

For the period 2007 – 2013, the largest instrument in support of the competitiveness of Bulgarian SMEs, as well as their innovation endeavors was the Operational Programme "Development of the Competitiveness of the Bulgarian Economy 2007 – 2013". The programme has allocated more than 1.2 billion euro to support the development of the competitiveness of SMEs in Bulgaria by improving their technological and innovative potential, as well as by facilitating their access to finance.

In 2015, the Chamber of Commerce and Industry in Blagoevgrad conducted a study on the number of projects with "innovative character" that were supported by the programme during the period 2007 - 2013. The projects were implemented by SMEs of the region of Blagoevgrad. According the results of the analysis, the total number of granted projects to SMEs of the District of Blagoevgrad in the period 2007 – 2013 under the Operational Programme was 93, of which 54 have been successfully completed, representing 58% of all implemented projects under the programme. The total value of all projects amounted to more than 50 million BGN. Based on the data of the research, the region of Blagoevgrad ranked third after Sofia City and Sofia District in allocation at NUTS2 level and second in completed projects with an innovative character in the country. However, only less than 3% of all funded projects were related to products or process innovations. **The main part of the projects that were completed and funded** were focused on organizational innovation, corresponding to the introduction of new standards, improving significantly the production characteristics of products and services and allowing them access to new markets (27 projects of which 19 have been completed successfully). Projects that were related to development or introduction of marketing innovations were a total of 23 projects (or 25 % of all projects). Projects with Product Innovation character amounted to 850 358,00 BGN.

For the new programming period 2014 – 2020, according to data of the *Information System for Management and Monitoring of EU funds in Bulgaria 2020 (ISUN)* as of May 2017 in the region of Blagoevgrad there are projects for more than 130 million BGN currently in a process of implementation. Based on the analysis of the data provided by the system, there are 64 projects that are currently in a process of implementation by SMEs with a total budget of 26 995 573.51 BGN. Twelve of those projects are supported by the new Operational programme "Innovation and Competitiveness 2014 – 2020" (OPIC). The total budget of all projects that are currently in a process of implementation by SMEs of the Blagoevgrad region under OPIC amounts to 7 748 835,23 BGN. Only 1 (one) project of all 64 projects that are currently implemented in the region is related to innovation (i.e. innovation related to a new production process in a company for marble production). Currently there are more than 240 projects related to innovation that are supported and financed by OPIC on national level, as most of the projects are located in the region of Sofia city.

In terms of educational environment, currently there are two major universities in the region - South-west university "Neofit Rilski" — Blagoevgrad and the American University in Bulgaria -Blagoevgrad.

Both universities are highly ranked and produce university graduates in fields such as social sciences, law, economics and business administration. There is also a private College of Tourism — Blagoevgrad which is also officially accredited under the National accreditation system of higher education institutions. However, all institutions of the system of high education that are located in the region lack well developed R&D departments as well as good connections with the local business.

In a summary, the analysis of the regional innovation system of the District of Blagoevgrad revealed the following challenges on which could be drawn some recommendations for improvement:

- **Low level of technological development and qualification of the economy** of the region of Blagoevgrad which has specialized in sectors and activities which require comparatively low qualification and technologies and which exports mainly low added value products.
- **Lack of highly qualified personnel in local SMEs** to develop and implement innovations.
- **Lack of capacity to develop and manage projects** funded from the European Union;
- **Poor connections between businesses and regional academia** and R&D institutions;
- **Insufficient popularity of the available innovation support organizations, structures and projects in the region;**
- **Innovation cooperation is poorly developed.** As a major obstacle to the innovation activity we could point out the poor financial state of the enterprises and the difficult access to sources of funding as well as the insufficient inside-company potential.
- **SMEs lack motivation to invest in innovation and R&D** as they are not completely aware of the true assets and opportunities that innovation could provide for their businesses;
- **Bringing academia and businesses closer** - The main challenge will be to establish more flexible structures where mobility of scientists between organizations and companies is possible; attract back Bulgarian scientists working abroad; combine education and research and connect them to business. An important step is to provide support for the establishment of intermediary units between research organizations and business in the form of technology transfer offices, innovation and enterprise centers, etc.

- **One-stop-shop services for innovation management** - provide more transparency and increase the popularity, facilitate the access to the existing service tailored to individual needs of SMEs (e.g. technological audit that identifies the specific technological needs and assess the technological portfolio of the company; provide more information on **available innovation support organizations, structures and projects in the region;** connect businesses with academia and R&D institutions, promote R&D; consult SMEs in subjects related to innovation, etc.).

- **Targeted investments** aimed to support and promote local sustainable entrepreneurship and innovations in economy sectors that are well developed in the region, e.g.: wine, food, beverages and tobacco, tailoring and textile industries, especially machinery for the food industry.
- **Promote cooperation among SMEs of the region** (including cross-border partnerships). Foster the establishment of more formal and information cooperation networks for SMEs. Such

approach will help SMEs through the provision of key market information and market research and analysis to find new markets and will support the implementation of ideas for new products and services as well as the uphold and promotion of activities for the creation and development of new technologies, leading to competitive advantage and increase value to local products and services.

- **Improve the skills and competences of human resources** by investing in the constant training and enhancing the qualification of existing personnel at SMEs in order to develop and implement innovations and introduce “best practices” in different industrial sectors and economic spheres of the regional economy

1.6 Innovation environment and conditions – specifics of the environment in the Republic of Macedonia and the Southeast Planning Region

1.6.1 Republic of Macedonia - National context

To support the development of the national Innovation Strategy 2012 - 2020, a comprehensive review of the national innovation system has been conducted by OECD in 2012. The main findings of that analysis are presented below[38].

Much remains to be done to improve lifelong learning and address the skills gap. Adults have access to adult education only in the context of a career re-orientation following a period of unemployment. Very few employees get access to training to maintain and develop their skills at their work place, as companies invest little in training their employees.

A major weakness in the framework conditions for innovation is access to finance. Since innovative activities are often of higher risk and long-term nature, equity finance can represent an important alternative to traditional bank loans. The nascent efforts to create business angel networks, few of which are recorded in other countries in SEE, are therefore a positive aspect. Nevertheless, much remains to be done to improve access to finance in the Republic of Macedonia.

To further improve the framework for innovation and competitiveness in the country, the government has worked on creating a regulatory climate favourable to businesses. For ex. restrictions to FDI appear minimal in the country and the ease to start a business has been improved. Even though Macedonia has a regulation of intellectual property (IP) rights that is well advanced and it has ratified most of the respective international frameworks, enforcement of IP legislation can be improved. Furthermore, the Republic of Macedonia files fewer patents and trademarks and has a lower share of high tech exports compared to its peers in SEE.

Innovation and R&D in both public research institutions and the private sector are constrained by a significant lack of funding. The gross expenditure dedicated to R&D (GERD) represented only 0.18% of GDP in 2007, which is low compared to the average share of 0.46% in SEE economies.

To improve the Macedonian research facilities, the Ministry of Education and Science has planned to establish 189 sophisticated laboratories. The research output of research institutions currently suffers from the lack of collaboration with businesses and the lack of labour mobility. Furthermore, policies for IP rights such as patents and trademarks, determining, for example, whether the rights should belong to the university or individual academics, are lacking. These policy gaps prevent the research institutions from fully contributing to innovation in the country.

In relation to innovations in the businesses sector, while firms do innovate in the country, they dedicate few resources to R&D. Business expenditure on R&D accounted for only 23% of GERD in 2007

[38] Innovation Strategy of the Republic of Macedonia 2012 - 2020

compared to 55% in the EU. Furthermore, results from an OECD survey of 500 Macedonian firms conducted in 2011 show that half of the companies do not offer any form of training to their employees. Companies rely more on internal knowledge for innovation than external knowledge so that co-operation between companies and other stakeholders is limited. Links between companies and universities or research institutions are particularly rare, even though firms which have established formal links with academia tend to be more innovative.

Companies surveyed consider the high cost of innovation and limited access to funding such as bank credits or equity finance as the main constraints to innovation. Other constraints mentioned included a low market demand for innovative goods, the market power of incumbent companies, the low level of co-operation with academia or other stakeholders and the difficulties in identifying co-operation partners and the lack of management skills.

In line with access to finance being considered the main constraint to innovation, most companies favour financial contributions by the government to support innovation. A smaller share of companies indicated that support schemes to develop employee training or foster the exchange of know-how between companies would be most useful to further develop their innovation potential. Almost half of the companies surveyed are not aware of existing support initiatives.

In terms of linkages between innovation actors there is room for improvement in strengthening the linkages between businesses and between businesses and research institutions to facilitate knowledge flows and by this increase innovation capacity.

There are currently 15 clusters in the country supported the Ministry of Economy. Nevertheless, existing clusters fail to successfully develop innovation and the commercialisation of new products. The main reason for this failure is the lack of complementarity within existing clusters. There are no Science and Technology Parks but a feasibility study exists to create one.

In a summary, the analysis of the national innovation system of the Republic of Macedonia revealed the following four main challenges:

1) **Limited capacities of research institutions**: The R&D capacity of research institutions in the Republic of Macedonia is weak. Limited financial resources are dedicated to R&D and the number of researchers is low. To address this issue, the government has planned to establish 189 laboratories for universities and Macedonian Academy of Science and Arts. However, building the research capacity will also entail ensuring the sustainable functioning of these laboratories. Finally, research institutions and universities are not sufficiently attuned to the needs of the private sector – the current investments into sophisticated laboratories should also be used for bringing the two sectors closer together.
2) **Insufficient propensity to innovate in the business sector**: Some companies realise the need for innovation, but experience hurdles when trying to engage in R&D activities, which often require significant human and financial resources. Another major obstacle to innovation in the private sector is the lack of incentives to back innovation-related activities in businesses and

the limited public awareness of existing public measures to foster innovation. Efforts need to be made to raise the awareness of companies that currently do not innovate on the need and benefits of introducing the four types of innovation: product, process, marketing and organisational.

3) **Inadequate framework for knowledge transfer**: There is a lack of channels for knowledge flows in the economy. Increasing the absorption capacities of firms and the linkages in the economy would help the economy derive the benefits from existing knowledge and research. In particular, the most innovative companies are not well linked with the rest of the private sector and initiatives such as inter-firms networks or clusters are underdeveloped or have not been particularly successful and sustainable so far. Collaboration between businesses and research institutions, which could increase the commercialisation of research, is also very limited and could be improved. However, because the commercialisation of research cannot reach its full potential before building up the research capacity of research institutions, collaboration between businesses and public research institutions may instead focus on training for skills development and on technology adaptation at this stage.
4) **Lack of co-ordination of policy-making**: Because policies supporting innovation touch upon a number of policy areas, including research, education and SME support, the responsibility for innovation policies is split between several institutions, including the Ministry of Education and Science and the Ministry of Economy. Therefore, a continuous inter-institutional dialogue needs to be established. Furthermore, as policies in these areas ultimately aim to develop a competitive private sector, public-private consultation needs to be developed or strengthened.

1.6.2 Regional innovation environment – South-east planning region

The analysis conducted as part of the **Regional innovation strategy of the South-east region 2016 – 2020** states the following facts with regards to demography: the trend of stagnation of population growth; the very high trend of activity of the population; the largest employment and the lowest unemployment in the South-east region compared to the other regions.

The most important economic sectors are agriculture, construction, trade, mining, textile industry, tobacco industry and catering. Although the industry is dominating, the service sector also has extremely dynamic growth. However, the South-east planning region is predominantly agricultural area with excellent climatic conditions for production of early garden crops, such as fresh vegetables and fruits.

The development index of the South-east region is 97.1%, whereas the economic-social index is 129.5%, and the demographic index is 72.4%. The South-East planning region reached GDP per capita of 3,970 EUR in 2012, which is 9.8% higher than the average of the country.

In the development of the economy of the South-east planning region, agriculture has the most significant place. It has the largest added value in the GDP structure. This sector participates with 10.3% in the GDP structure at the national level, while in the GDP structure of the South-east planning region it accounts for 34.3%.

Of concern are the small share of investments in fixed assets in the South-east region which accounted to only 4.33% in 2013. This generally indicates that a small percentage of the profits of the companies are invested in the purchase of a new technology and overall modernization. The companies from this region are still predominantly labor intensive with low level of technical and technological equipment.

In the period from 2011 to 2014, there was a decline in the number of active business entities both at the national level and in the South-East planning region (from 6,248 to 5969). In 2013, compared to 2012, there is a decrease in the active business entities in two key sectors for this region. Namely, the number of companies working in the Sector "Agriculture, forestry and fisheries" has been reduced from 371 to 330, and the number of Processing capacities has also decreased from 796 to 721.

The activity rate of the population is 66.9% and is the highest of all regions and is above the national average in 2014. The employment rate of 56.8% is also the highest of all regions and again above the national average. The unemployment rate is the lowest and accounts for 20.8%. The unemployment rate in the South-east region is significantly higher in urban than in rural areas, due to the developed agriculture in the region.

In the period from 2011 to 2013, in the Southeast region were identified 1730 companies that met at least one of the conditions for growth: either steadily increasing revenue, or profit, or investment in new equipment or bigger number of employees. The biggest number of such companies were in the sector Wholesale and retail trade, followed by the Processing industry and Transportation and storage. There were 11 companies from the sector Education in the region, which emphasizes the need for strengthening the human capital. There was no company in the field R&D in natural, technical and technological sciences.

The growth of profits and the number of employees is the highest in the Processing industry. Most investments in new processes / equipment were in the sector Wholesale and retail sector, followed by the Processing industry.

Based on the survey of 52 companies in the South-east region there is a number of companies that pay attention to investments in their innovative capacity, such as, for ex. quality management systems and use of information systems for managing technological processes. However, there is no cooperation at all with scientific research institutes, as well the use of certain innovation infrastructure at regional level, national or international level is weak, which emphasizes the lack of adequate regional infrastructure to support innovation. On the other hand this weak utilization of the infrastructure may be the result of the lack of adequate culture as well as policies to encourage innovation in the region.

More than 50% of the respondents use their own funds or loans to finance their own innovative projects, while more than 32% finance them through loans from domestic banks. There is a lack of other sources of funding from a private capital such as business angels or investment funds and venture capital funds. The underdeveloped private capital available for financing innovative projects is an obstacle to increasing the region's innovative capacity. The biggest challenges for access to finance by the respondents were the limitation of banks to finance innovative projects and underdeveloped private capital ready to invest in innovative projects.

The biggest challenges that companies face in terms of access to finance is the very low interest of commercial banks to finance risky projects, such as innovative projects.

From the responses in the survey on institutional innovation support, it is noticeable that there is still a lack of information from companies on various types of institutional support for innovation. All 52 respondents answered that they did not use some kind of government institutional support for innovative activities, and only 7 respondents used donor support. Almost 70% of the respondents consider that there are certain barriers, that is, legal barriers to the development of innovation, while on the other hand, companies believe that with the help of certain initiatives, such as tax exemptions, they would increase investment in R&D, which would encourage innovation (about 60%).

Surveyed companies gave certain proposals for introducing institutional mechanisms and measures at the regional level:

- Development of innovation infrastructure;
- Education and informing the companies from the region about the benefits from innovation, as well as on the laws and by-laws related to innovation; and
- Development of regional and local innovation fund for better access to finance.

When it comes to the needs of companies in terms of access to external competencies / resources, all respondents answered that they need, but despite the fact they are ready to invest time, they are not yet ready to invest money or are willing partially invest money, but at a subsidized price. It can be deduced that there is a need for measures for subsidizing companies using external competencies and resources.

1.7 Support policies and strategic documents in the field of innovation

In order to address the major societal challenges such as globalization, shortage of resources and aging of the population, as well as to support Europe to overcome the negative effects of the economic and financial crisis, in 2010 the European Council adopted the **Europe 2020 Strategy**.

The Europe 2020 strategy, designed as the successor to the Lisbon strategy is the EU's common agenda for the present decade. It placed an emphasis on promoting a growth pact that can lead to a smart, sustainable and inclusive economy, in order to overcome structural weaknesses, improve Europe's competitiveness and productivity, and underpin a sustainable social market economy.

The European Commission adopted seven flagship initiatives in order to drive progress towards these Europe 2020 goals. They are grouped together under three main heading:

- ✓ **Smart growth** — the digital agenda for Europe, the innovation union, and youth on the move.
- ✓ **Sustainable growth** — resource efficient Europe and an industrial policy for the globalisation era.
- ✓ **Inclusive growth** — an agenda for new skills and jobs, and the European platform against poverty and social exclusion.

The main targets of the strategy are oriented in five main priorities:

- ✓ **Employment** — increase the employment rate among those aged 20–64 to at least 75 %.
- ✓ **Research and development** — increase combined public and private investment in R&D to 3 % of gross domestic product (GDP) of the Community.
- ✓ **Climate change and energy sustainability** — reduce greenhouse gas emissions by at least 20% (or even 30 %, if conditions are right) compared with 1990 levels, increase the share of renewable energy in final energy consumption to 20%, and encourage a 20% increase in energy efficiency.
- ✓ **Education** — reduce the rate of early leavers from education and training to less than 10% and increase the proportion of those aged 30–34 having completed tertiary education to at least 40%.
- ✓ **Fighting poverty and social exclusion** — lift at least 20 million people out of the risk of poverty and social exclusion.[39]

1.7.1 Overview of innovation support policies in Bulgaria

One of the main objectives of the ***EU 2020 strategy*** is related to R&D and innovations, with the expected result that R&D investments will reach 3 % of the European Union's (EU) gross domestic product by 2020. In compliance with the European Commission's requirement that each Member State should adapt the Europe 2020 Strategy to its own economy, the *National Development Program Bulgaria 2020 (NDP Bulgaria 2020)* was adopted. According to the strategy, Bulgaria has pledged to

[39] http://ec.europa.eu/eurostat/web/europe-2020-indicators/europe-2020-strategy/context

reach a national target for investment in R&D amounting to 1.5 % of the country's gross domestic product (GDP).

The adoption of a **National Innovation Strategy of the Republic of Bulgaria**[40] *(the predecessor of the Innovation Strategy for Smart Specialization 2014 – 2020)* in 2004 and its implementation through concrete projects, such as the establishment of the ***National Innovation Fund*** and the development and launch of the Operational Program "Development of the Competitiveness of Bulgarian Economy" 2007 - 2013, were the first, although quite restricted and chaotic measures in support of improving the innovation environment of Bulgaria.

Due to the lack of consistent policy and adequate financial support they did not succeed in bringing the much needed positive change in the innovation environment of the country. The surveys of the European Commission – the *European Innovation Scoreboard* and *Innobarometer* for the period prior the entrance into the European Union classified Bulgaria as a "catching-up country" in the field of innovation, characterized by a downturn of investment in innovation in a time of crisis and increased innovation deficit in several key problem zones, including:

- Weak and inappropriate innovation policy;
- Prolonged process of updating the legislative framework in support of innovation in Bulgaria (long postponed *Innovation Promotion Act*);
- The lack of administrative capacity for more effective utilization of the funding from the European funds in support of increasing the innovation potential of SMEs and adequate support for R&D uptake;

The measures undertaken by the Bulgarian government in support of innovations as a major factor for overcoming the economic crisis and for maintaining sustainable economic growth were inadequate and more "on paper" and in the form of "good intentions" and not real and tailored to the needs actions and activities. The national policies and the development of micro-economic programs to promote innovations, ICT and R&D across industries were not formulated strategically and in coherence with one another. As a result, Bulgaria came out of the economic crisis in the same position in which it entered it and the benefits of the stable macro-economic policy of the last decade remained unutilized and even worse - wasted. Prior to its accession into the Union in 2006 Bulgaria was defined as a "modest innovator"[41].

At present, following the entrance of the country into the European Union in 2007 the policies related to innovation and R&D started to develop following a more strategic and bottom-up approach. This approach was dictated by the European union and was based on the good European practices and lesson learned (e.g. Cohesion policies for the period 2014 – 2020, Strategy for smart specialization, etc.).

[40] http://www.mi.government.bg/bg/themes/inovacionna-strategiya-na-republika-balgariya-14-287.html
[41] European Innovation Scoreboard, 2006 edition

At present, policies in the field of research and innovation are currently laid down in the National Development Program Bulgaria 2020 (NRP Bulgaria 2020), National Reform Programme (NDP); National Strategy for Research Development 2020 (NRSR) and Innovation Strategy for Smart Specialization of the Republic of Bulgaria 2014-2020 (ISIS). Those documents represent the main strategic papers that will outline and direct the innovation and R&D development and support of the country in the period up to 2020 and beyond.

1.7.1.1 National Development Programme: Bulgaria 2020

In line with the requirements of the Europe 2020 Strategy endorsed by the European Council, **the Bulgarian government has adopted a national target to increase the share of research and development spending to 1.5 % of GDP per capita up until 2020.** The target is formulated in the National Development Programme: Bulgaria 2020 (NDP BG2020) which is the leading strategic and programming document detailing the objectives of the development policies of the country to 2020.

The main purpose of the NDP BG2020 is to achieve quality and balanced long-term economic growth. The document aids the optimization of the programming of the development of Bulgaria to 2020, by providing the link between the national priorities of the Republic of Bulgaria and the objectives of the EU in the context of the Europe 2020 Strategy.

The vision of the NDP BG2020 is rather ambitious and it states that *"As of 2020, Bulgaria is a country with a competitive economy, providing conditions for the complete social, creative and professional realization of the individual through intelligent, sustainable, inclusive and territorially balanced economic growth."*

The vision, the objectives and the priorities of **NDP BG2020** were defined on the basis of detailed socio-economic and SWOT analyses that were carried out, as well as on the basis of the opinions that were submitted in the framework of public debates, carried out in the process of preparation of the strategic document.

There are three main goals of the strategy which are supported **by eight priority areas**. The priority areas relate to both formulation and implementation of the individual national policies and to the implementation of the pan-European policies, which cover the full range of actions of the state in the area of the socio-economic development.

Innovations and R&D are at the basis of most of the priority areas of the strategic document. However, they are directly supported in *Priority Area 5 "Support of innovation and investment activities to increase the competitiveness of the economy"*. The policies included in the Priority area will contribute to: achieving higher economic growth; reaching R&D expenditure share in GDP of 1.5% by 2020; reducing unemployment to 8.2% in 2020; and to increasing investments in tangible fixed assets and foreign direct investment and increasing productivity. **The Priority policies are focused on:**

- ✓ Creating a favorable institutional environment for innovation and investment;
- ✓ Stimulating innovation;
- ✓ Support of high-tech industries;

- ✓ Support of sector Tourism;
- ✓ Increasing the competitiveness and the viability of SMEs primarily.[42]

The priority area is divided in 5 (five) sub-priorities:

Sub-priority 5.1 will provide support the creation of conditions for the ***development of an institutional environment conducive to innovation and investment in high value added industries and services***, in high technologies, as well as to the development of the SME sector.

Sub-priority 5.2 is aimed ***at intensifying research and development and innovation activities, aimed at modernizing the production technologies in the economy***, as well as implementing innovative solutions in the management practice.

Sub-priority 5.3 will lead to an increase in ***efficiency, competitiveness and profitability, increased value added, improving the external trade balance.*** The overall effect of this will be an increase in the economic growth of the country.

Sub-priority 5.4 will help increase the competitiveness of the tourism sector of the Bulgarian economy.

Sub-priority 5.5 will contribute to enhancing the efficiency, productivity and competitiveness, as well as the sustainability, mainly of SMEs. **As a result, employment and GDP growth are expected to increase.**

The strategy for the policy being conducted in the field of innovation and R&D support is detailed in the Three-Year Action Plan for implementation of the National Development Programme: Bulgaria 2020 for the period 2017 – 2019. The latter provides for the implementation of a wide range of

[42] National Development Programme of Bulgaria: 2020

measures grouped into several key priority areas which are expected to lead to a more balanced regional development, enhanced quality of human capital, promotion of innovation, improved infrastructure quality and an increase in the overall competitiveness of the economy, as well as employment and income levels. The relevant funding will be secured primarily from the EU funds which complement the planned expenditure from the national budget.

The key priority areas in the three-year period **(2017 – 2019)** will be the building of innovation and scientific infrastructure to improve the connections between business, science and education, and the implementation of measures under the *Investment Promotion Act*. There will be comprehensive measures for promoting investments in manufacturing and in high-tech industries and services, such as support for infrastructural projects, education, job creation and financing innovation projects. Concrete steps will also be taken to improve the quality of services in the tourism sector. Pro-active marketing will help support the attraction of targeted investment to the economy and the promotion of the country as a tourist destination. The sector of small and medium-sized enterprises will be supported by measures aimed at improving the conditions for starting up business and implementing good practices, including wider use of ICT and support for R&D projects. EU funds will be used to finance the building and completion of innovation and scientific infrastructure in Bulgaria, while national financing will be used to support the participation of Bulgarian enterprises in EU programmes such as Horizon 2020 and Eureka.

1.7.1.2 National Reform Programme

On 13 July 2010, the European Council adopted a Recommendation on the general guidelines for the economic policies of the Member States and the Union (2010-2014). Member States were invited to comply with the integrated guidelines in the preparation of their national economic and employment policies. On 12 November 2010, the Bulgarian Government provided to the Commission a preliminary version of the National Reform Programme that defined Bulgaria's national targets in regards to the strategy Europe 2020. The NRP is prepared annually and in coordination with the Convergence Programme of the Republic of Bulgaria. Both documents are submitted simultaneously to the EC in April each year. The EC assesses the policies set out therein and on this basis the EU Council approves country-specific recommendations in early July, which Member States should address in the next 12 to 18 months.

Based on the report provided by Bulgaria on the implementation of the *2016 National Reform Programme of Bulgaria* the European Council provided a set of recommendations[43] for Bulgaria to follow in the period 2016 – 2019. One of the key recommendations provided by the EC included was related to *"Unstable policies and lack of trust in key public institutions, such as the judiciary, constitute significant deterrents to investment in the Bulgarian economy. The slow implementation of public administration reforms and reforms in* ***specific sectors such as research, innovation*** *and energy* ***hamper progress in improving the investment climate"***.

[43] Council recommendation on the National Reform Programme 2016 of Bulgaria and delivering a Council opinion on the Convergence Programme of Bulgaria, 2016-2019, http://www.minfin.bg/document/18567:1

The update of the NRP for 2017[44] has been prepared in the framework of enhanced monitoring of economic policies in the EU. Bulgaria has focused on the implementation of measures addressing the 2015 and 2016 CSR of the Council on the excessive macroeconomic imbalances identified by the EC. In July 2016, the Council adopted four recommendations to Bulgaria in the areas identified in 2015, in which the country is experiencing macroeconomic imbalances – fiscal policy, banking and non-banking financial sector, active labour market policies and insolvency framework.

According to the updated NRP in 2017 Bulgaria continued to implement the measures set out in the Action Plan of the *Innovation Strategy for Smart Specialization 2014 - 2020*. The implementation of activities in the entrepreneurial breakthrough process were aimed to create conditions for strengthening innovation in enterprises and increasing the number of SMEs that have introduced a new product, service, technology and marketing or organizational innovation.

In addition, under the National Innovation Fund (NIF) the approval of various projects aimed at promoting innovation and technological development has continued. The support that was provided under NIF was aimed primarily at SMEs that collaborate with research organizations. In the period 2016 – 2017 continued the implementation of measures to improve the pro-innovative infrastructure and to promote innovation in enterprises with funds from the Operational Programme "Innovation and Competitiveness". In 2017, it is envisaged the opening of grant procedures with a budget of EUR 64.8 million related towards improving the innovative potential of SMEs. Various policy documents and measures were developed and updated in the field of research promotion and R&D infrastructures.

1.7.1.3 Convergence Programme of the Republic of Bulgaria 2017 - 2020

Bulgaria's Convergence Programme (2017-2020) outlines the key policy priorities in support of macroeconomic and fiscal stability in order to create conditions for economic growth. The programme is reported and updated on annual basis in coherence with the National Reform Programme.

The key objectives in managing public finances are maintaining fiscal sustainability, overcoming the macroeconomic imbalances and conducting a consistent, transparent and predictable fiscal policy aimed at improving the business environment, promoting investment and stimulating labour market development.

The current Convergence Programme presents developments and measures addressing the first two of the four *Council Recommendations of 12 July 2016 on the 2016 National Reform Programme of the Republic of Bulgaria*, containing the *Council Assessment of Bulgaria's 2016 Convergence Programme*.

In coherence with the National Development Programme: Bulgaria 2020 and the Priority area 5 *"Support of innovation and investment activities to increase the competitiveness of the economy"*, the following main strategic documents in support of innovation and R&D were drafted:

[44] National Reform Programme 2017-update, http://www.minfin.bg/document/19894:1

1. *National strategy for the development of scientific research 2020* - The Strategy aims to facilitate the development of Bulgarian science by making it a factor for economic development based on knowledge and innovation.
2. *National Strategy National strategy for the development of scientific research in the Republic of Bulgaria 2017 -2030* – the Strategy goes outside the timeframe of the previous strategy both in relation to the time-frame to which it is related and in relation to its purposes and the scope of the results for the country and the society which are foreseen to be achieved.
3. *Innovation strategy for smart specialization of the Republic of Bulgaria 2014-2020 (IS3)* – It presents a comprehensive analysis of the research and innovation capabilities of Bulgarian economy and in the field of science, as well as R&D. **IS3** is based on the concept of a broader understanding of innovation going beyond investment only in research or only in the manufacturing sector. It is also based on building competitiveness through design and creative industries, innovation in the social sector and services, new business models and innovation based on practice.

The policies included in *Priority 5* and regulated through both strategies will contribute to achieving higher economic growth, to reaching R&D expenditure share in GDP of 1.5% by 2020, reducing unemployment to 8.2% in 2020, and to increasing investments in tangible fixed assets and foreign direct investment.

For the purposes of the present research we will focus only on the *National Strategy National strategy for the development of scientific research in the Republic of Bulgaria 2017 -2030* and the *Innovation strategy for smart specialization of the Republic of Bulgaria 2014 – 2020*.

1.7.1.4 Innovation strategy for smart specialization of the Republic of Bulgaria 2014-2020

Innovation strategy for smart specialization (ISSS) was developed in accordance with the strategy of the Union 2020 for smart, sustainable and inclusive growth, and to achieve thematic goal 1 of Art. 9 Regulation (EU) 1300/2013 - "Strengthening research, technological development and innovation". ISSS is a thematically precondition from Annex XI of the regulation and on its implementation the allocation of funds under the "Innovation and Competitiveness" and "Education and science for smart growth" depends.

According to the situation analysis that was conducted in the frame of the strategy, Bulgaria was analyzed as highly centralized country. After study of the state structure and governance of regions NUTS-2 it was adopted instead of the concept "Regional specialization" to be used the concept "Geographical specialization". During the past programming period all regions in Bulgaria have developed Regional Innovation Strategies (RIS) under the auspices of the European Commission initiative "Innovative Regions in Europe." A limited part of the measures provided for in these strategies have been implemented due to the high centralization of decision-making and management. All measures related to innovation and support programs are coordinated centrally. As mentioned above the RIS process in the current programming period evolves into the RIS3 (Innovation Strategy

for Smart Specialization), the latter being ex-ante conditionality for the programming of the Structural funds in the period 2014-2020.

The Innovation strategy for smart specialization (ISSS) of Bulgaria for the period 2014 – 2020 consists of the following main parts:

- **Analytical part** which covers the socio-economic analysis, analysis of the capacity for innovation and research performance, and analysis of ICT and ICT potential. The SWOT analysis summarizes the conclusions of the analyses;
- **Strategic part**, which formulates the vision, strategic and operational objectives for realizing the vision; the proposed main activities associated with the achievement of the strategic objective, and an indicative financial plan;
- **Proposals for effective and coordinated management of IS3** with an elaborated mechanism for monitoring and evaluation.

According to the main objectives of the *Innovation strategy for Smart Specialization of Bulgaria 2014 -2020* a focus will be given on the investment for the development of innovation potential in the smart thematic areas (for creation and development of new technologies leading to competitive advantages and increase in the added value of domestic products and services). On the basis of proposals from businesses, and the established and declared interest of the academia to participate in international projects, including Horizon 20202, and on the basis of the assessment of international trends and market potential, **four thematic areas have been identified for targeted support at national level:**

- Mechatronics and clean technologies
- Informatics and ICT
- Health and wellness industry and bio technologies
- New technologies for creative and recreational industries

According to the Strategy it was determined that in each of the six NUTS2 planning regions there were at least 3 of the above-mentioned thematic objectives (Table 14).

Table 14: Regional specialization according to ISSS 2014 - 2020

NUTS 2 REGION Thematic area	Northwest Planning region	North-central Planning region	Northeast Planning region	Southeast Planning region	Southwest Planning region	South-central Planning region
Mechatronics and clean technologies						
Informatics and ICT						

The Strategy was developed in order to cope with the current challenges before the Bulgarian industry and economy:

- Bulgarian exports include mainly low-tech products;
- Internationalization of Bulgarian enterprises is low;
- Contribution of foreign direct investment in technology transfer is limited;
- Industrial production is extremely energy intensive, energy inefficient;
- Labour productivity is low – as a result of the above factors.

Based on the identified challenges, ISSS shares a common vision: ***"By 2020 Bulgaria must make a qualitative leap in its innovation performance at EU level to tackle public challenges in the field of demography (reverse brain drain and youth entrepreneurship), sustainable development, intellectual capital and the nation's health"".*** In relation to the identified vision a common strategic goal was set: ***"Bulgaria will move from the group of "modest innovators" into the group of "moderate innovators"[45]".***

According to the Strategy the change in the innovation performance and position of Bulgarian economy could be achieved only through a consistent and integrated approach in the policy related to innovation and R&D. In this regards the strategic objective will be realised by achieving two operational objectives:

- **Objective 1:** Focus the investment for the development of innovation potential in the smart thematic areas (for creation and development of new technologies leading to competitive advantages and increase in the added value of domestic products and services).
- **Objective 2:** Support for accelerated implementation of technologies, methods, etc. which improve resource efficiency and application of ICT in the enterprises in all industries.

The different measures for implementation of the Strategy will be secured financially mainly by the Operational programmes – *Operational Programme "Innovations and competitiveness" 2014 - 2020*

[45] Ranking of the European Innovation Scoreboard

and *Operational Programme "Science and educations for sustainable growth"*, as well as with resources from the state budget.

The process of defining product and technology niches will continue throughout the whole programming period on the based on an on-going dialogue with representatives of industry, academia, and all stakeholders with an annual monitoring to track the implementation of the necessary actions to achieve the objectives formulated in the Strategy. The results of monitoring will impact the decisions of the **Council for Smart Growth** on changing the interventions, if necessary. Evaluation of the results will be regularly made by an independent assessor, external for the system. Based on the knowledge gained from impact evaluation, the future interventions will be more effective in terms of the development of the country.

1.7.1.5 National Strategy for the Development of Scientific Research in the Republic of Bulgaria 2017-2030

The National Research Development Strategy 2030 aims at enhancing the development of science so that it becomes a significant factor in the development of an economy based on knowledge and innovation. The Strategy presents an overview of the strengths and weaknesses of the Bulgarian science and formulates thematic priorities for the future scientific research. It is also co-aligned with the structure and priorities of the Bulgarian Academy of Sciences.

It is one of the required conditions for the achievement of the targets that were set-out in the *Partnership agreement* between the Republic of Bulgaria and the EC during the programming period 2014 – 2020 and in the *Innovation strategy for smart specialization 2014 – 2020*.

The Strategy includes an analysis of the dynamics of the national system for scientific research during the recent years. The analysis takes into account a number of documents from national and international reviews, inspections and analyses as well as information from statistical sources and official data bases. The steady decline in the scientific development of the country is evident. The lack of consistent state policy (incl. funding) for support of the scientific research as well as the unsatisfactory performance of the previous National strategy for development of scientific research in the Republic of Bulgaria (2012-2020) and the commitments to EU were counted among the main reasons for that decline.

The National strategy for development of scientific research in the Republic of Bulgaria 2030 sets out an ambitious objective that envisages ***"through a scale, rapid and long-term development of the system of research Bulgaria to become an attractive center for advanced research and development of new technologies, to recover and raise the international prestige of the country in science, to retain and attract talented scientists in Bulgaria"***

As a final result to achieve long-term economic growth and to significantly improve the quality of life in the country. It is envisaged that the main objective of the strategy will be achieved by applying a set of interrelated and complementary policies affecting one or several components of research (Table 14).

The Strategy implementation is divided into three stages to ensure effective operational planning, implementation of planned activities and control over them, and to report on performance. Each stage is associated with the implementation of some of the specific objectives of the strategy and contributes to the realization of its vision. To evaluate the performance of each stage are given values of selected indicators which is necessary to be achieved. Three stages are provided for the strategy's implementation: 1) Recovery stage (2017 – 2022); 2) Accelerated development stage (2023 – 2026); and 3) Scientific research at world level (2027 – 2030).

The time frame of the first stage covers the period up to 2022. The implementation of the main mechanisms and activities for the recovery and modernization of the scientific research system in Bulgaria are foreseen for that period. Tangible results of the implementation of the strategy are expected towards the end of the first stage. The second stage foresees accelerated development of the scientific research which should drive Bulgaria close to the average European level.

Table 14: Priorities and specific objectives of the NSDSR 2030 (summary);

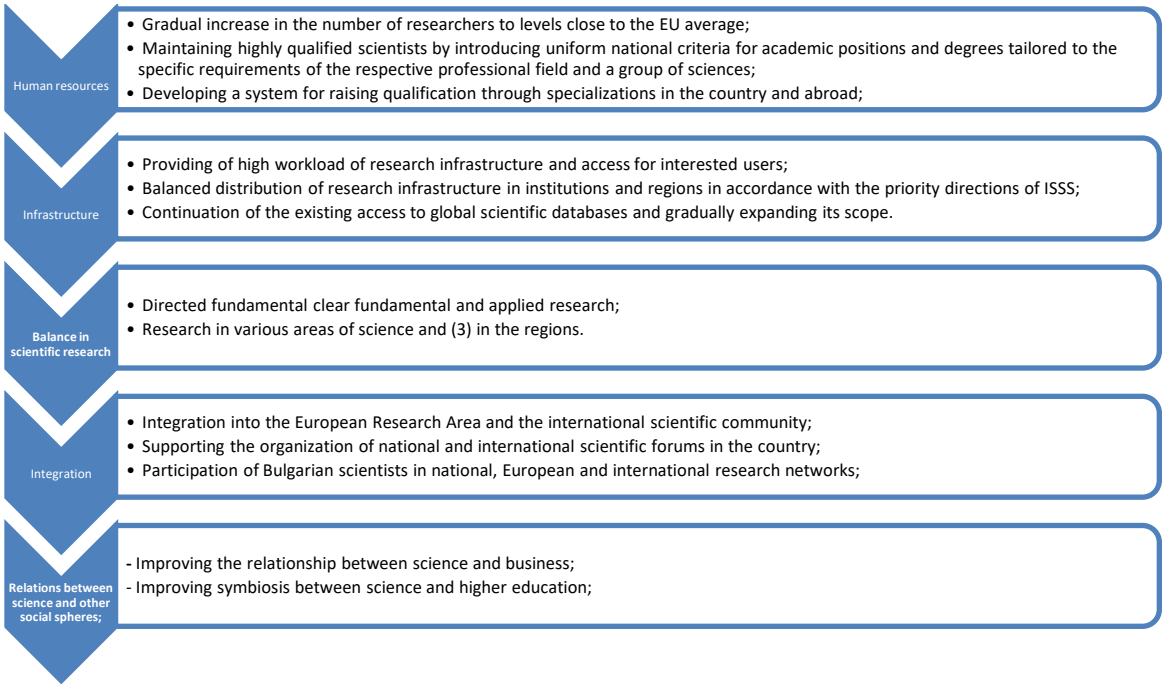


Table 14 shows only the main objectives under the different priorities of the NSDSR.

The funding provided by OP "Science and education for intelligent growth" completes during that stage. Based on the successful implementation of the previous two stages, the third one – four years stage, would ensure stable and balanced development of the scientific research and their rising to world class. The control over the strategy implementation is implemented by the National Assembly and the International Control Board on strategy implementation.

1.7.1.6 Regional Development Strategy of the District of Blagoevgrad 2014 - 2020

The Regional Strategy for Development of the Blagoevgrad Region[46] covers the planning period 2014-2020 and represents an integrated part of the main strategic documents of the EU and Bulgaria for development of the region by taking into account the specific characteristics and specific needs of each community that is part of it. **It is based on a comprehensive analysis of the region** and the current state of development of all communities of the region, their past achievements over the previous programming period, as well as on their future needs and opportunities for development. The main objectives and the strategic visions of the Regional Strategy express the aspirations of local communities to achieve an integrated and balanced development of the region in all aspects of the social, cultural, historical, economic and administrative life.

The plan envisages activities that are centred around the following five main priorities:

- ✓ **Developing a competitive and modern economy** based on knowledge, modern technologies and available resources;
- ✓ **Achieving overall improvement of the quality of life** in the region;
- ✓ **Development of tourism as a strategic sector** for the area, using the available natural, cultural, historical and other resources;
- ✓ **Development of international and European synergies** as a factor to achieve integrated and inclusive growth, transfer of good practices and improvement of administrative and economic interaction on a regional scale;
- ✓ **Fostering interaction between businesses, civil society and public administration** at all levels in order to facilitate the achievement of the abovementioned objectives.

According to the Strategy for development of the region, in order to boost its innovative potential, it is necessary to utilize in full the existing potential of the local resources. Attention should be paid towards investments in economic zones near larger towns in the region, as well as in the constant upgrading and searching for new methods for enhancing the skills and qualifications of the managerial and technical staff of local SMEs. The strengthening of the export base of the region could be achieved by attracting SMEs with higher export potential, as well as by improving the conditions for investments (e.g. infrastructure, tax and investment incentives, etc.). Another important target is related to the formation of an integrated economic environment capable of attracting innovation and R&D.

[46] http://www.bl.government.bg/images/stories/documenti/Strategies/Blagoevgrad_v4_073113.pdf

1.7.2 Overview of innovation support policies and strategic documents in Macedonia

The main guidelines, with a particular emphasis on support for SMEs to introduce innovations, are set out in the following policies and programmes.

1.7.2.1 Innovation Strategy of the Republic Macedonia 2012-2020

The vision of the Innovation Strategy of the Republic Macedonia 2012-2020 is:

The innovation strategy will drive competitiveness and economic development based on knowledge and innovation, thereby creating high value employment and prosperity for Macedonian citizens.

By 2020, the Republic of Macedonia should have an effective national innovation system, co-created by all stakeholders and open to the world. The government will place research and innovation at the heart of its policies and ensure adequate financial support.

In order to fulfill the vision, four Strategic Objectives (SOs) and 14 priorities have been defined:

SO1. Enhance the business sector's propensity to innovate.

1.1. Raise awareness of SMEs on the benefits of innovation.

1.2. Establishment of a Fund for Innovation and Technological Development (FIT).

1.3. Encourage private investment in R&D and innovation.

SO2. Strengthen human resources for innovation.

2.1. Adapt education policy to develop the skills needed for innovation.

2.2. Stimulative measures for talented students and for the professors engaged in the preparation of the most successful students.

2.3. Increase the quality of vocational training and promote lifelong learning.

2.4. Make tertiary education more innovation-oriented.

SO3. Create a regulatory environment in support of innovation.

3.1. Provide an effective regulatory environment for academics and research institutions.

3.2. Adapt public procurement practices to encourage innovative solutions.

3.3. Provide for a competitive business environment.

SO4. Increase knowledge flows and interactions between innovation actors.

4.1. Foster business networks and clusters.

4.2. Increase knowledge flows and interactions between research institutions and businesses.

4.3. Embed FDI and innovative stars into the national innovation strategy.

4.4. Strengthen the linkages with the Diaspora.

1.7.2.2 Strategy for entrepreneurial learning of the Republic of Macedonia 2014 – 2020

Strategy for entrepreneurial learning of the Republic of Macedonia 2014 – 2020 aims at increasing the confidence for entrepreneurial ventures of all citizens and enabling them to have full and effective role in the future development of the economy and the community. It states that the primary objective of entrepreneurship education is not simply to give all citizens to open their own businesses, but rather to give young people the ability to think positively, look for opportunities to realize their ideas, have confidence to achieve their goals and use their talents to build a better society (both from an economic and social point of view).

The Strategy for entrepreneurial learning and the National innovation strategy have many intersections and are complementary, especially with respect to the SO2 for strengthening human resources for innovation in the country. Since innovations are usually part of entrepreneurship, formal education reforms related to entrepreneurial learning, encouraging entrepreneurship at all levels of formal and informal education and promoting lifelong entrepreneurial learning as part of an entrepreneurial learning strategy will help build an effective national Innovation system.

1.7.2.3 Programme for development of South-east region 2015 – 2019

The analysis in the Programme for development of South-east region 2015 – 2019 states that there is a small value of investments in fixed assets, low technical and technological equipment and low level of innovation by companies. On the other hand, the region has poor institutional support for the business sector, which is why it rarely uses services from the chambers of commerce and other institutions for additional training, marketing and expertise. There are Specific objectives, priorities and measures in the Programme that promote innovations:

SO1. Promoting economic growth in the region / Priority 1.1. Institutional support for the business sector and strengthening the capacities of SMEs / Measures 1.1.2. Construction of a technology park and establishing business incubators for young entrepreneurs and 1.1.5 Encouraging innovation in the companies and creating a knowledge-based economy.

SO5. Development of competitive agricultural production and improvement of life in the rural areas/ Priority 5.1. Encouraging growth in agricultural production/ Measure 5.1.1. Technical and technological development and innovative approach in agricultural production.

1.7.2.4 Regional innovation strategy of South-east region 2016 – 2020

The vision and the mission of the **Regional innovation strategy of South-east region 2016 – 2020** are:

- Vision: Better life for citizens in the South-east planning region through innovations in energy efficiency, tourism and agriculture.
- Mission: Development of innovative human capital and creation of conditions and adequate infrastructure that will focus on innovations in energy efficiency, tourism and agriculture.

The Specific Objectives (SOs) in the strategy are:

SO1. Development of human resources ready to innovate in the region.

SO2. Development of innovation policy and culture in the South-east region.

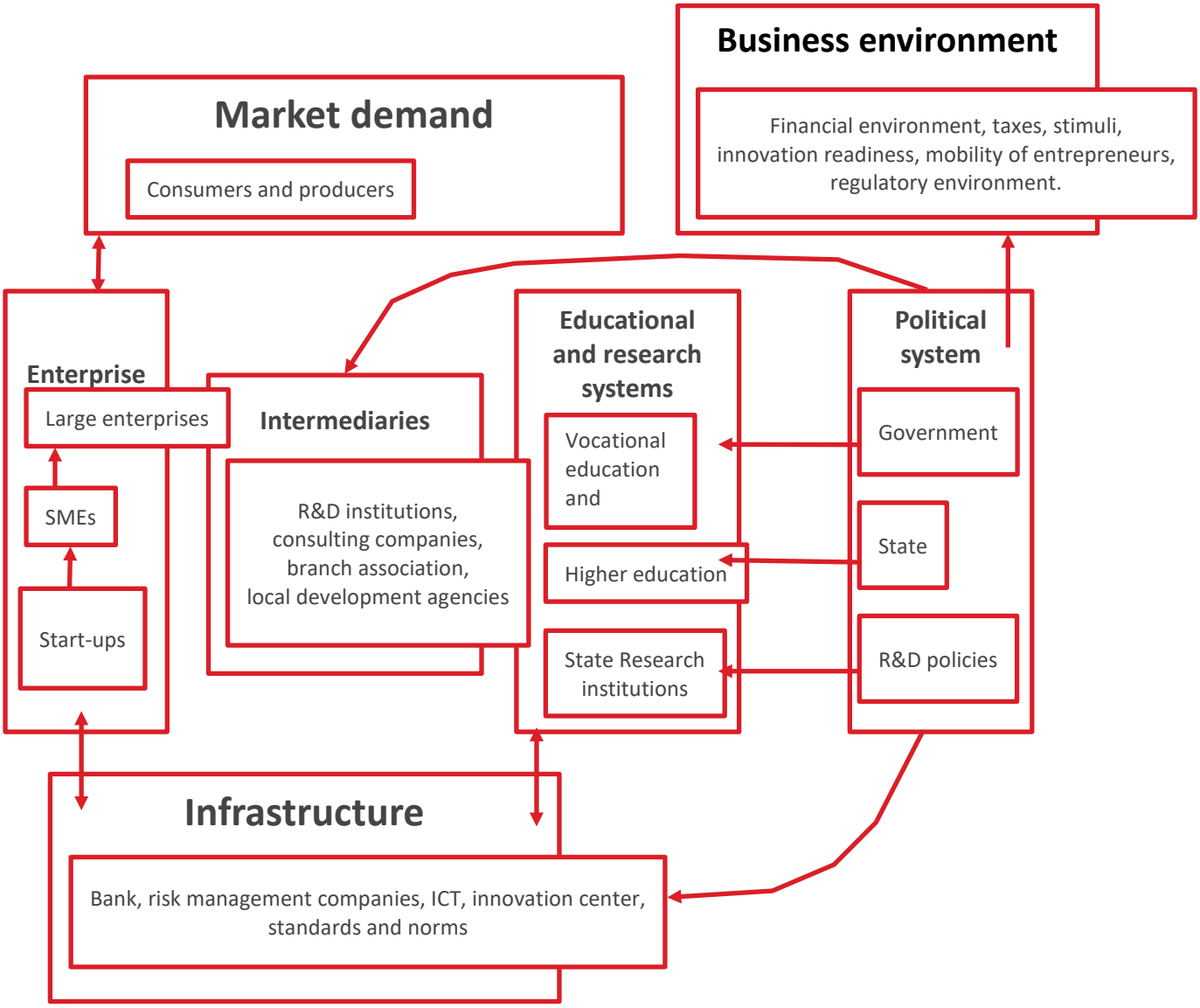
SO3. Development of supporting infrastructure for innovations in the South-east region.

SO4. Development of private capital ready to invest in innovations.

1.8 Brief overview of the Innovation stakeholders on national and regional level

The main participants and assets that contribute and participate in the innovation environment are quite diverse. Such assets might include R&D and academia capacities (e.g. universities, research organizations, private inventors, etc.), human resources (e.g. talented people, skilled workforce, etc.), financial capital in support of entrepreneurship and innovation (e.g. innovation support funds, community programmes, venture capitalists, business angels, etc.), legal and regulatory environment, physical infrastructure, etc **(Table 15)**.

Table 15: Innovation environment (assets and key participants)

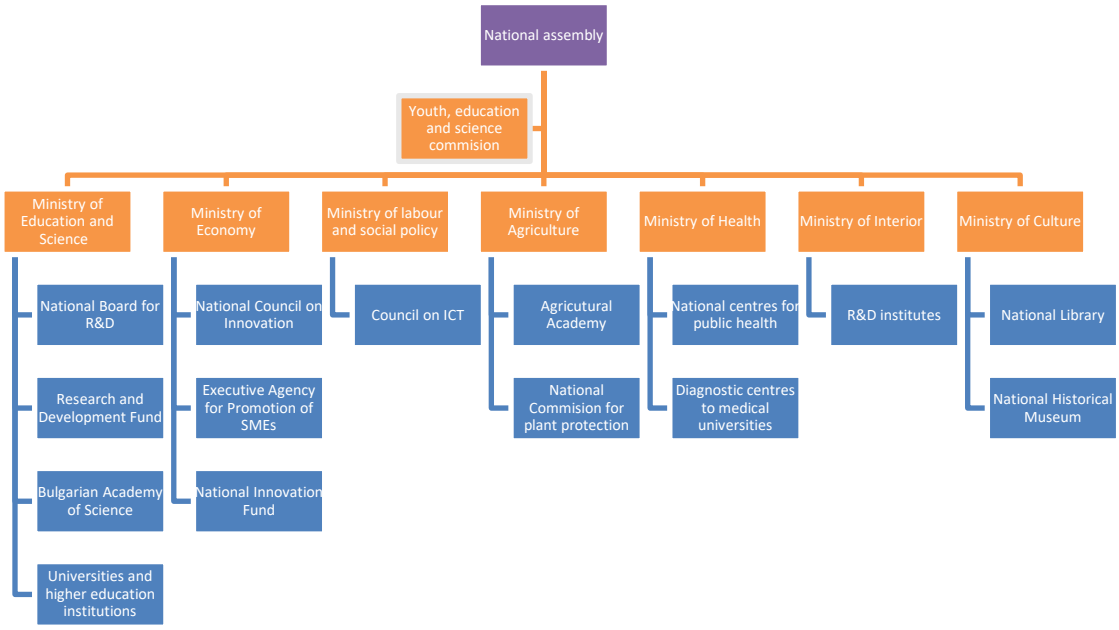


In the present chapter we will not focus on the assets of the environment, as their main features and current state of development were detailed in the previous chapters. The main focus will be put on the stakeholders, or the different institutions and organizations (both governmental and non-governmental) that participate or are somehow related to the processes and policies in the field of R&D and innovations.

1.8.1 Innovation stakeholders on national and regional level in Bulgaria

In Bulgaria the main stakeholders that are responsible for the implementation of the national policy in the field of scientific research and innovations are the *Council of Ministers, the Ministry of Education and Science and the Ministry of Economy.* The *National Policy* in the field of research and development is conducted by the Council of Ministers (Council for Intelligent Growth) through the Ministry of Education and Science in accordance with the National strategy for the development of scientific research in the Republic of Bulgaria 2017 -2030. The MES is the central body that is responsible for the implementation of the state policy in the field of education and science. The Minister manages, coordinates and controls the education and science policies related to the development and participation in programs and projects funded by the European Union. The organizational structure of the NSDSR includes different stakeholders which have specific functions and contributions in the field of research and innovation. The main stakeholders in the field of scientific research are the Council of Ministers and the established *Council for Smart Growth*[47], as well as the different Ministries **(Table 16).**

Table 16: Organizational chart of the National Infrastructure of the National R&D and Innovation System according to NSDSR (2017 – 2030)[48]

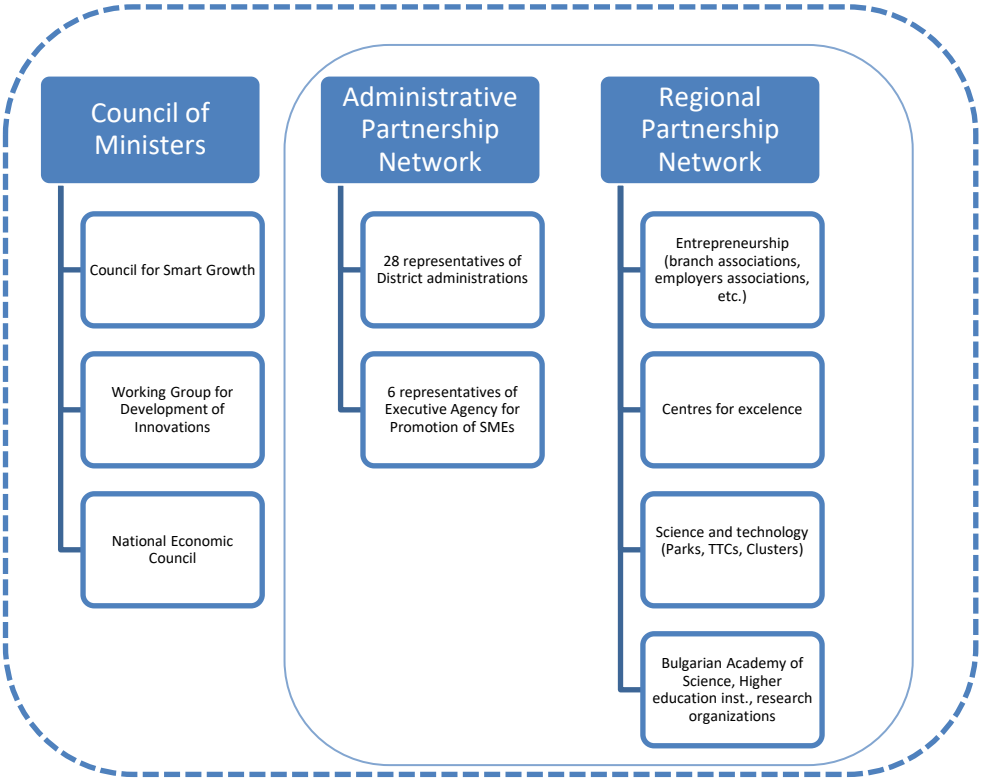


[47] Established under Decree No:116 of the Council of Ministers on the 12.05.2015
[48] National strategy for the development of scientific research in the Republic of Bulgaria 2017 -2030

The key stakeholder in the implementation of the national policies in the field of research and development is the Ministry of Education and Science of Bulgaria which is the Managing Authority of the key financial instrument in support of the R&D policies – Operational Programme "Science and Education for Smart Growth" (financed under the European Structural Funds), as well as the National Innovation Fund and the Research and Development Fund.

The state policy in the field of innovations are conducted in the frame of the Innovation Strategy for Smart Specialization of The Republic Of Bulgaria 2014-2020 by the Ministry of Economy either independently or jointly with other authorities and / or public organizations. The Ministry of Economy is responsible for the development, organization, coordination and control of the implementation of the state policy related to innovations and SMEs support that are in line with Bulgaria's EU membership. The Ministry also manages the participation in programs and projects financed by EU funds, international financial institutions and other. The structure and the main participants in the implementation of the Innovation Strategy for Smart Specialization for the period 2014 – 2020 are described in **Table 17.**

Table 17: Structure of the Innovation Strategy for Smart Specialization of Bulgaria



The key structures that coordinate and supervise the policies related to innovation in Bulgaria which are new for the current programming period are the ***National Council for Smart Growth***, the ***Nation Council for Innovation and Science*** as well as the ***National Economic Council***.

The Council of Intelligent Growth (ICE) is chaired by the Prime Minister of the Republic of Bulgaria and members - Ministers / Deputies of the leading institutions responsible for policy formulation in the fields of education and science, industrial innovation, information and communication technologies and innovations in agriculture. In addition, there are representatives of the industry and the scientific and academic communities. The functions of the council are related to setting up the policy priorities in the field of education, science, innovation, and ICT. The Council also coordinates and adopts all activities that are necessary to ensure the implementation of ISIS.

The National Science and Innovation Council was established to assist the Minister of Education and Science in conducting the state policy to promote research. National Innovation Council was established to assist the Minister of Economy in the formulation and implementation of the national innovation policy in accordance with the Innovation Strategy for Smart Specialization.

National Economic Council – The Council was established to take over the activities of the National Council for Science and Innovation and the National Innovation Council to avoid duplication of functions. The functions of the National Economic Council are related to analyzing and proposing measures to support innovation and investment activities in order to increase the competitiveness of the economy; as well as developing and offering economic and legal regulators to promote investment activities in the country.

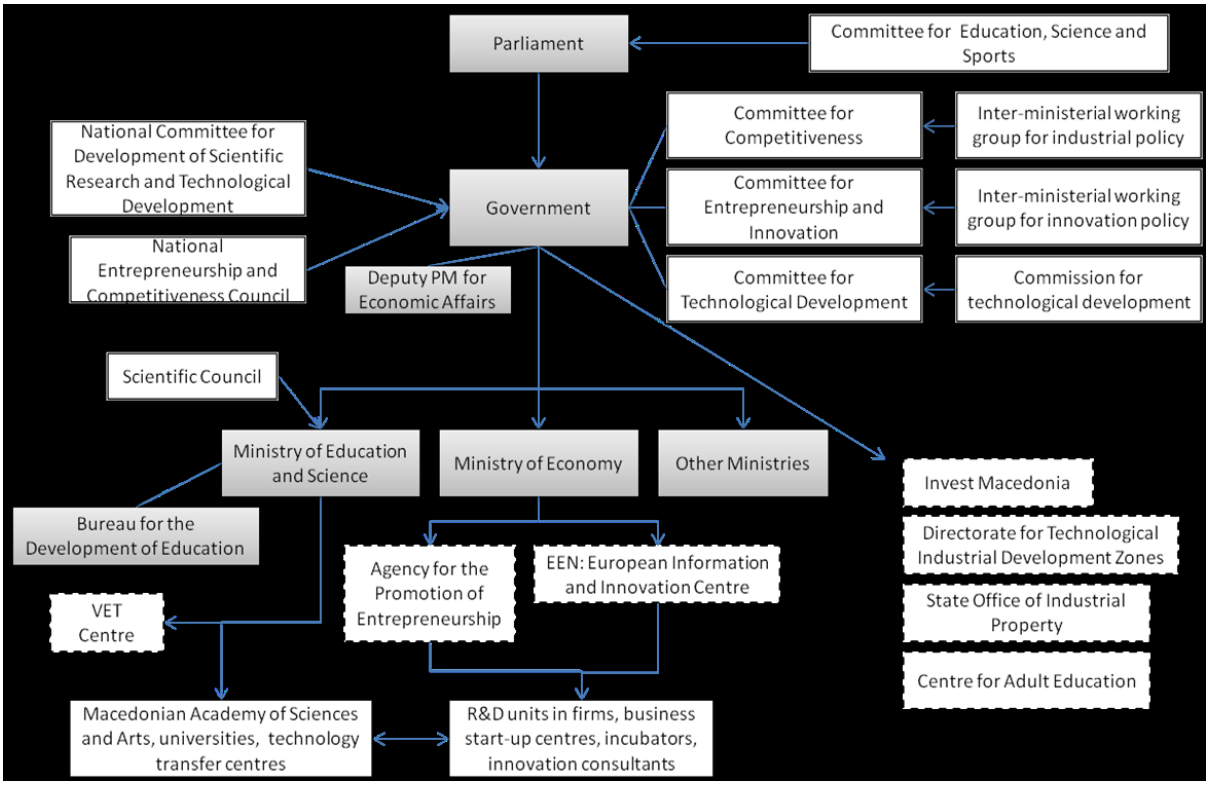
1.8.2 Innovation stakeholders on national and regional level in Macedonia

Key stakeholders in the innovation eco-system in the Republic of Macedonia are:

- Deputy Prime Minister for Economic Affairs
- Government Committee for Entrepreneurship and Innovation
- Other Government Committee
- Ministry of Education and Science
- Ministry of Economy
- Bureau for development of education
- Other ministries
- Fund for Innovations and Technological Development
- National Committee for Development of Scientific Research and Technological Development
- National Entrepreneurship and Competitiveness Council
- Macedonian Academy of Science and Arts
- Universities
- Technology Transfer Centers
- Agency for the Promotion of Entrepreneurship
- EEN – European Information and Innovation Centre

- R&D units in companies
- Business start-up centres
- Incubators
- Innovation consultants
- Invest Macedonia
- Directorate for technological Industrial Development Zones
- State office of Industrial property
- Centre for Adult Educations

Table 18: Governance structure of the national innovation system



Note: Grey boxes represent government and parliament, boxes with two lines represent advisory bodies, boxes with dashed lines represent executing agencies.

Key stakeholders in the innovation eco-system in the South-East planning region are:

- Center for development of the South-East planning region - the owner of the Regional innovation strategy 2016 - 2020
- Business center for support and consulting services for SMEs within the Center for development of the South-East planning region
- Local Economic Development (LED) Offices in the municipalities:
  - Bogdanci
  - Bosilovo

- Valandovo
- Vasilevo
- Gevgelija
- Dojran
- End
- New village
- Radovish
- Strumica

- Business Support Organizations (BSOs) in the South-east planning region - public, profit and non-profit organizations, foundations and institutions that focus on providing consulting and advisory services for the business sector in the area of R&D, marketing, commercialization of innovations
- Bureau for Regional Development of the Republic of Macedonia as a body within the Ministry of Local Self-Government aimed at achieving balanced and sustainable development on the whole territory of the Republic of Macedonia
- International supporters of private sector service providers to the private sector in the region:
  - German Agency for International Cooperation (GIZ)
  - United Nations Development Program in the Republic of Macedonia (UNDP)
  - United States Agency for International Development (USAID)
  - The Swiss Agency for Development and Cooperation (SDC) and the State Secretariat for
  - Economic Affairs (SECO)
  - Embassy of the Kingdom of the Netherlands in the Republic of Macedonia.
- Institutions for higher education
  - State University "Goce Delcev" - Stip with dispersed studies in the field of agriculture, informatics, economics and educational sciences in Strumica and Faculty of Tourism and Business Logistics in Gevgelija;
  - Private university FON with dispersed undergraduate and postgraduate studies at the following faculties: Faculty of Law, Economic Sciences, Philological Sciences and Faculty of Detectives and Security - Strumica;
  - Business academy "Smilevski" with dispersed undergraduate and postgraduate studies in operational management - Strumica
- Vocational secondary schools
  - “Josif Josifovski”, Gevgelija (catering-tourist, mechanical, economic-legal and trade),
  - “Dimitar Vlahov”, Strumica (agricultural-veterinary, chemical-technological, health),
  - “Jane Sandanski”, Strumica (economic, legal and trade),
  - “Nikola Karev”, Strumica (forestry-woodworking, textile-leather / direction: applied art, construction-geodetic, traffic, electro-technical, mechanical),
  - “Goce Delchev”, Valandovo (agricultural-veterinary),
  - “Bogdanci”, Bogdanci (textile-leather, traffic),
  - “Kosta Susinov”, Radovish (geological-mining and metallurgical, electro-technical).

- Large companies, especially if they have an already developed sector for the development of new products and/ or services, processes and business models (the analyzes did not show that some companies are distinguished by their research and development activities)
- SMEs, especially fast growing and export-oriented companies
- Other non-governmental organizations (NGOs).

The Regional Innovation Strategy for the South-east planning region itself will need to encourage the creation of additional stakeholders, which at this moment are not present, but which will help create a strong entrepreneurial/ innovation ecosystem and developed quadruple helix.

These are the following potential organizations/ entities:

- Regional and/ or local organizations/ institutions for financing start-up capital (business angels, investment funds, etc.) with a particular focus on encouraging private capital to be more prevalent as well as the self-sustainability of those organizations;
- Private R&D organizations that can be the driving force for increasing the innovative capacity and potential of the South-east planning region, regardless of whether it concerns non-profit organizations, sectors in existing companies, or organizations initiated by private higher education institutions;
- Technology transfer organizations that need to be a link between the science and business sector and their development and support will be important for increasing the innovative capacity and potential of the South-east planning region; and
- Clusters, etc.

1.9 Financial tools in support of innovations

Developing an innovative idea into a product, technology or even a new company is very time and money consuming process. An important issue when managing an innovation process is finding the right tool and an appropriate instrument for financing it. In general, innovation finance could originate from the public sector, banks or from private financial sources. Which of these is appropriate to a specific case would depend on a number of factors such as the stage of development of the project, the size of the innovative company, as well as the amount of money required.

There are various sources of financing that are available to Bulgarian SMEs to develop and implement innovations (including non-technological ones). The existing financial tools could be divided in public and private. The public sources of funding for enterprises to develop and introduce innovations are coming mostly from the **European Structural Funds** and **Community Framework programmes**, as well as from the **National budgets of Bulgaria and Macedonia**. Below is provided a summary of the most popular and appropriate tools that are currently available to Bulgarian and Macedonian SMEs to improve their innovative potential and overall competitiveness.

1.9.1 Community Programmes

Horizon 2020

Horizon 2020 is the biggest EU Research and Innovation programme with nearly €80 billion of funding that will be available for over a period of 7 years (2014 to 2020). Horizon 2020 is the financial instrument that supports the implementation of the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness. Horizon 2020 is open to all SMEs, with a simple structure that **reduces red tape and time to grant** so participants can focus on what is really important. A very important addition to the programme is the SME Instrument which provides targeted financial support for innovative ideas and project of SMEs. The Instrument is divided in 3 phases and offers small and medium-sized businesses the following:

- **Business innovation grants** for feasibility assessment purposes (optional phase I): EUR 50,000 (lump sum) per project (70% of total cost of the project will be provided as a grant). It is about a significant innovation for the sector (new product, process, design, service, technology, new market application of an existing technology). The activities, the program will finance during that first phase may include risk assessment, market research, customer acquisition, intellectual property management, developing an innovation strategy, partner search, feasibility of the concept. *The maximum grant amount for a project of this phase is 50 000 euros and the duration of implementation is six months.*
- **Business innovation grants** for innovation development & demonstration purposes. The second phase of the SME Instrument provides grants amounting in the indicative range of EUR 500,000 and 2,5 million (70% of total cost of the project will be provided as a grant). The support is for innovative projects that already have a strategic business plan. It can be prepared in advance or during the first phase. During the second phase activities, such as product demonstration,

testing, prototyping, initial marketing will be subsidized. The focus is on industrial readiness and marketing of innovative product or service. The duration of this second phase is 12-24 months.

- **Free-of-charge business coaching** (optional) in order to support and enhance the firm's innovation capacity and help align the project to strategic business needs; as well as angel investment, etc. The third phase - "Commercialization" will not directly finance companies because it is believed that the risk is less than in the first two stages, since there is already a finished product. Only give free advice will be provided. This process will run through the three phases. Consultations will be carried out by experts of the Enterprise Europe Network - Bulgaria. For some of the projects under the program funding will be 100%, for other the support will be up to 70%.

The application and contracting procedures under the 1st phase of the SME Instrument are very straight forward and user friendly. The entire process is done online by following a simple registration procedure of the SMEs into a Participants portal. The portal hosts information on all available calls for proposals in the numerous areas of the programme.

COSME

COSME is the EU programme for the ***Competitiveness of Enterprises and SMEs***, running from 2014 to 2020, with a budget of €2.3billion. The funds under the COSME programme facilitate access to finance for SMEs, create supportive environment for business creation, help small businesses operate outside their home countries and improve their access to markets.

COSME programme has the following four priority pillars:

- Improving access to finance for SMEs in the form of equity and debt;
- Improving access to markets for SMEs, particularly inside the Union but also at global level;
- Improving framework conditions for the competitiveness of enterprises;
- Promoting entrepreneurship.

The COSME programme is foremost a funding instrument that will improve access to finance for SMEs. For this purpose the period 2014-2020, nearly 1.4 billion euro of COSME budget is allocated to loans and venture capital, which may be complemented with the use of national financial instruments for SMEs. Financial instruments of COSME programme include a Loan guarantee facility (cover loan guarantees to € 150 000 for SMEs) and an Equity facility for growth (support for venture capital funds, with a particular focus on expansion and growth phase SMEs).

Territorial and Cross-border Cooperation Programmes

The European Union has a very diverse and elaborated policy for supporting the cooperation between regions and countries in the Union. The policy is implemented through various initiatives such as the European Territorial Cooperation and the Macro-regional Strategies. And although rules and procedures under those policy instruments are designed to suit public sector logic in the last programming period certain steps were taken to target small businesses and organizations and involve them actively in the process of implementing the cohesion policy of the EU. As a result, small and

medium sized businesses play key role in the implementation of those strategies and can participate with project proposal or receive many free services by being project beneficiaries.

European Territorial Cooperation (ETC), better known as Interreg provides a framework for the implementation of joint actions and policy exchanges between national, regional and local actors from different Member States. Interreg is built around three strands of cooperation: **cross-border (Interreg A)**, **transnational (Interreg B)** and **interregional (Interreg C)**.

Each strand boasts various funding instruments that are open to a variety of potential applicants such as: SMEs, NGOs, public authorities, educational and cultural intuitions, academia and R&D, etc.

Bulgarian and Macedonian SMEs, especially of the region of Blagoevgrad and Southeast Planning region can participate only as **project beneficiaries** at both the Bulgaria – the former Yugoslav Republic of Macedonia IPA Cross-border Cooperation Programme 2014 - 2020 and the Cooperation Programme Greece-Bulgaria 2014 – 2020 (Interreg V-A).

The Macro-regional strategies represent an integrated framework to be supported by the European Structural and Investment Funds among others, to address common challenges faced by a defined geographical area relating to Member States and third countries located in the same geographical area. The European Commission has adopted four macro-regional strategies - Baltic Sea Region, Danube Region, Adriatic and Ionian Region, Alpine Region

Small businesses can participate with projects or receive benefits of project's implementation under the implementation of the regional strategies, as well as to actively participate in identifying the common problems and challenges related to common labour market and education policies, competitiveness measures, in particular for SMEs and measures addressing demographic challenges and brain drain in the respective regions.

Entrepreneurs in both countries have access to other EU funded programmes subject to eligibility criteria:

- ERASMUS+
- CIP ECO-INNOVATION
- INTELLIGENT ENERGY EUROPE
- TEN-T
- EUROPE AID
- ENPI
- LIFE+
- EUROSTARS
- NER 300

- URBACT
- COST ACTIONS
- EIB LOANS
- KICs
- CREATIVE EUROPE
- CONNECTING EUROPE FACILITY
- INSTRUMENT OF PRE-ACCESSION ASSISTANCE
- EUROPE FOR CITIZENS
- EU PROGRAMME FOR EMPLOYMENT AND SOCIAL INNOVATION

1.9.2 European Structural and Cohesion Funds in Bulgaria

The Partnership Agreement is the national strategic document outlining the framework for the management of EU structural and investment funds in Bulgaria in the programming period 2014-2020. It covers support from five funds - European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund, the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF), etc.

The financial provision for implementation of the partnership agreement totals to around 7.57 billion euro and includes all funds that will be provided to Bulgaria for the implementation of the Cohesion policy for the programming period 2014-2020. Of those funds 165 million euro are envisaged for supporting territorial cooperation and 56 million euro will be provided for activities related to Youth Unemployment. Social inclusion and fighting poverty measures will be supported by a total of 407 million euro. Agri-food sector and rural areas will be supported with a total of 2.34 billion euro.

The structure of the Cohesion policy programming will be constituted of the following programmes:

- Operational Programme “Regions for growth” – funded by ERDF;
- Operational programme “Innovations and Competitiveness Programme” – funded by ERDF;
- Operational programme “Environment” – funded by ERDF and CF;
- Operational programme “Transport and transport infrastructure” – funded by ERDF and CF;
- Operational programme “Science and education for smart growth” – funded by ESF and ERDF;
- Operational programme "Good Governance" – funded by ESF;
- Operational programme "Human Resources Development" - funded by ESF;
- Rural Development Programme – funded by EAFRD;
- Maritime and Fisheries programme – funded by EMFF;

All operational prgrammes and instruments were developed by following the Common Strategic Framework for ensuring smart, sustainable and inclusive growth. The following presentation of the various operational instruments is a brief guide into the business and research opportunities provided by each instrument.

As described in Chapter 6 Support policies and strategic documents in the field of innovation the two main funding instruments that will channel the funds allocated under the National Strategy for Scientific Research of Bulgaria and the Innovation Strategy for Smart Specialization for the period 2014 – 2020 are the Operational Programme "Innovation and Competitiveness" and the Operational Programme "Science and Education for Smart Growth".

Operational Programme "Innovation and Competitiveness"

Operational Programme "Innovation and Competitiveness" 2014-2020 (OPIC) is the main program document at national level that has been governing and channeling the support for **Bulgarian SMEs** from the European structural and investment funds for the period 2014-2020.
OPIC is focused at addressing the needs, overcoming the challenges and seizing the opportunities for development of the Bulgarian economy. The measures included in the program aim to contribute for the establishment of sustainable, long-term competitive advantages of Bulgarian enterprises and accelerate the transition to a knowledge-based economy. The support is focused on innovation, entrepreneurship, capacity growth of small and medium enterprises (SMEs), energy and resource efficiency of the businesses.

The total budget of OPIC 2014-2020 is EUR 1.27 billion. The funding from the European Regional Development Fund (ERDF) exceeds EUR 1,079 billion and the national co-financing amounts to over EUR 191 mln. (15% of the budget).
The programme will strive to achieve its objectives though various interventions grouped in four main priority axes as follows:

- Priority Axis 1: Technological development and innovations;
- Priority Axis 2: Entrepreneurship and Capacity for SMEs growth;
- Priority Axis 3: Energy and resource efficiency;
- Priority Axis 4: Removing bottlenecks in security of gas supplies

The aim of all actions envisaged under the various priority axes are to provide a joint support for creating sustainable and long-lasting competitive advantages for Bulgarian enterprises and accelerating the transition to a knowledge-based economy, while improving the country's performance under the indicators financial market development, technological readiness, market size, business sophistication and innovation, as well as to improve security of gas supplies to enterprises.

Operational Programme "Science and Education for Smart Growth"

The Operational Programme Science and Education for Smart Growth 2014-2020 is a newly established funding instrument for the period 2014 – 2020 which has been solely dedicated to the development of science and education in Bulgaria. Investments will aim to improve the quality of Bulgarian education while taking into consideration business needs for qualified employees, and also to modernise and improve the conditions in education and scientific institutions. Scientific research potential will be developed by directing research and innovations to the specialization areas in line with the Smart Specialization Strategy. The **main objectives and priorities of the programme** are grouped in three main priority axis as follows:

- Priority Axis 1: Research and technological development;
- Priority Axis 2: Education and lifelong learning;
- Priority Axis 3: Educational environment for active social inclusion;

According to the established priorities the OPSESG will invest approximately 1 billion euro into various actions under the approved investment priorities. Up to 243 million euro will be invested in developing centers of excellence and competence, as hubs of high-quality research and innovation in the areas defined in the Innovation Strategy for Smart Specialization of Bulgaria 2014 - 2020. Funding will be dedicated to research infrastructure of regional and national significance, as well as to support the specialisation of researchers and their involvement in the European Research Area.

Investment in educationwill aim at improving key competences of students and youth, including through innovative teaching methods. It will promote the quality of higher education with a view of obtaining better outcomes on the labour market, as well as the modernisation of vocational education and life-long learning. Significant focus is put on measures investing in the qualifications of researchers, teachers, lecturers improving their mobility and career opportunities.

Operational Programme SME INITIATIVE

This funding instrument represents a new national operational programme aimed at improving the situation of SMEs in Bulgaria. In this regards OP SME INITIATIVE will make use of the possibilities available to support SMEs' access to finance, through the combination of ERDF with other EU Budget funding under COSME and Horizon 2020.

The aim is to further develop SMEs by facilitating, and maximising, the synergies between existing SMEs support programmes at both national and EU level. Based on the experiences learnt through the implementation of the JEREMIE Initiative in Bulgaria during the 2007-2013 programming period, the OP will facilitate SME access to finance, by providing guarantees through a joint instrument blending Horizon 2020, COSME and ERDF resources, in cooperation with EIB/EIF and with the aim of generating additional lending to SMEs.

1.9.3 Budgetary funds and instruments in support of innovation in Bulgaria

National Innovation Fund (NIF)

NIF is the main financial instrument in support of the innovativeness of SMEs. It is a contest-based subsidy scheme for innovative projects. The Fund was established by a Government Decision. It is financed from the Ministry of Economy and Tourism' budget and is managed by Bulgarian SME Promotion Agency.

The direct objective of the fund is to encourage the implementation of scientific research and development projects and technical feasibility study projects with the aim to create new or develop existing products, processes or services for increasing the economic efficiency, improving the innovative potential and enterprise technological level, and promoting the dynamics of the innovative processes. The interest towards this financial instrument has remained unchanged throughout the years.

The data from analysis of the interest of Bulgarian SMEs provide convincing evidences for the need for this financial scheme and the serious interest on the part of the business is a ground for continuation and expansion of the NIF activity. Currently the biggest priority is provided to companies, operating in the sectors of ICT, metal products and R&D. In addition, the percentage of projects in the sphere of chemical products, medicinal substances and food products is also high.

National Science Fund (NSF)

The National Science Fund finances research activities under various projects and programs. It plays an important part in the implementation of scientific research and supports the Bulgarian scientific community in the establishment of multinational research networks and the participation in European consortia and infrastructures. NSF was set up in 1990, but only in the period 2005 – 2009 it was given the resources to contribute sufficiently to the establishment of the Bulgarian research area. NSF supports both the development of scientific projects and the protection of scientific products.

The key programme, in which NSR Fund is currently participating, is called "Scientific Research Potential Development". It is operating under three strategic priority modules: improvement of the scientific research infrastructures in the universities and research institutes; modernization of the scientific research equipment in the universities, specialized laboratories and research institutes. NS fund is promoting the scientific research in the priority directions of the National Strategy for Development of Scientific Research through:

- financial support to the scientific organizations and the higher educational institutions based on project-programme financing;
- financing of projects, developments and demonstration projects in scientific directions, determined by the Fund;
- financing of projects, developments and demonstration projects of young scientists.

1.9.4 Budgetary funds and instruments in support of innovation in Macedonia

Fund for Innovation and Technological Development (FITD)

The mission of the Fund for Innovation and Technological Development (FITD is to encourage and support innovation activities in micro, small and medium-size enterprises (MSMEs) in order to achieve more dynamic technological development based on knowledge transfer, development research and on innovations that contribute to job creation, and to economic growth and development, while simultaneously improving the business environment for the development of competitive capabilities of companies. Financial resources are provided from the loan obtained from the World Bank in amount of 8 Million EUR for 3 years. FITD publishes Calls for Proposals for different instruments, where MSMEs apply for financing.

Instruments of the FITD are:

1. Grants for start-ups, spin-offs and for innovations.
2. Co-financing of grants and conditioned loans for commercialization of innovations.
3. Co-financing of grants for technology transfer.
4. Technical assistance through business – technological accelerators.

The first instrument which is suitable for start-ups is entitled "Co-financed grants for newly established enterprises "Start-ups" and "Spin-offs".

The instrument supports projects that are in the phase of proof-of-concept, up to the close-to market phase. MSMEs from all business sectors are eligible to apply for funds under this instrument. The eligibility criteria that have to be fulfilled by the applicants are available on the web site of the FITD (http://www.fitr.mk/portfolio-item/co-financing-grants-for-start-up-spin-off-companies-and-innovations/?lang=en).

The instrument aims at encouraging the innovation level in newly-established enterprises by providing the necessary support for R&D activities. The grant is expected to encourage a culture of risk taking and innovation, to provide support for the enterprises that aim to develop new or improved products, processes, and/or services, as well as to encourage the commercialization of research results obtained in higher education institutions, i.e. scientific-research institutions.

Under this instrument the FITD provides financing of up to 85% of the total project budget, in a maximum amount of 30.000 EUR. Projects under this instrument have a 12 month duration with the possibility of extension for up to 6 months.

Criteria for evaluation of project proposals are:

- Level of innovativeness
- Project quality

- Capacity of the project team
- Market potential
- Impact.

Following successful commercialization, the revenue (not only the profits) derived from the sales of the product/service and any subsequent products/services based on the technology developed within the project financed by the FITD, will become the basis for the royalty payments towards the FITD.

The second instrument supports projects with a clear commercialization objective, which are in the phase of prototype (or appropriate phase depending on the type of innovation product, service, and process) up to close-to-market phase.

The instrument is open to MSMEs that wish to develop an innovative product, service or process either on their own or in collaboration with another enterprise or higher educational or scientific-research institution.

Project-proposals from individual applicants (MSMEs) and consortia led by MSMEs are eligible for funding through this instrument.

The eligibility criteria that have to be fulfilled by the applicants are available on the web site of the FITD (http://www.fitr.mk/wp-content/uploads/2017/01/Rulebook-commercialization.pdf).

The aim of this instrument is to incentivize R&D increase in the private sector, to encourage cooperation within the private sector and between the private sector and the higher educational and scientific institutions, as well as other forms of collaboration for commercialization of innovations.

The duration of the projects funded through this instrument can be up to 24 months with possibility for extension for additional 12 months, with prior approval by the Fund.

Criteria for evaluation of project proposals are:

- Level of innovativeness
- Project quality
- Capacity of the project team
- Market potential
- Impact.

The financing under this instrument can be in a form of a co-financed grant or in a form of a conditional loan, depending on the amount of revenues of the applicant. The maximum amount which can be awarded in the form of a loan may not exceed 30% of the total capital of the applicant. The conditional loan is repaid at quarterly intervals with a fixed interest rate of 2% on annual basis under conditions determined in the Agreement.

Following successful commercialization, the revenue derived from the sales of the product/service and any subsequent products/services based on the technology developed within the project financed by the FITD, will become the basis for the royalty payments towards the FITD.

The third instrument is open to project proposals from:

- Individual applicants (MSMEs from all sectors)
- Partnerships between MSMEs, institutions in research and/or higher education, clusters, business associations, chambers of commerce and others
- Consortia consisting of MSMEs, institutions in research and/or higher education, clusters, business associations, chambers of commerce and others.

The eligibility criteria that have to be fulfilled by the applicants are available on the web site of the FITD (http://www.fitr.mk/wp-content/uploads/2015/10/Co-financed-grants-for-technology-transfer.pdf).

The purpose of this instrument is to encourage the transfer and implementation of new innovative and improved technologies, know-how and technological processes, and encourage various forms of cooperation between MSMEs, business associations, clusters and/or chambers of commerce, in order to achieve a positive impact on the sector. The instrument focuses on the application and adaptation of technologies and innovations which are not new to the world, but may nevertheless be new to the country, or new to the sector. Ultimately this will enhance the technological capabilities and capacities of existing industries and businesses, by bridging the gap between already available knowledge globally or nationally and in local industries.

This instrument is expected to have a positive long-term contribution to the development of the national economy, and to enhance competitiveness through technological and operational improvements.

The duration of the projects funded through this instrument can be up to 24 months with possibility for extension for additional 12 months, with prior approval by the Fund.

Criteria for evaluation of project proposals are:

- Cooperation
- Technological improvement
- Quality of the project
- Capacity of the project team
- Market potential
- Impact and
- Procedures for quality assurance, standardization and certification.

After the successful implementation of the technology/know-how/process deriving from the project, all MSMEs that are direct or indirect beneficiaries of the project financed by the Fund will owe royalties to the Fund.

The fourth instrument is dedicated to business and technology accelerators which are entities for providing infrastructural support to innovation activity (under the Law on Innovation Activity), whose main function is making available office space, administrative and technical services, mentoring and training, consultancy services, providing initial funding and providing technical and

expert assistance to overcome the organizational and strategic obstacles in the establishment of enterprises ("start-up" companies), including the period of developing a business idea, until the establishment and initial operation of the "start-up" company and its growth.

The maximum amount which will be financed by the Fund for establishment, operating costs, management fees, and for funding the accelerated businesses is 500 000,00 Euros per set accelerator. This amount will be used for setting the accelerator, as well as for the phase of funding or financial support to accelerated enterprises.

The eligibility criteria that have to be fulfilled by the applicants are available on the web site of the FITD (http://www.fitr.mk/wp-content/uploads/2015/02/Technical-Assistance-through-Business-Technology-Accelerators.pdf).

The purpose of this instrument is to promote entrepreneurship through support for individuals who want to establish an enterprise, as well as for already established enterprises (not older than 6 years) in their initial stage by providing educational, logistical and financial support. The business accelerators through the investment funds for early stage of development, can become dynamic tools for encouraging new ventures in various sectors, especially in ICT, connecting the talent, technology, capital and "know-how" in an effective framework.

The project duration for support to accelerators projects is 42 months from the date of signing the contract with the Fund. The selected applicant has a maximum of 6 months to set up the accelerator and 3 years to actively manage it.

The accelerator services for the initial phase should not be longer than 6 months starting from the date of entry of the person/enterprise in the accelerator.

Criteria for evaluation of project proposals are:

- Profile of the management team and human resources
- Quality of the project
- Institutional capacities and sustainability
- Financial parameters
- Relevance of the budget.

1.9.5 Other types of funding for innovative projects in Bulgaria

Bank funding and other financial instruments

Among the state programmes supporting small and medium enterprises, one of the most active has been the Bulgarian Development Bank AD (BDB AD). It is the successor of Encouragement Bank which was established in 1999. Its focus is to support small and medium-sized enterprises. BDB is among the top four Bulgarian banks in terms of credit rating and it is the only Bulgarian bank to provide financing

via other credit institutions as well as direct financing. The bank's subsidiary, the National Guarantee Fund, issues guarantees for bank loans to the non-financial sector, e.g. municipalities, NGOs, R&D institutions, universities, etc. The bank focuses its activities mainly on start-ups and innovations through different funding instruments and incentives.

Eleven initiative

Eleven is an accelerator and venture capital fund for early-stage investments. It provides mentorship, support through its partners, and the critical first round of investment. With 12 million euro of funding provided by the European Investment Fund (EIF) through the JEREMIE Program Eleven is one of the biggest early stage investors in Central and East Europe. Eleven is a very successful initiative that provides fast-growing ecosystem of entrepreneurs who come together to change the world. Eleven team has access to more than 150 mentors and partners bring practical, global experience, counsel and connections to more than 50 companies that accelerate each year. Eleven develops startup teams and ideas into winning businesses – making startup escape velocity (the inspiration behind our name) possible, i.e. the speed needed to break free of local restraints and become truly global. Eleven welcomes close to 50 startups into our accelerator program annually, providing hands-on support and mentorship, collaborative office space, and critical seed funding. The venture capital fund potent ideas by providing up to 200,000 euro in incremental rounds starting initially with 25-50,000 euro. Eleven is focused on innovative ideas, providing up to 100,000 euro for proof of concept starting with a 3-month acceleration program under one roof.

LaunchHub Initiative

LAUNCHub is a seed fund supporting the most promising entrepreneurs and digital startups in Southeastern Europe. Since 2012, LAUNCHub has invested and committed 7.5 million euro in 60 startups from 10 countries in the SEE region, including Bulgaria, Romania, Macedonia, Croatia, Greece, Slovenia, Ukraine, Austria and Switzerland. Launchhub has welcomed over 200 founders in their portfolio family.

The LAUNCHub team works with various founders to provide assistance in many ways, other than the investments granted. The initiative acts more like a team member and an engaged partner by offering startup teams access to a network, consisting of experts, tech vendors, successful entrepreneurs and investors. Launchub provides joint resolution and basis to elaborate together business and product development strategies. Each application run is aimed at companies targeting seed financing as investments vary of up to 200,000 euro. Together with co-investors a company can participate in seed rounds of up to 400,000 Euro. The LAUNCHub funding opportunities are open also to teams having already participated in accelerator programmes or raised angel money. Intros and recommendations from other startup founders, accelerators, business angels and industry peers are more than welcome to support each application for seed and micro-seed investments with LAUNCHub.

NEVEQ

NEVEQ (New Europe Venture Equity) is a venture capital fund focused on seed and early stage investments enabling companies to scale and reach growth stage. The fund has invested among others in business intelligence, travel technology, semantic technology, social media, telecommunication solutions and data centres businesses. **NEVEQ I** was a venture capital fund with eight investments in seed and growth stage technology companies. Based in Central and Eastern Europe, the supported companies were focused on delivering products and services to customers worldwide. NEVEQ Capital Partners, the investment manager of **NEVEQ I** and **NEVEQ II**, has over 40 years of investment experience, and its team members have built and/or exited five industry leaders in the region.
The original backers of NEVEQ in 2006 included the European Bank for Reconstruction and Development (EBRD), as well as private investors from the United States, Switzerland, Austria, UK and Bulgaria, with significant emerging markets private equity investment track record.

Bulgarian Private Equity and Venture Capital Association

The Bulgarian Private Equity and Venture Capital Association (BVCA) is a focal point of private investors, venture capital funds and the entrepreneurial community in Bulgaria. The association works alongside its members to improve the business environment and to drive innovation and growth in the country and the CEE region.
BVCA is committed to popularising the role of private investment as a reliable and sustainable source of funding for growing and established companies. The association represents its members' interests on a national and international level, actively communicates with institutional and private stakeholders as well as the general public.
BVCA collects data on member activities in private equity and venture capital, and identifies industry-players in the ecosystem. Giving voice to the community it represents, BVCA advocates on behalf of the industry to ensure sound public policy that encourages a favourable investment environment in Bulgaria.

Black Peak Capital

BlackPeak Capital is a co-investment growth equity fund focused on investing in high-growth small and medium enterprises of Southeast Europe. BlackPeak Capital is funded by the European Investment Fund, part of the European Investment Bank, through the JEREMIE initiative for support of the SME enterprises in Bulgaria.
It invests in equity, mezzanine, and other forms of hybrid capital to support the investment plans of dynamic regional companies. As a co-investment fund, BlackPeak Capital invests alongside other private institutional or individual investors on pari-passu terms. Their target investment ticket is between €1-8 million per transaction.
The financing provided for the establishment of the fund originated from the Joint European Resources for Micro to Medium Enterprises (JEREMIE) Initiative which was implemented through the Operational

Programme "Development of the competitiveness of the Bulgarian economy" 2007-2013, co-financed by the European Regional Development Fund and the state budget.

Crowdfunding

Crowdfunding is a popular form of fund raising in which you ask a large number of investors to provide a small amount of money. It is basically the opposite of more traditional sources of investment where a few investors provide a lot of money. There are three types of Crowdfunding model with different possibilities and consequences:

- **Donation/Reward Crowdfunding:** In this type of funding, you target people who are passionate about your product or cause, because they will donate money just because they care. Any rewards can be free samples or acknowledgements, but there will be no repayment or partial ownership of the business.
- **Debt or Peer-to-Peer Crowdfunding:** This is quite similar to basic money loans, because the money will eventually be paid back (with interest), but will involve several investors instead of one bank or investor. Microloans are often used in developing countries where there is no interest.
- **Equity Crowdfunding:** In this case, the money provided by the investor is exchanged for a small share in the company or product. If the product is successful, the value of the share goes up, if not, it goes down.

There are many crowdfunding platforms that provide financial support to SMEs, private entrepreneurs and inventors, as some of the most popular include:

- GoFundMe - This is the largest, worldwide platform for individuals, groups and organisations, for any type of project or campaign. Starting a campaign is free, but deductions will be taken from each donation you receive. Donors are not charged.
- Kickstarter is the largest online platform for creative project crowdfunding. Kickstarter helps artists, musicians, filmmakers, designers, and other creators find the resources and support they need to make their ideas a reality. You will be charged for a pledge only when you reach your funding goal.
- Indiegogo focuses more on entrepreneurial projects. There are different funding choices and discounts for social and non-profit causes. The platform also offers different pre- and post-campaign tools.
- Patreon is a way to get paid for creating the things you're already creating (webcomics, videos, songs, etc). Fans pay a a small sum per month OR perpost you release, and then you get paid every month, or every time you release something new. All campaigns are related to creative projects.
- RocketHub is not only a crowdfunding platform, but a global community for entrepreneurs. Their funding system is called ELEQUITY. After submitting your project idea, the team will review your information and contact you with information and options available for raising capital for your business.

1.9.6 Other types of funding for innovative projects in Macedonia

South Central Ventures (ENIF)

South Central Ventures (ENIF) is a 40 Million EUR Fund, dedicated to investments in start-ups, tech-SMEs in the Western Balkans. The Fund helps the most ambitious start-ups to build the next big things. The Fund is partnering with the most ambitious, dedicated, hard-working and brave teams that dare to build great companies and disturb the status quo. The Fund operates offices in: Zagreb, Belgrade and Skopje.

Innovation Financing Vehicle (IFV)

Innovation Financing Vehicle (IFV) is a specialized fund designed to support innovation in SMEs in the country through lending and equity financing. It is funded by USAID and Crimson Capital Corporation and managed by Crimson Development Foundation.

The actual funding is on a commercial basis. Eligible beneficiaries are companies registered in Macedonia that will offer sustainable innovative product or service for which there is a confirmed market demand. The innovation should have development potential, and has to foster sustainable development and creation of new jobs. Each potential client should have financially and commercially sustainable product or service that will clearly address the market needs on a competitive basis. It should also present a credible cash flow projection, and thus a clear strategy for repayment of the debt, through profitability or liquidity or any other way of closing the debt within 12 to 24 months. Preference is given to innovative businesses that create new jobs.

As a priority, the Fund is financing innovative business projects (but not limited to) in the ICT, energy efficiency, environmental protection, agriculture, food processing, manufacturing, logistics, etc.

The duration of the projects is from few months up to two years. Funding amounts ranges from 5,000 to 100,000 EUR.

Network of Business Angels in Macedonia

Network of Business Angels connects the entrepreneurs who want to start their own business with investors/investments and mentors. Even in the case when entrepreneurs have excellent business plans, banks are requesting collateral which is several times higher than the value of the newly proposed business. Network of business angels is consisted of business leaders who can provide financing, know-how, as well as social capital to the entrepreneurs with innovative ideas.

CEED Macedonia Business Angels Club

CEED Business Angels Club (CEED BA Club) was formed as a sub club from members of CEED Business and Learning Club Gold, in November 2013 and is one of the first clubs of this kind in Macedonia. Since January 2016, CEED Business Angels Club is officially a member of European Business Angel Network (EBAN).

Currently, 16 entrepreneurs are Club members who are willing to invest in business ideas or existing businesses, if they identify potential for growth or innovation.

The first business ideas were presented to the club members in April, 2014. After three year of existence, CEED Business Angels Club made the first investment in December 2014, second one in May 2015, and the third one in June 2016. At the moment four potential ideas are being reviewed.

Euro-Macedonian Knowledge Innovation Center (EMKICE)

Mission of EMKICE is to improve and promote Macedonian business and innovation culture, especially entrepreneurs, innovators and business angels.

Macedonian Business Angels Network (MBAN)

Macedonian Business Angels Network (MBAN) is the first official business angels investment network in Macedonia and member of European Business Angels Network (EBAN).

1.10 Existing organizations / stakeholders and successful initiatives/ projects in the cross-border region of Bulgaria and Macedonia in the field of promotion and development of innovation at SMEs

Even though innovation policy and development is regulated by innovation platforms on national level the main motor of innovative activities remains at regional level where companies, workforce and universities work, closely related to each other. Therefore, the real innovation hubs emerge and develop locally and regionally.

1.10.1 Existing organizations / stakeholders and successful initiatives/ projects in the cross-border region of Bulgaria

The innovation profile of the region of Blagoevgrad is determined by the strategic position of the region (in a cross-border area with Greece and Macedonia), the regional imbalances related to the economic development of the different municipalities – part of the region, as well as the amounts of foreign investments in the region (including European funding).

The region of Blagoevgrad is part of the Southwest Planning Region of Bulgaria which is the most developed region in the country. At the same time, the SWPR is characterized with high internal economic development contrast due to the presence of the capital city of Sofia. On one hand, we have the capital city of Sofia where all the R&D infrastructure and innovative potential of the region are located, and on the other hand we have the regions of Blagoevgrad, Pernik and Kyustendil which significantly fall behind in terms of investments, business support and innovation development. This creates huge inter-regional imbalances.

Currently, all existing strategic document and regional development policies are prepared on NUTS 2 level and in this regard, it is very difficult to conduct a correct analysis of the Blagoevgrad region (NUTS3) in terms of both business and innovation development.

As seen from the analysis that was conducted in the previous chapters of the present desktop research innovation support and promotion at local/regional level is still underdeveloped and only a few organizations and support structures exist. As a result, there are not many successful initiatives / best practices that could be highlighted.

1.10.1.1 Existing organizations and stakeholders in support of innovation in SMEs in the region of Blagovgrad, Bulgaria

Local assets are in the heart of regional innovation. Local assets might include R&D capacities (e.g. universities, research organizations, private inventors, etc.), human resources (e.g. talented people, skilled workforce, etc.), financial capital in support of entrepreneurship and innovation (e.g. innovation support funds, community programmes, venture capitalists, business angels, etc.), legal and regulatory

environment, physical infrastructure, etc[49]. Key stakeholders in the innovation eco-system in the Region of Blagoevgrad are:

State Authorities

The Regional Administration of the Region of Blagoevgrad with its Regional Council for Development is one of the main stakeholders in the process of regional economic development which also include all policies related to the support of enterprises in the region, including innovation promotion. The Regional Administration of the region of Blagoevgrad is included in the Regional Partnership Network which was established under the *Innovation Strategy for Smart Specialization 2014 – 2020.* Representatives of the administration are participating at the regular meeting that are being held under the Action plan for implementation of the Strategy and are also part of the Entrepreneurial discovery process[50]. Each of the 14 (fourteen) municipalities that are located in the region of Blagoevgrad has an Economic and Investment Department that participates at the process of business support and development.

Business support and branch organizations

Business Support Organizations (BSOs) in the region of Blagoevgrad are public, profit and non-profit organizations, foundations and institutions that focus on providing consulting and advisory services for the business sector in the area of R&D, marketing, commercialization of innovations. Currently in the region of Blagoevgrad there are 6 (six) registered branch association that aim to support the development of SMEs of the region. In addition, there are 27 registered and active NGOs that were registered with a main activity related to supporting of the local economic development, including SMEs. Some of the most active organizations in support of SMEs of the region include:

- Chamber of Commerce and Industry - Blagoevgrad was established in 1992 as an independent non-governmental organization of employers. The main objective of the organization is to protect the economic interests of its members, to provide information and advice to companies in Southwest Bulgaria, to support their efforts for financial stability and competitiveness. The organization brings together 170 members and over 1300 associated members. The management is carried out by a 5-member Management Board, which is elected by the General Assembly of the members. Chamber of Commerce and Industry - Blagoevgrad is part of the unified system of the Bulgarian Chamber of Commerce and Industry, which includes 28 regional chambers. As part of the Bulgarian Chamber of Commerce and Industry, the Chamber of Commerce and Industry - Blagoevgrad is included in the World Network of Chambers of Commerce.
- Business Incubator - Gotse Delchev, Entrepreneurship Promotion Centre was established in 1999 as an initiative of UNDP and the municipality of Gotse Delchev. The Incubator works towards encouraging local economic and human resources development. Its main objective is to support start-ups and SMEs within the Gotse Delchev region through providing them high quality business services such as information, consultancy, trainings, and support for micro-

[49] http://www.innosupport.net/uploads/media/EN_1_2.pdf
[50] http://s3platform.jrc.ec.europa.eu/entrepreneurial-discovery-edp

financing. The Incubator implemented a large number of projects and measures which improved the skills / staff qualification and competence of SMEs, addressed modernization deficits of SMEs, improved the quality of services provided to business start-ups and SMEs, improved the connection SMEs-education and deliver vocational trainings for new qualification or the improvement of existing ones.

- Association of Entrepreneurs of Gotse Delchev Region /AEGDR/ is a non-governmental organization which was established in 2006 with the main aim to support enterprises of the region Gotse Delchev established in March 2006. AEGDR has 81 members - firms with different subject of activity from the region. The organization provides free of charge services and information for its members, organizes seminars, meetings, implements different initiatives requested by the business society. The association contributes to the development of the economy in the region, increases the social and cultural level of the community, it overcomes the unemployment through establishing partnerships and networks with other educational institutions. The organization participates actively in cross-border cooperation projects with organizations of Greece and Macedonia.
- Business Information and Consulting Center – Sandanski (BICC – Sandanski) is a non-governmental organization with more than 18 years of experience in the field of local economic development, supporting of SMEs, training and mentoring of entrepreneurs. BICC – Sandanski is a membership association. Currently the organization has 35 active members which include private entrepreneurs, business organizations, SMEs and people related to business and economic development in the region. In addition, BICC – Sandanski is a member of Enterprise Europe Network which is the largest business information and support organization in Europe. The organization has implemented various projects aimed at supporting the both the economic and social development of the region of Southwest Bulgaria. BICC-Sandanski actively cooperates with more than 800 enterprises from Blagoevgrad and Kyustendil districts via exchange of information and consultations, organization of seminars and trainings, dissemination of information materials on specific issues, support for business cooperation and promotion, organization of participation in matchmaking events. The organization implements various research projects on the business environment and specifics of the region of Southwest Bulgaria, as it cooperates actively with local stakeholders, policy makers and the business community.

Other organizations

Enterprise Europe Network is the largest business support network of the European Commission – Enterprise Europe Network in support of SMEs and innovations. It was launched by the Commission in early 2008 as one of the key instruments for implementing SME support policies. Enterprise Europe Network is co-funded under the COSME program, and Improve and KAM under the Horizon 2020 program. The Network is active in more than 60 countries worldwide. It brings together 3,000 experts from more than 600 member organizations – all renowned for their excellence in business support.
The Network provides a wide range of services to SMEs, including, most importantly, innovative and technological development; building technology partnerships between SMEs based on innovation transfer; technical support to micro, small and medium-sized business on issues like intellectual

property rights, EU standards and regulations; promoting innovations, implementing new products and making use of the opportunities provided by the single market; support for companies to go international; support for development and exchange of new ideas amongst enterprises; access to European projects and EU funding.
Bulgaria is also part of the network as 12 organizations in all parts of the country assist Bulgarian businesses and research organizations in enhancing their competitiveness and access to European and world markets by providing integrated services for business co-operation and innovation.
In the region of Blagoevgrad, the EEN is represented by the Enterprise Europe Network Centre in Sandanski which is hosted by Association Business Information and Consulting Center – Sandanski.

Institutions for higher education

Universities are key pillars in every local innovation system. Universities and research centres are considered as creators, receptors and very often interpreters of innovation and ideas. They are the most important source of human capital and resources. In the region of Blagoevgrad there are two major universities.

- American University in Bulgaria (AUBG) is a privately funded, non-profit institution which opened its doors in September 1991. AUBG provided education to well over 1100 students from over 40 countries. For sixth consecutive year, the university is ranked in the top of the National University ranking 2016 edition. The university is renowned for its majors such as Business Administration (BUS), Journalism and Mass Communication (JMC), Economics (ECO), Political Science and International Relations (POS), and Computer Science (COS) as the Business Administration rated as the best in the Bulgaria.
- Southwest University "Neofit Rilski" (SWU) is a state institution that offers training in Bulgarian and English in 71 Bachelor's, 100 Master's and 74 specialized PhD programmes. The university has achieved a leading position in the scientific and educational space both in Bulgaria and Eastern Europe. The university provides training in different scientific fields for about 14 000 students of whom 700 are international students coming from various countries such as Greece, Turkey, Cyprus, Serbia, Albania, Moldova, Ukraine, Russia, Japan, Pakistan, Yemen etc. Its library possesses over 200 000 volumes, an e-reading room with free access to the data bases of EBSCO Publishing, Science Direct, SCOPUS, Benham Science and ProQuest Central. The Career Centre provides quality aid and services to help the South-West University students obtain adequate professional advice as well as support for the university graduates in finding suitable positions at the labour market.

Existing clusters in the region of Blagoevgrad

According to statistics, currently in the region of Blagoevgrad there are three clusters registered in the field of ICT, tourism and renewable energy sources.

- **Cluster "Information and Communication Technologies – Blagoevgrad region"** was registered in Blagoevgrad in 2016 as a result of a round table on "Development of the ICT sector in

Bulgaria and the opportunities of the municipality Blagoevgrad". During the event, the main participants and stakeholders of the Cluster signed a Memorandum of Cooperation which formulated their intentions for the establishment of the organization. The joint document was signed by representatives of the Blagoevgrad Municipality, District Administration - Blagoevgrad, Bulgarian Academy of Science, Southwest University "Neofit Rilski", the American University in Bulgaria, Bulgarian Association of Information Technologies, Bulgarian Association of Information Technologies, the Bulgarian Outsourcing Association as well as representatives of ICT companies. **Currently the Cluster has been categorized by the SME Promotion Agency** and includes 15 members – representatives of the business, NGOs and the South-west University "Neofit Rilski"- Blagoevgrad. The main objectives of the cluster formation are to support and promote software education; foster the linkages between education, science and business in the field of ICT; enhance the competitiveness of the companies in the field of ICT.

- Cluster Renewable Energy Sources – Bulgaria (CRES Bulgaria) was launched in 2010 in Blagoevgrad as a pilot cooperation effort between companies-producers of energy from renewable sources (wind, solar and hydro); energy sector manufacturers and suppliers, construction and investment companies in the field of the renewable energy; business supporting organizations (economy, sustainable development and environment); different academic institutions, research organizations and others. CRES Bulgaria is sustainable energy cluster with more than 25 members with more than 580 MW of energy output, coordinated by an Administrative unit of experts working in various fields. The cluster was established and has its headquarters in Blagoevgrad.
- **Cluster for Eco and Bio Tourism** was established in 2012 in Bansko with the active participation of the local Agency for Economic Development of Bansko. The Cluster has seven members and target the development of the alternative tourism in the town of Bansko and the region.

1.10.1.2 Initiatives/projects/best practices in the field of innovation in SMEs

There were numerous initiatives that foster the introduction, promotion or development of innovation at SMEs. However, the region of Blagoevgrad can only highlight only a few projects that were successful in terms of promoting innovation and boosting the innovative potential of local SMEs.

Project "Innovation Centre for Young People"

The project was implemented by Business Incubator – Gotse Delchev, Entrepreneurship Promotion Centre and the Foundation for Local and IT Development – Gevgelija, Macedonia under the Third call for proposal of the IPA CBC Programme between Bulgaria and Macedonia 2007 – 2013.

It lasted 17 months and aimed to support the Innovation environment within the cross-border region of Bulgaria and Macedonia though the introduction and promotion of an Innovation Centre for Young people and by providing services to support Innovative ideas generation and develop them into business. As a result of the project 40 young people were trained in modern ICT tools and technologies to boost their personal and business development. In addition both organizations that implemented

the project organized numerous capacity building, networking and joint events for Bulgarian and Macedonian representatives in order to boost their skills in innovation and creativity.

Project "Plan of Smart Regional Specialization for the promotion of competitiveness, research and innovation"

Project "Plan of Smart Regional Specialization for the promotion of competitiveness, research and innovation" with acronym "Smart Specialization" was a 20-month initiative that aimed at providing a preview of European Regional Innovation trends for the next programming period 2014-2020, by presenting the concept of Smart Specialization, its potential impact on regional development trajectories and the main differences with the previous strategic approach (Regional Innovation Strategy). The project was implemented by a consortium of 10 complementary partners from 2 different European Countries, namely Greece (Thessaloniki, Drama) and Bulgaria (Haskovo, Gotse Delchev, Blagoevgrad, Sandanski).

One of the main objectives of the Smart Specialization project was to identify targeted investment priorities for the targeted cross-border region of Bulgaria and Greece, as well as the targeted actions that will support the excellence of entrepreneurship, research and innovation in the common region of the two countries. Furthermore, the scope of the project was to elicit, through experts, brainstorming sessions with participants on the possible scenarios for Innovation Intermediaries, given the new regional development paths that Smart Specialization could produce, and to give first-hand advice on possible new roles that intermediaries could assume to support Regional Authorities. The project identified targeted investment priorities for the Interregional area and relative targeted actions that will support the excellence of entrepreneurship, research and innovation. Smart Specialization project aimed to create a region based on knowledge and innovation, which can be achieved through the development of collaborative networks between public and private sectors to create a competitive advantage and ensure the successful transition to new dynamic markets.

Project "Integration of European healthcare standards and innovations on the way for development of cross-border health cluster"

In 2016 the Regional Medical Association – Blagoevgrad branch started the implementation of project *"Integration of European healthcare standards and innovations on the way for development of cross-border health cluster" (Acronym: CBHealth).* The project has been funded under the First Call of proposals of the Interreg IPA CBC Programme between Bulgaria and Macedonia and it is expected to finish by January 2017. The project is implemented by two medical institutions of the region but it is primarily aimed at improving the capacities, qualification, knowledge and carrier realization of young medical experts through active inclusion in various capacity building, networking, experience and best practice exchange in the field of applying modern healthcare standards and practices. As a result, the competitiveness and quality of services provided by both public and private healthcare service providers (e.g. hospitals, private medical practices, young graduating physicians, etc.) will be improved. Throughout the project, both partners will implement various joint capacity building events, networking, exchange of theoretical and practical experiences in the field of healthcare service

provision. At the final stages of the project, strategic guidelines for the establishment of a CB Healthcare Cluster BG – MK will be produced with the aim to promote the integrated and strategic approach for the development of a competitive healthcare sector and service providers (both public and private) in the target CB region of Bulgaria and Macedonia by utilizing the cluster based approach for development, mutual benefit, cooperation and shared innovation and research potential.

Green Industry Innovation Programme Bulgaria

The Green Industry Innovation Programme Bulgaria is a programme area under the Norwegian Financial Mechanism 2009-2014 (Norway Grants) which contributes to the reduction of the economic and social disparities in the European Economic Area (EEA) and strengthens the bilateral relations between Bulgaria and Norway. The objective of the Programme is to increase competitiveness of green enterprises, including greening of existing industries, green innovation and green entrepreneurship.

In 2013 the Programme funded a project titled "Promoting Competitiveness through Water Recycling" which was implemented by Cherkezov OOD – a company of Blagoevgrad region which is specialized in manufacturing and selling mainly of stone, marble and travertine blocks, plates and slabs. The project was implemented in partnership with International Development Norway as the total budget was 383,500 euro of which 240,000 euro was the amount of the grant that was provided by the Programme. The project aimed to build a waste water treatment plant in order to prevent negative consequences on the environment caused by the factory's manufacturing activity. The investment had two components, the Waste Water Treatment Unit, and a new polishing line, which will replace the polishing line from 1993. The installation of a WWTP improved the effectiveness of water usage for production purposes. The realization of the project achieved nearly 10 times reduction of water usage as well as an environmental effect on water management. The plant allowed repeated circulation of water in the manufacturing process through purification and reuse. This resulted in reduction of the company's expenditure on water usage and discharge, which improved its. competitiveness.

Project "Improving the competitiveness and fostering the sustainable development of C-RES Bulgaria".

C-RES Bulgaria was launched in 2010 as a pilot cooperation effort between companies-producers of energy from renewable sources (wind, solar and hydro); energy sector manufacturers and suppliers, construction and investment companies in the field of the renewable energy; business supporting organizations (economy, sustainable development and environment); different academic institutions, research organizations and others. In 2014 the Cluster implemented a project ***entitled "Improving the competitiveness and fostering the sustainable development of C-RES Bulgaria"***. The project was funded within Measure 2.4.1 "Support for cluster development in Bulgaria" under the Operational Programme "Developing the Competitiveness of Bulgarian Economy" 2007 – 2013. Some of the key objectives and activities of the project included the improvement of the administrative capacity of the Cluster as well as the establishment of partnership relations, cooperation, exchange of experience and good practices with similar organizations and cluster establishments at national and European level.

1.10.2 Existing organizations / stakeholders and successful initiatives/ projects in the cross-border region of Macedonia

1.10.2.1 Existing organizations and stakeholders in support of innovation in SMEs in the Southeast Planning Region of Macedonia

Enterprise Europe Network in Macedonia

Enterprise Europe Network (EEN) is the largest network of contact centers that provide information and advice to companies on EУ issues. Comprised of more than 600 local partner organizations (universities, chambers of commerce, agencies, foundations, associations) in more than 50 countries, the network promotes competitiveness and innovation.

The main mission of the EEH is to help SMEs take advantage of different business opportunities within the EU's single market, developing co-operation in the business, technology or science. The network provides advice to support innovative businesses and access to finance. Also, it is possible to get information on the possibilities for the availability of EU programmes and funding.

EEN in Macedonia is represented through the project consortium, composed of four partners: the University "St. Cyril and Methodius" in Skopje as a coordinator (http://www.een.mk/476/univerzitet-sv-kiril-i-metodij-vo-skopje), the Foundation for Management and Industrial Research (http://www.een.mk/480/fondacija-za-menadzment-i-industrisko-istrazuvanje), the Economic Chamber of Macedonia (http://www.een.mk/481/stopanska-komora-na-makedonija), and the Union of Chambers of Commerce of Macedonia (http://www.chamber.mk/).

EEN Macedonia offers the following portfolio of services:

- Business and cooperation (http://www.een.mk/492/biznis-i-sorabotka)
- Technology and innovation (http://www.een.mk/493/tehnologii-i-inovacii)
- R & D (http://www.een.mk/494/istrazuvanje-i-razvoj)
- Innovation services (http://www.een.mk/495/inovaciski-uslugi)

All services are free of charge and are offered by each partner in the consortium as a one-stop service system.

Center for development of the South-East planning region

Center for development of the South-East planning region is the owner of the Regional innovation strategy 2016 – 2020. Orientation to innovations are embedded in the Vision and the Mission of the South-east planning region.

Vision: By 2019, the South-east region will be an attractive place to live, an engine of the own sustainable development, with satisfied and motivated citizens, recognizable value added products, desired destination with distinctive features and cultural and historical values.

Mission: Sustainable development of the South-east region through optimal use of resources, functional institutions for access to services, investment, innovation and competitiveness to improve working and living conditions in the region.

Business center for support and consulting services for SMEs within the Center for development of the South-East planning region

The regional Business Centre was established in 2014 within the project "Establishment of Business Center for support and consultative services for SMEs in the South-east planning region" in order to increase competitiveness in the South-east region by supporting SMEs and entrepreneurship.

The Business Center for support and consulting services for SMEs in the South-East region within the Center for development of the South-east planning region aims to help and give support to SMEs for their rapid and dynamic development. By identifying current needs, advocacy, informing and networking, the Business Centre contributes towards strengthening the capacities of the SMEs in the region which creates a climate for development of sustainable and profitable businesses. The scope of work of the Business Centre for support and consulting services for SMEs in the South-east planning region consists of:

- Conducting trainings for capacity building of micro, small and medium size companies
- Organization of advisory, informational and promotional events for the private sector Informing the companies in the region for available open calls and funding opportunities
- Preparation of analysis
- Facilitating partnerships
- Support for participation in fairs and events

Functions:

- Communication with all stakeholders and support them in the preparation of project applications;
- Submission of information and active calls of interest to stakeholders;
- Provision of advisory services to the private sector ;
- Maintenance of advisory and promotional events specialized for the private sector;
- Development of a central database that will contain information on the private sector, institutions and other stakeholders of the South-east region.

Target groups of the project:

- Municipalities in the South-east planning region;
- Potential foreign and domestic investors;
- SMEs;
- Traders / economic operators in the region;
- Regional Chambers (Regional Craftsmen's Chamber and Regional Chambers of Commerce);
- Local civil society organisations and foundations.

The Business Center implements innovative projects for the benefit of the stakeholders in the South-east region.

1.10.2.2 Initiatives/projects/best practices in the field of innovation in SMEs of the Southeast Planning Region of Macedonia

New Man's Business Accelerator

New Man's Business Accelerator provides support to:

- Young and hardworking talents to build career superpowers and become strong and independent owners of their future,
- Inspiring experts and mentors willing to maximize the potential of their mentees and to grow exceptional individuals,
- Dedicated and passionate entrepreneurs to flourish and build products that can change industry dynamics,
- Successful local companies bold enough to tackle global markets and inspire others to follow.

SEEUTechPark

SEEUTechPark is a technology park located at South East European University (SEEU) campus in Tetovo, Macedonia. It was opened in May, 2013 by the Board of SEEU in order to create conditions to stimulate the creation of new start-up companies, creating a synergy between the companies and encourage the growth of existing SMEs which in the long term provides new job opportunities.

Euro Macedonian Knowledge Innovation Center (EMKICE)

The Euro Macedonian Knowledge Innovation Center (EMKICE) is non-for-profit organization with goal to support and accelerate the process in which industry engages in economic development and innovation, using best practice, knowledge sharing and education for (re)placement of new products and services on the EU market. **EMKICE has three main objectives:**

1. To encourage and support Innovation and commercialization of innovations (inventions), the development of new products and services, through entrepreneurial approach and innovative technology (by legal or natural person and gender equality protecting their IPR);
2. To support access to finance process, for innovation, applied research, technological development (I + R + T + D) from available EU funds and business angels investors;
3. To support national, regional and transnational cooperation and knowledge shearing. Learning new skills for creative entrepreneurship, leading innovation and change, especially among youth and young people.

It also hosts Macedonian Business Angels Network (MBAN) which is the first official Business Angel Investment Network in Macedonia and member of European Business Angels Network (EBAN).

Inovativnost.mk

Inovativnost.mk is a web portal which has its separate section that provides information and news with regards to start-ups in Macedonia (“Start-up scene”).

CEED Macedonia – CEED Hub Skopje accelerator and co-working space

CEED Hub Skopje accelerator and co-working space, is a place which provides access to innovative and inspiring work environment for entrepreneurs and companies at an early stage, freelancers and individuals who want to start their own business. CEED Hub Skopje offers desktop - desk, internet access and a meeting room, access to information, access to knowledge, access to potential partners, customers and markets - through B2B and networking events, access to finance – enables presentation to the Club of business angels CEED Macedonia and supports professionals for innovation and creative thinking – provides advice from consultants for innovation and business management.

YES Foundation (ПСМ Фондација)

Foundation "Youth Entrepreneurial Service" with the main component business incubator to support micro, small and medium enterprises (MSMEs) in the field of Information and Communication Technologies (ICT) through the process of business incubation which allows access to services designed to accelerate their growth and development. Members of the incubator benefit from the following services:

- Subsidised rates for business office space
- The right to use the meeting room, computer lab, rooms for presentations and training
- Advice in everyday operations,
- Trainings for strengthening the capacities of doing business,
- Mentoring by domestic and international top experts, entrepreneurs and consultants,
- Promotion,
- Mediation/ facilitation of contacts with institutions that provide funding
- Connecting with customers,
- Organizing events for networking and internationalization.

Association for Development of New Options (ARNO)

Association for Development of New Options (ARNO) is an organization established with special mission of development and implementation of social innovation and promotion of new options and contemporary technological approaches for society change. At the moment it functions as a hybrid organization (Civil Society Organization with economic activities). Once there is a legal framework for Social Entrepreneurship in Macedonia, the plan is to be officially registered as a Social Enterprise.

Project "Coolinari 2.0"

Coolinari 2.0 is a follow-up of the project "Professional youth cuisine – new technologies for social business" designed to reflect the highest social and entreprenurial values. As part of this initiative, which is the first one of its kind in Macedonia, it is foreseen that ARNO, as an initiator and implementer of the project idea, in collaboration with the Secondary School for catering "Lazar Tanev" organize cooking lessons with top chefs from Macedonia which are then offered in the market at market prices.

Project "Philanthropy for green ideas"

"Philanthropy for green ideas" is an annual competition which supports the development of small, local and sustainable business ideas in Albania, Kosovo, Macedonia, Montenegro and Serbia. The term "green ideas" refers to ideas that contribute to the environment, using resources from the local community and contributing to sustainable development (integration of local, economic, social and environmental needs and priorities of communities).

Seavus Incubator

Seavus Incubator is a multi-functional work space committed to supporting entrepreneurs, artists and media. We mentor ideas, and provide infrastructure and resources for the start-ups of the future.

- **Dot.up technology** – Incubation program that supports startups in the area of IoT, gaming, software and technology development and support.
- **Dot.up creative** – support of the creative industries and individuals working in areas such as graphic design, industrial design, 2D&3D animation.
- **Dot.up media** – designed to ensure support in the efforts to encourage and simulate investigative journalism, and free and independent media. It will strongly encourage and support debate and encompass

Seavus Education & Development Center (SEDC)

SEDC is a private company established in September 2010 under the umbrella of the Seavus Group. SEDC Offers post academy specialization programme which includes lectures and speed mentoring:

- Vision and ideas, team development
- Business model generation
- Research and customer development, Branding and marketing, Product and user experience design, Competitive Benchmarking of the features
- Sales and Growth hacking
- Finances and Raising Capital
- Developer Problems and Coding
- Basics of Crafting a compelling pitch and company
- Graduation – Watch what you wish for

Total curricula of 100 hours of lectures and speed mentoring sessions where the mentors with the expertise on the subject answer questions and the teams present their idea, progress and thoughts from the "teacher" session.

SEDC Business Simulator

SEDC Business Simulator is a unique model for advanced practical professional training of students in a special training programme through their direct placement of concrete position - role in simulated business process under the supervision of the IT company.

I-lab.mk

i-Lab.mk is an innovation center within the Knowledge Center, established in 2015 under the auspices of the Central European Initiative (CEI) and KEP Austria 2014. One of the services offered is Start-up catalyst which provides assistance to start-ups, spin-off, SMEs and other organizations in the commercialization of their ideas and strengthen their businesses through:

- Guidance, support and advice;
- Access to finance; and
- Providing other necessary resources.

CEFE Macedonia

CEFE Macedonia is an organization founded in 2008 in Skopje, Macedonia and we work mainly with youth and organizations for promoting and raising entrepreneurship and self-employability skills. The mission of CEFE Macedonia is to improve entrepreneurial performance of economic actors by stimulating entrepreneurship and business development skills. We believe and work towards building entrepreneurial society and teach people to be innovators and entrepreneurs. Our main standards in work are proficiency and professionalism in everything we are doing. Our main activities are trainings, consultancy and workshops.
CEFE works according to the CEFE methodology that stands for Competency based Economies through Formation of Entrepreneurs and represents an accumulation of instruments for entrepreneurship training combined with active and dynamic approach to work and methods of empirical learning in order to develop and improve managerial and individual skills. So far, this methodology has proved as successful approach in promotion of development of small and medium enterprises, new jobs, generating revenue and economic growth.

Goals: The main goals of CEFE Macedonia are the following:

- to organize trainings and workshops in the field of entrepreneurship, raising the awareness of the importance of the self-employability;
- to offer business knowledge for start-ups and expansion of already existing companies;
- to facilitate, coordinate and implement projects in sustainable economic development;
- to collect and disseminate the comprehensive knowledge for the CEFE methodology;
- to enable constant development of CEFE tools;
- to encourage regional and international economic cooperation and exchange.

CEFE Macedonia:

- Provides support to those who want to start a business or develop the already existing though organization of business trainings according to the CEFE methodology and offering expert advices; and
- Cooperates with organizations for support of entrepreneurship in order to motivate them to create favorable environment for entrepreneurship development.

Vision of the CEFE Macedonia is the organization to become well-established institution that will provide professional services for office work and incubation of the business environment in the region.
Membership: CEFE Macedonia is part of the global CEFE network of organization working in nearly 140 countries in the world which is coordinated by CEFE International Germany.
CEFE conducts trainings on the topic "Innovative and unusual models of financing SMEs) that include: crowdfunding, business angels, accelerators, innovation funds, EU funds, bilateral funds, venture capital, etc.

Project "Network for creative entrepreneurship"

Foundation for SME development – Strumica implements the project "Network for creative entrepreneurship" in partnership with the Business Incubator – Centre for entrepreneurship support Gotse Delchev in the frame of INTERREG – IPA CBC Programme Bulgaria – Macedonia.

1.11 SWOT analysis of the innovation environment of the common cross-border region of Bulgaria and Macedonia

Strengths	Weaknesses
• Favourable geographic location – mountains and sea nearby; cross-border region; access to foreign markets; • Proximity to the capital city of Sofia (Bulgari) and Skopie (Macedonia)– the leading and most developed areas in Bulgaria and Macedonia; • Existence of natural resources, geothermal resources and protected areas; • Highly qualified professional staff; • Low taxes and simplified company registration procedures; • A favourable trend of GDP growth, living standards, salaries, etc. • Well-developed agricultural sector (especially in Macedonia) and potential for development of organic and biodynamic agriculture; • Well-developed transport infrastructure **mostly in the Bulgarian part;** • Excellent broadband and IT infrastructure **mostly in the Bulgarian part;** • Presence of two high-rated universities in the region of Blagoevgrad – **only in Bulgarian part of the CB region;** • Existing and well – experienced business support organizations with strong international relations, positive image, database, opportunities for development; • Existing clusters in the region – **only in Bulgarian part of the CB region;** • Well-developed logistics and transport sector;	• Specialization of the regional economy in low-tech sectors, with only few exceptions; • Low productivity of labour force; • Poor competitiveness of existing enterprises; • Mismatch between the work force and the needs of the labour market; • Lack of innovation culture of businesses in the CB area; • Lack of innovation potential in companies in the CB area due to limitation in the entrepreneurial mindset of local managers related to the constant investment in raising the qualification of their employees; • Lack of working R&D departments in local universities (applicable for the Bulgarian part of the region); • Lack of interest towards business of young people; • Administrative burden and bureaucracy; • Limited network and cooperation initiatives of SMEs; • Lack of enough clusters and low competitiveness / lack of vision of the existing (applicable to a large extent for the Macedonian part of the region); • Lack of awareness and trust to the national patent system / IPR; • Insufficient information to companies about the existence and use of programmes to increase their innovation potential as well as support for innovative projects. • Lack of enough and quality innovation and entrepreneurship support initiatives (e.g.

- Existing of technological companies in the region;

events, trainings, workshops, matchmakings, etc.);

- Non-existing trade fairs and exhibitions to promote the economic potential of the region (applicable for Bulgarian and Macedonian parts of the region);
- Lack of good practices, projects, best practices, case studies of local companies that have successfully developed / introduced innovation;
- Lack of skills and interest towards the development and introduction of marketing innovations;
- Resilience to change of local entrepreneurs towards enhancing and improving their company practices in the field of human resources, production / manufacturing process, planning, etc.
- Underdeveloped private capital that would be available for financing of innovative projects and fast-growing SMEs as well as enterprises with high growth potential;

Opportunities	**Threats**
• Region is attractive for foreign investors by being in a strategic position (cross-border region of three countries – two of which EU member – states, well-developed transport, energy and broadband infrastructure – mostly for the Bulgarian part of the region) and in proximity to the capital cities of Sofia (Bulgaria) and Skopie (Macedonia); • Good potential for outsourcing activities; • Emergence of clusters in the region (e.g. in the field of ICT, renewable energy sources, tourism); • A trend for eco-friendly technologies and innovations; senior entrepreneurs with experience.	• Aging population in both counteis; • Increasing competition from Asia and third world countries; • Migration of labour force and qualified personnel (to bigger cities) and emigration (abroad); • Big portion of companies working in the “grey” sector; • Expanding the gap between education, research and business and imbalance in the innovation ecosystem; • High share of youth unemployment and long-term unemployment; • The proximity to the capital cities of Sofia (Bulgaria) and Skopie (Macedonia) represents a threat in terms of employment and education migration;

- Excellent conditions for developing green projects and support services utilizing various RES sources;
- Organic production potential, in both countries;
- Diverse and favourable geographic location – well-developed tourism sector, especially in the Bulgarian part of the CB region;
- Better utilization of European funds in the field of promoting and increasing the innovation activities of the local businesses;
- Increased opportunities for SMEs for access to funding (e.g. banking instruments, capital markets, risk financing, Operational Programmes, Community Framework Programmes, etc.), more applicable to the Bulgarian part of the region, as Bulgarian SMEs have more access to financial instruments in support of innovation due to Bulgaria's membership in the EU.

- Aging of researchers and science workers;
- Lack of qualified workforce (e.g. engineers, technical staff, etc.);
- Fragmentation of public policies, lack of efficient instruments to measure the results and effects of supporting policies;
- The region of Blagoevgrad is not in favorable position in terms of EU funding support as it is part of the Southwest Planning region. All SMEs in the region receive lower percentage of grant financing for the period 2014 – 2020. This will further limit their competitiveness and access to those resources;
- Political instability in Macedonia creates insecurity in both funding policies and foreign investors;

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2. Results of the quantitative research process in Bulgaria and Macedonia

2.1 Introduction

The present chapter presents the results of the quantitative online survey of SMEs representatives of the region of Blagoevgrad, Bulgaria and the Southeast Planning Region of Macedonia. The main aim of the survey was to identify the main factors that favor or hinder the development of innovations at local SMEs, as well as their specific training and other needs in relation to innovation (e.g. support, funding, learning formats, tools and content, etc.).

The online survey was implemented in the period April - May 2017 with the joint efforts of two expert teams – one in Bulgaria and one in Macedonia which were coordinated by both project partners – Association Business Information and Consulting Center – Sandanski and Centre for Development and Promotion "Promo Idea" – Strumitsa. The research in both countries has been conducted on the basis of an online questionnaire which was jointly developed by both research teams. It included 24 multiple choice questions that were uploaded to an online survey platform - Survey Monkey™. After the preparatory stage of translation and adaptation of the research tool was completed both project partners have disseminated the questionnaire to their extensive networks of stakeholders and representatives of the business community in both the region of Blagoevgrad, Bulgaria and the Southeast Planning Region of Macedonia. Targeted follow-up calls were also made in view of ensuring high level of participation while confirming that information will be treated confidentially and no personal data or information will be disclosed or be otherwise used except for research purposes.

A total of **64 respondents participated (30 of Bulgaria and 34 of Macedonia)** at the online survey of both target regions. Provided below is a summary of the results based on the structure of the online questionnaire and the questions that were asked. For easier visualization of the results, there are graphic charts, accompanied by comments, highlighting interesting data of the expressed attitudes and opinions of business representatives of the both target regions.

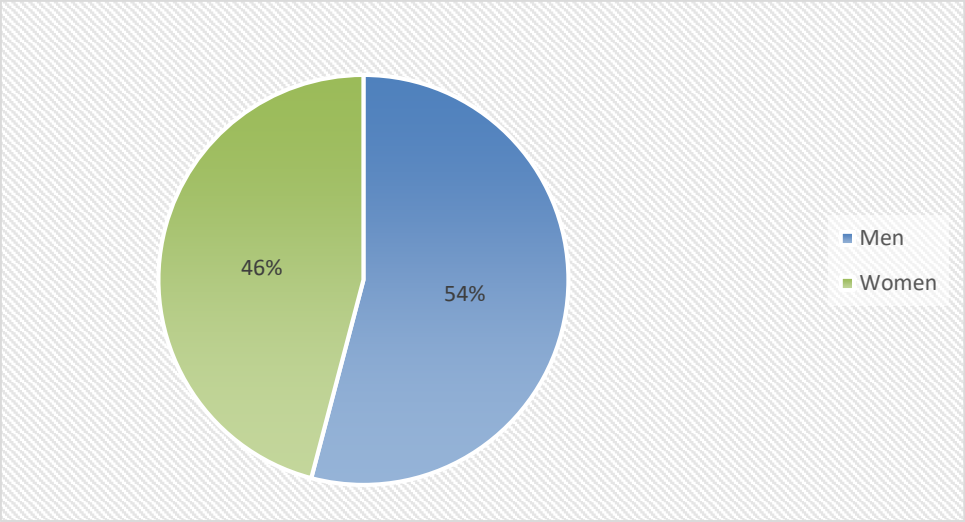
The overall summary and conclusions of research results are presented in Chapter 4 (General Summary and Conclusions) of the present report.

2.2 Summary of the results

The introductory part of the questionnaire aimed to gather some basic information on the profile of the participants in the survey as well as on their business' background and history. The interest to the topic of the survey – innovation for SMEs indicated that a lot of business owners are becoming more aware of the benefits of introducing innovations and novel practices, especially in regions such as Blagoevgrad and the Southeast Planning Region of Macedonia, where most enterprises consider innovation as something abstract, costly and irrelevant for their business. It is also important to state that the results of the two parallel surveys that were implemented in both target regions showed very identical results in relation to the specifics of the regional innovation environment and the technological development of SMEs.

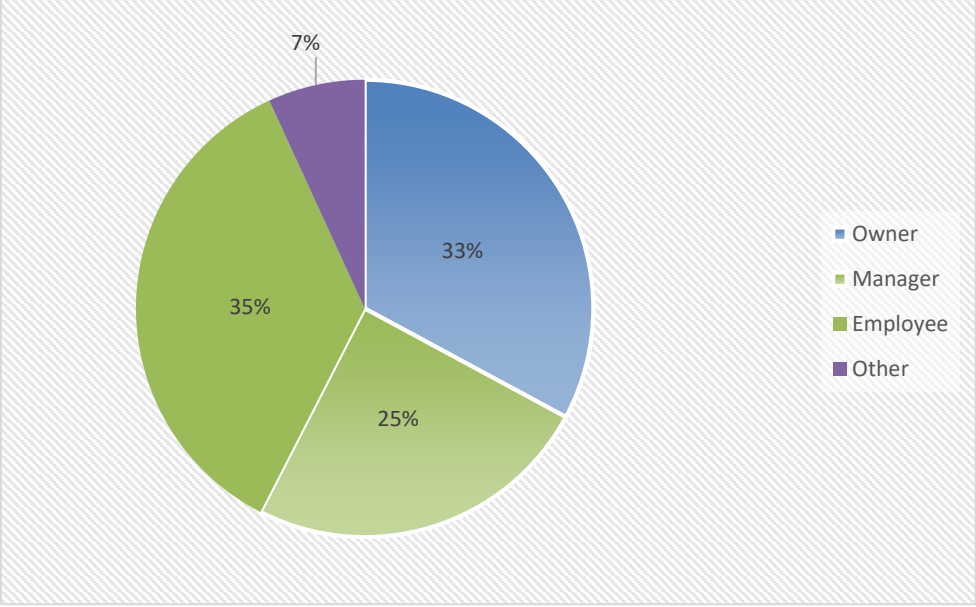
Q1: Gender profile of participants

There has been relatively balanced participation of men and women among the respondents. There has been a clear tendency outlined in national statistical papers that the majority of business owners and managerial staff in SMEs of both target regions in Bulgaria and Macedonia have been predominantly men. However, in recent years many women also undertake business management functions especially in areas like social care, non-profits, media and online commerce.



Q2: What is your role in the business that you own or work for?

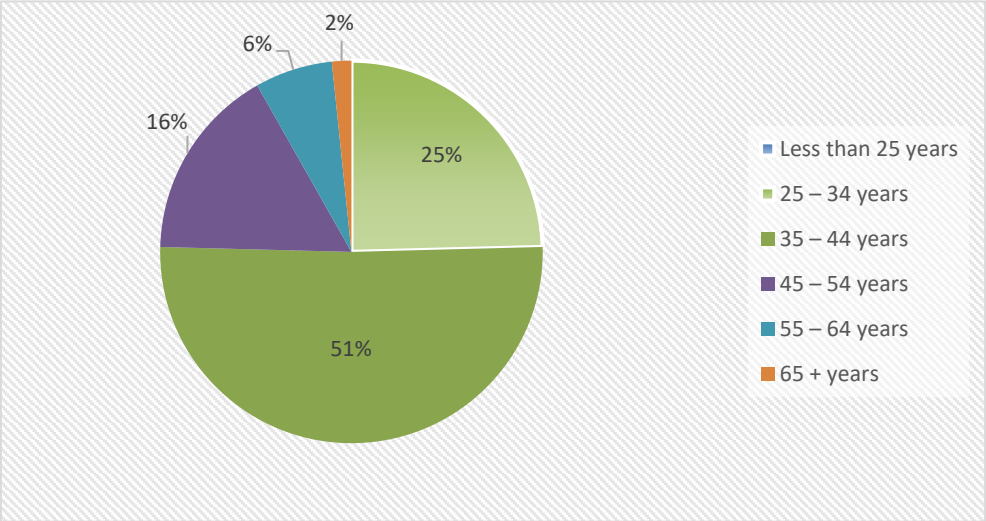
The question allowed for multiple responses. According to survey results, the majority of the the respondents (57.5%) indicated that they were either managers or owners in their companies. Almost one-third of participants in the survey indicated that they were employees. In Macedonia, 53% of the



respondents were employed in a company, while 38.2% were owners of a company, and 26.5% were managers (where multiple responses were possible);

Q3: Age profile of participants in the survey?

Overall, the vast majority of participants (75,4%) were in the age groups between **25 and 54 years of age**, whereas none of them **was less than 25 years old**. **The age group of 35 - 44 years** was mostly represented in the survey (50,8%) while only 6,6% of participants were above 55 years of age**.**



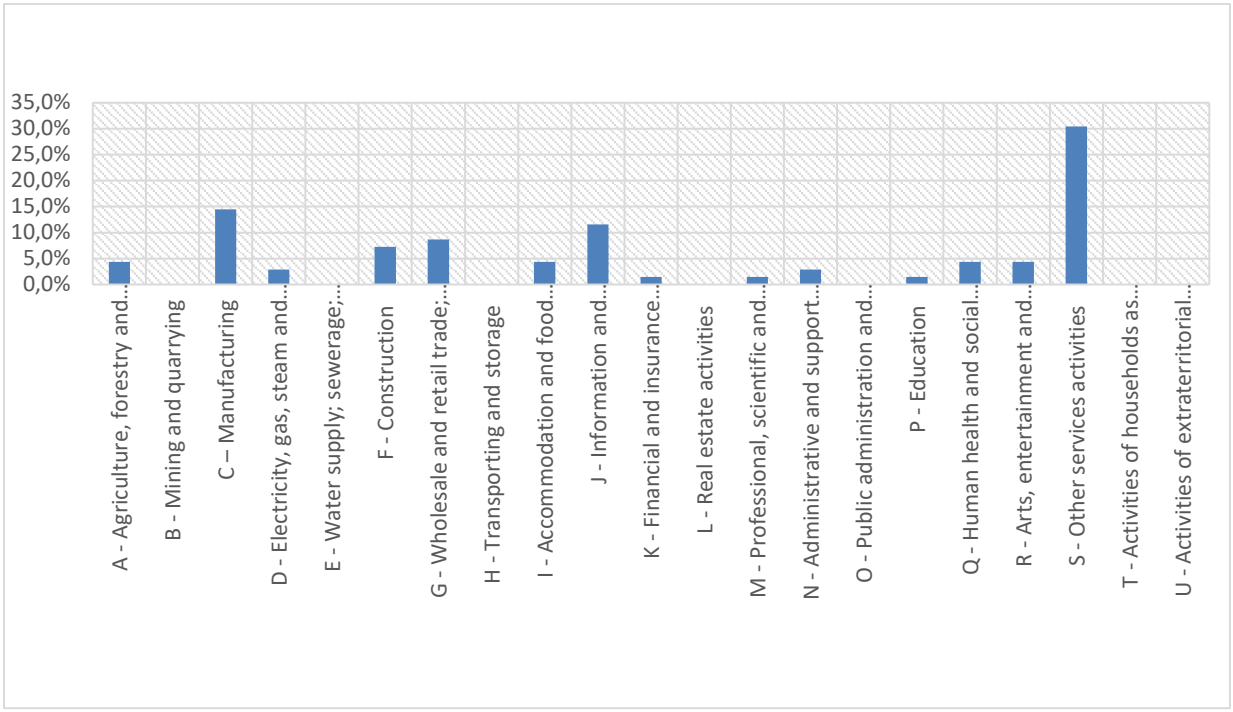
Q4: Where does your business currently operate?

The majority of participants in the survey (53.3%) were from the town of Blagoevgrad, which is the regional center of the District of Blagoevgrad. Almost one quarter of participants were from the town of Sandanski, where the Contracting Authority – BICC – Sandanski is located. There were also participants from other municipalities of the region such as Petrich (10%), Goce Delchev, Razlog, Simitli and Strumyani (3.3%). **For the Republic of Macedonia, 61.8% of surveyed companies are located in Strumica**, 17.6% in Gevgelija and 8.8% in Vasilevo. In general, the highest number of participants in the survey was coming from the most developed and economically active communities (e.g. the town of Blagoevgrad in Bulgaria and the town of Strumitsa in Macedonia).

Q5: In which industrial sector does your business/ company operates in?

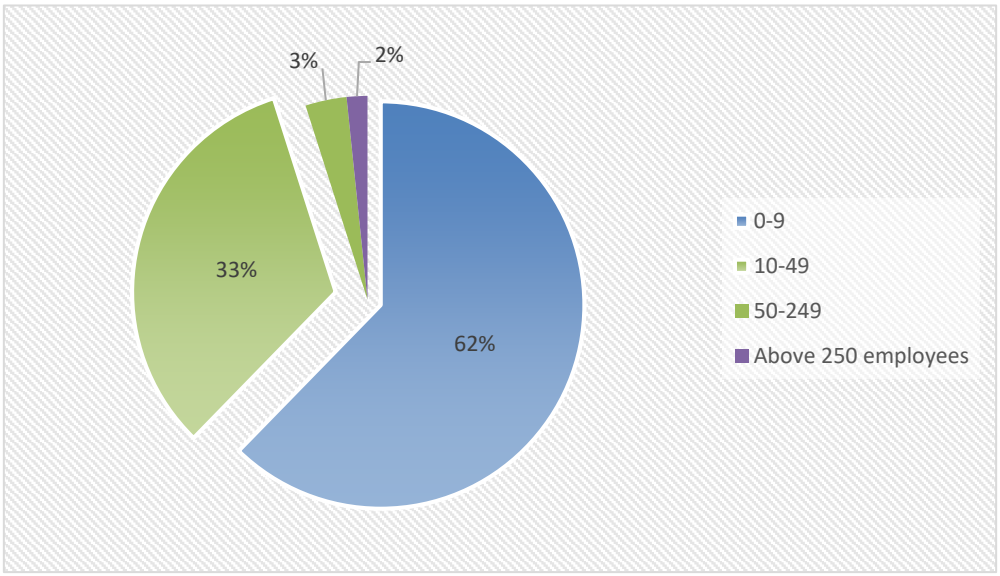
A large part of respondents **(30,4%) indicated that their company operated in the sector "Other services / activities".** One fifth of respondents were representatives of companies that were implementing their main activities in the field of "Manufacturing". The rest of the respondents were from the "Hotel and tourism sector", "Wholesale and retail sector", "Social and health services", etc. The results were more or less expected due to the fact that the "Light manufacturing" and the "Wholesale and retail" sectors are some of the key industries in the economy of the region of Blagoevgrad.

The results clearly indicate that the economy of the cross-border region of Bulgaria and Macedonia has specialized in sectors and activities which require comparatively low qualification and technologies (e.g. furniture production, textile industry, food processing, etc.) and which export mainly low added value products. Therefore, with only a few exceptions, the majority of local SMEs have low level of technological development and limited potential for applied research.



Q6: Number of employees

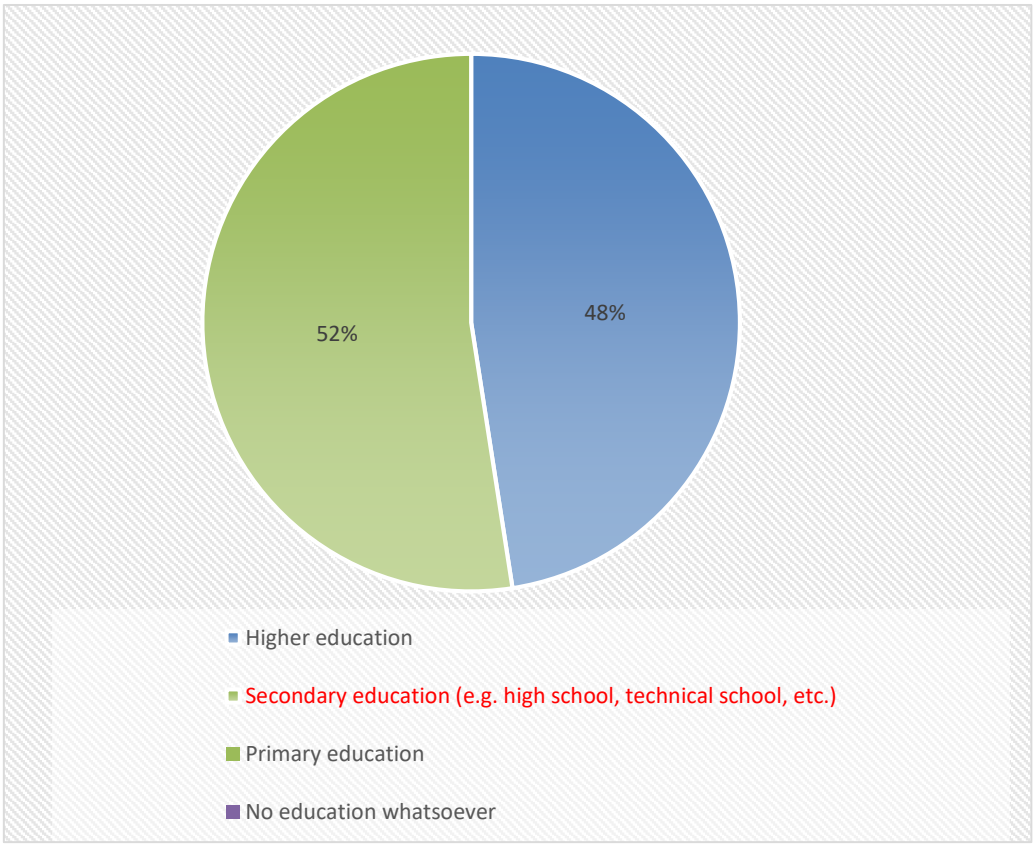
The results of the survey clearly indicate that the majority of companies in the region are micro enterprises (62,3%) which according to regional statistics were the backbone of the economy of the



cross-border region of both countries. A little more than 30% of the survey participants indicated that they either owned or were employed in a small enterprise (10-49 employed). Only 2 participants represented a medium enterprise (50 – 249 employees). One survey respondent represented a large company of Bulgaria,

Q7: What is the predominant level of education of the majority of the staff members of your company / organization?

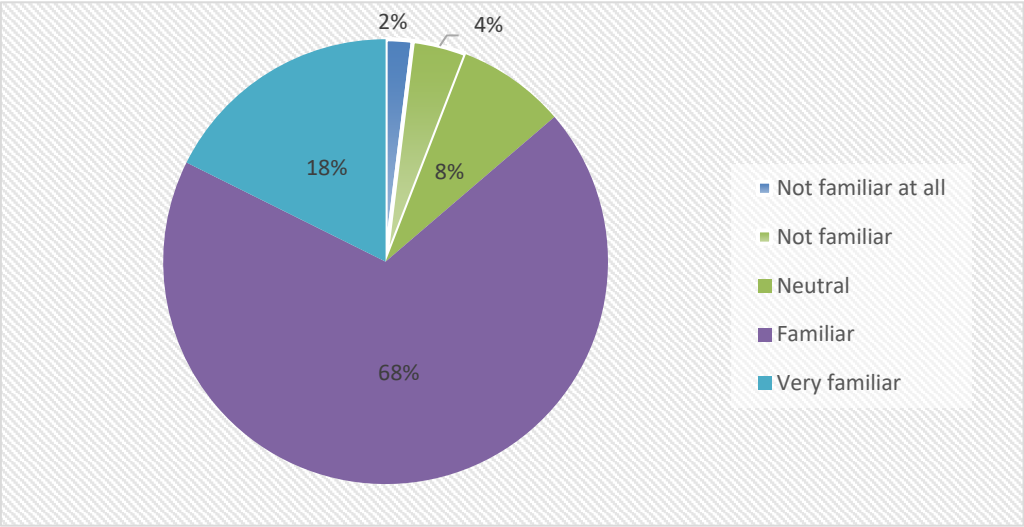
When analyzing survey data of Bulgaria it came out that the predominant part of participants were university **graduates (53%) and some 47% indicated** that they have completed a secondary education in either general high school or a technical education institution. According to data of the National Statistical Institute of Bulgaria, **the number of people aged between 25 and 64 years of age** with **higher education in the region of Blagoevgrad is 19.5%. 58.8% of the surveyed companies in Macedonia predominantly have employees with secondary education and 38.2% have higher education. None of the survey participants have declared primary or no education as their preference.**



The second part of the questionnaire was aimed at finding out more of the attitude of surveyed business representatives on innovation, the place of innovation at the company policies and strategies, as well as their overall confidence and preparednes to develop and introduce innovations in their companies.

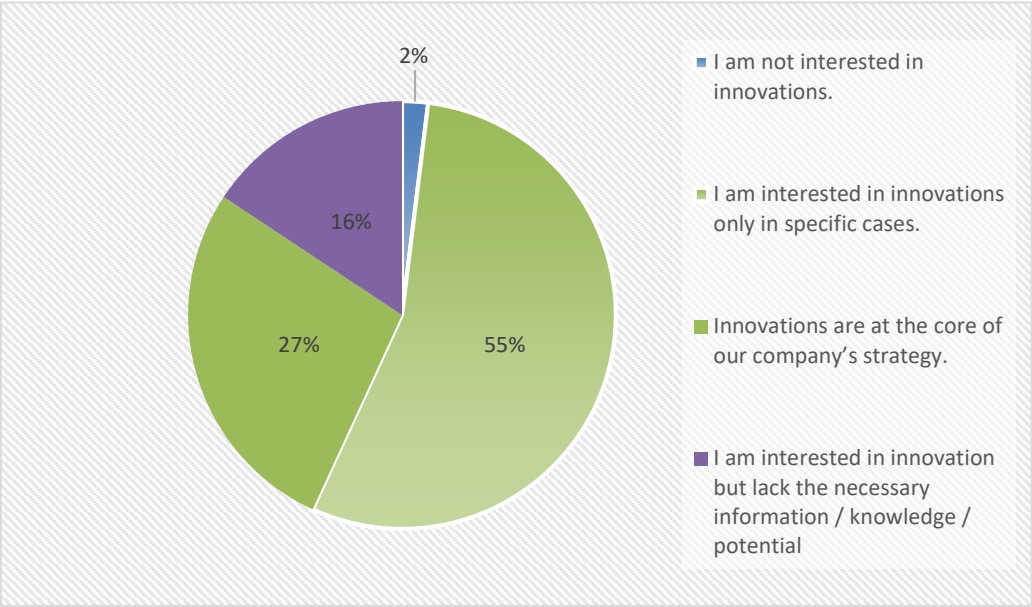
Q8: Are you familiar with the term "innovation"?

According to survey data, **9 out of 10 business representatives** in Bulgaria indicated that they were either familiar or "very familiar" with the term innovation and the specifics that it implies. **Only one of 24 respondents** that have answered the question has indicated that he/she was not aware of the **meaning of the term "innovation". In Macedonia, exactly 70% of the respondents declared that they were familiar with "Innovation"**, while 13.3% are very well acquainted, which speaks about the high level of familiarity with the term "innovation". Again, both regions show very identical results in terms level of awareness and attitude towards innovation.



Q9: How do you perceive innovation in relation to development of your company?

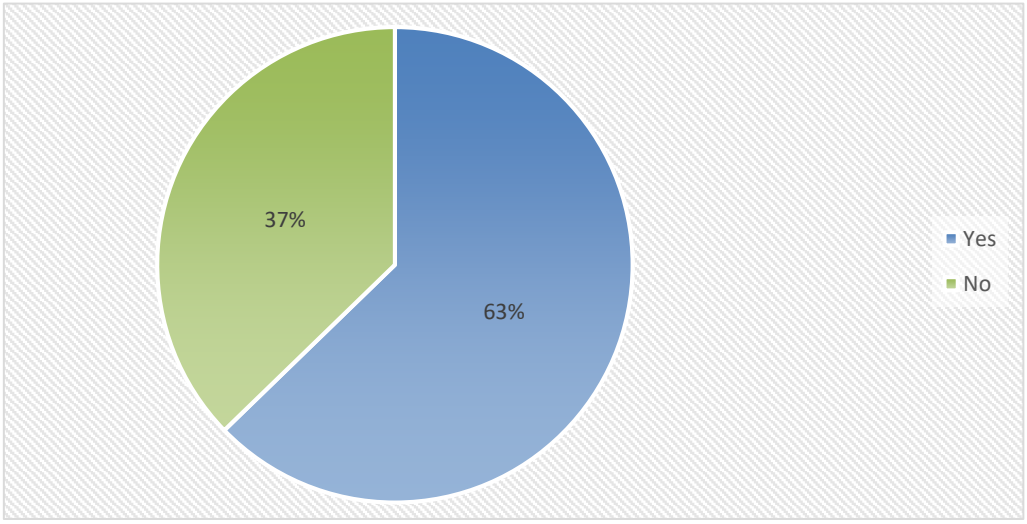
When analysing the results of the survey, it can be seen that **the more than half of all respondents (54,9%) were interested in innovations** only in particular cases. A rather suppressing was the fact that



almost one quarter (27,5%) of surveyed business representatives stated that innovations were at the core of their company's strategy. **Every 3 in 10 companies** answered that they were interested in innovation but lacked either the right information or the knowledge to implement it. Only one survey participant of Macedonia answered that the company that he/she represented **was not interested in innovations.**

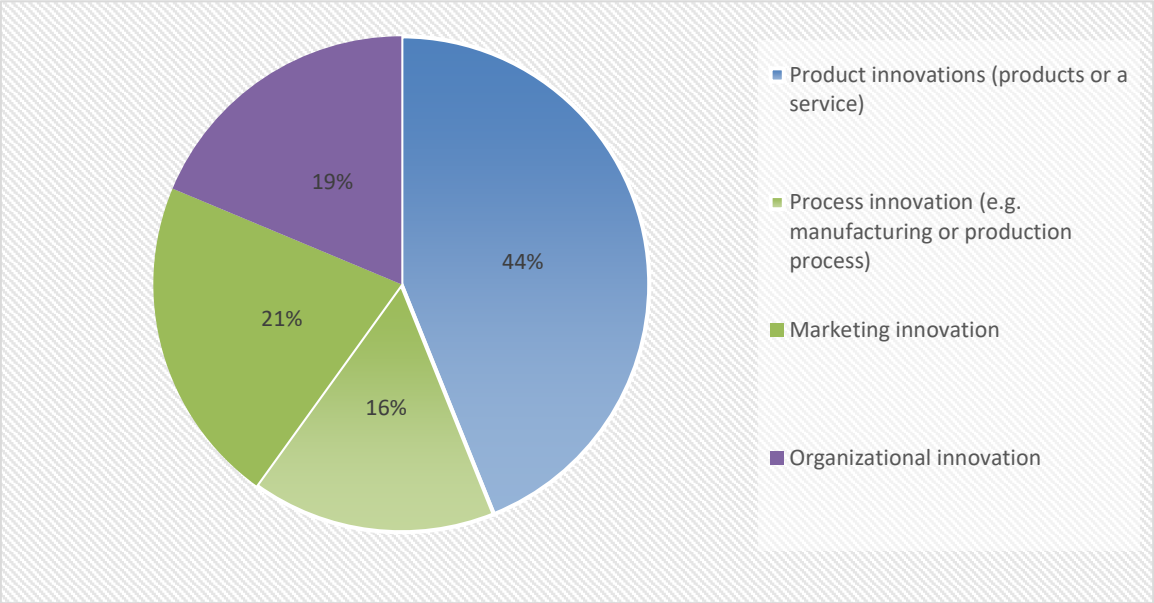
Q10: Do you consider your business/ business of the company where you are employed being an innovative one?

Slightly less than two-thirds of the respondents (62,7%) answered that they consider their company as innovative, while 37,3% of the respondents believe that their company is not innovative. Results were almost identical in both countries. This question was directly related to the following one where participants who have answered positively were asked to further clarify the nature of the innovation that they had introduced or were in the process of introduction at their companies.



Q11: If yes, what type of innovation you have developed or are currently in a process of development?

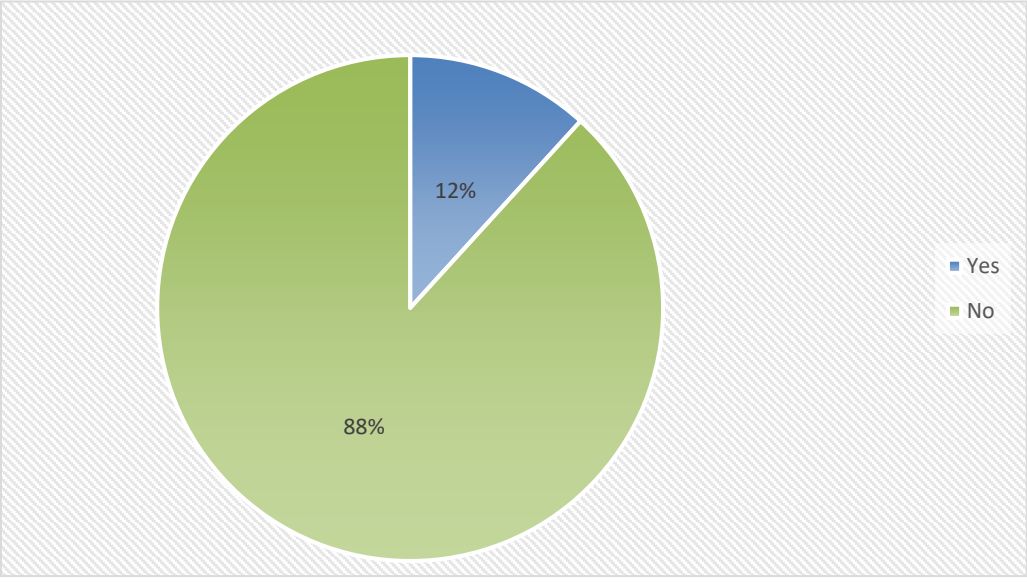
In companies which stated that are innovative, 52,2% of innovations refer to production (related to products and services) and manufacturing processes, and 34,9% are non-technological innovations, of which 18,6% are marketing and 16,3% are organizational innovations. **The results showed that an almost equal number of participants have stated that they were currently introducing a marketing or an organizational innovation (non-technological innovations).** When studying the individual responses of participants, we observed interesting descriptions of their innovative projects. **A company of Bulgaria was currently working on promoting "positive education" in schools of the region of Blagoevgrad. Another Bulgarian SME was developing a system for funding of innovative products via crowd-funding. Other companies have introduced other non-technological innovative solutions related to improving productions processes, work environment, etc.** A Macedonian SME was engaged in the introduction of new business models related to the production of ready-made wood products. The results are provided in the table below and again show complete



Q12: Does your company have its own innovation department or an employee that coordinates / manages the innovation processes?

According to survey results, when asked whether their company had an innovation department or a person that was in charge of the innovation processes / projects in their companies, **only 6 out of 51 respondents (11,8%) answered positively. The majority of surveyed SME representatives stated that they lacked special unit or a person that was responsible for their innovative endeavours.**

The percentage of companies with own innovation units was higher in Macedonia, where 16.7% of the companies that participated in the survey have indicated the availability of such department / employee who coordinates / manages the processes of innovation.



Q13: What, in your opinion, are the main barriers that hinder the introduction and development of innovations (including non-technological ones) in your company?

When asked of their opinion on the main barriers that prevent their companies of innovating, Bulgarian respondents in the survey highlighted **"Financial deficiencies"**, **"Lack of initiatives that foster cooperation / networking among the participants in the innovation process"**, as well as the **"Lack of access to qualified personnel"** as some of the major obstacles for their innovation projects or plans.

In the qualitative phase of the research, the interviewed business consultants stated that the specifics of the local business environment (i.e. specialized in low-tech activities, as well as the low productivity and creativity of labor force) as the main barriers towards the improvement of the innovation potential of local businesses.

Similarly, Macedonian respondents indicated the following five major barriers to introducing or developing innovations (including non-technological innovations) in companies are:

- Lack of access to qualified staff and staff with creative skills;
- Lack of initiatives that encourage cooperation / networking between different stakeholders participating in the innovation process;
- Lack of innovation management skills;
- Lack of finances;
- The high cost of introducing innovations.

Q14: At present how confident and prepared do you feel about planning, introducing and developing innovation in your company/organization?

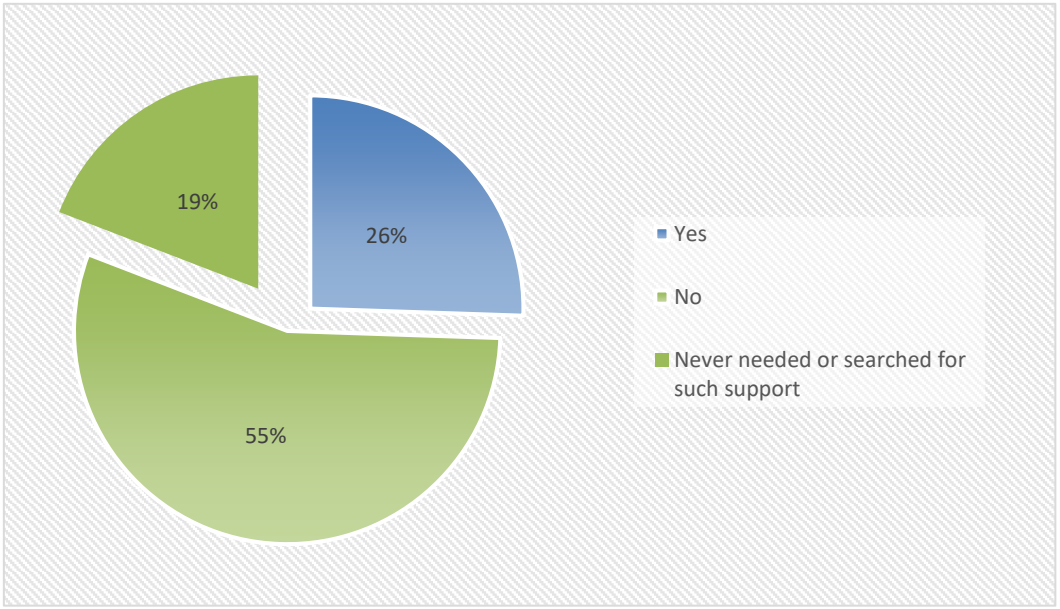
In terms of their confidence in developing and introducing innovation at their companies, the majority of Bulgarian respondents stated that **they would consider this at a later stage of their company's lifecycle** due to the fact that **they have more urgent matters to deal with at present (e.g. survival of the company, financial matters, etc.).** On the other hand, **SME representatives of both countries stated that they felt confident and had concrete plans to introduce innovative projects in their company**. The majority of companies underlined that the **lack of access to R&D infrastructure or knowledge was the least important barrier for their readiness / resilience towards innovation**. Every 9 in 10 representatives of SMEs acknowledged that their company needed innovation to grow and achieve sustainability.

The final third part of the online survey aimed to gather more information on the existing support and training needs SME representatives of the region of Blagoevgrad when it comes to innovation and innovative projects.

Q15: Are you aware of any firms / institutions in your region that provide support and specialized consulting targeted to innovation in small businesses?

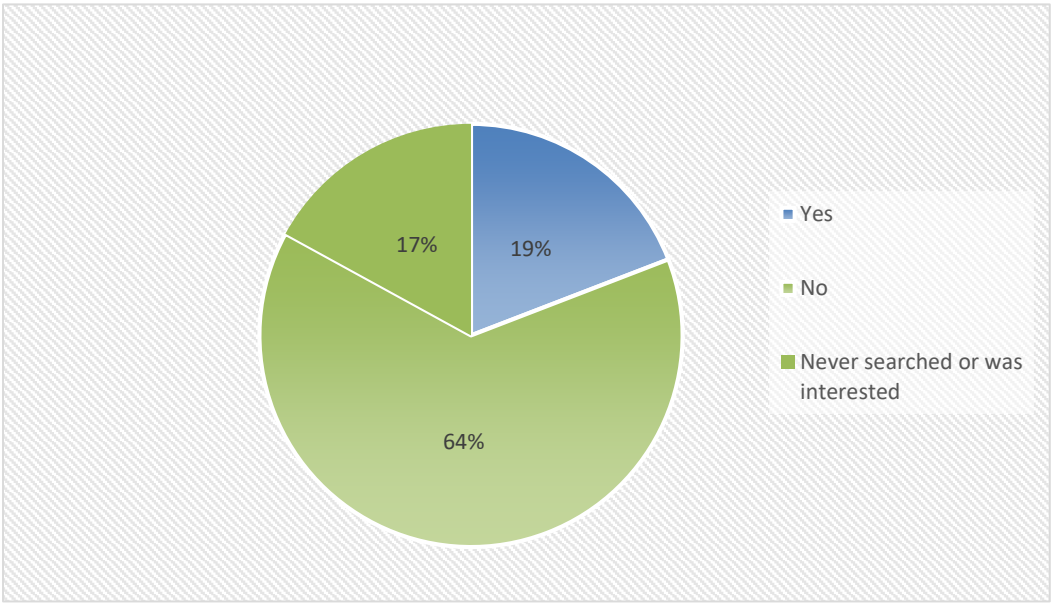
More than a half of all participants in the survey (55,3%) stated that they were not aware of any firms / institutions of their region that provided support and specialized consulting targeted to innovation in small businesses. The results to this question clearly showed the existing deficiency in

both available organizations and tools that were specifically tailored to the needs of the companies when innovation was concerned. In this regard, non-governmental, business-support and branch association should really focus on making their services more popular and accessible for SMEs of the region of Blagoevgrad (Bulgaria) and the Southeast Planning Region (Macedonia).



Q16: Have you received such support and/or consulting already?

The result of the previous question is further backed-up here as more than **63,8% of respondents of both countries have never received any support on matters related to innovation**. In comparison to data of the previous question the percentage of companies that were aware of the available support and tools, indicated **that they had received such support (19,1%).** Some **17% of respondents indicated**



that they have never searched nor were interested in obtaining information or advice related specifically to matters of business innovation.

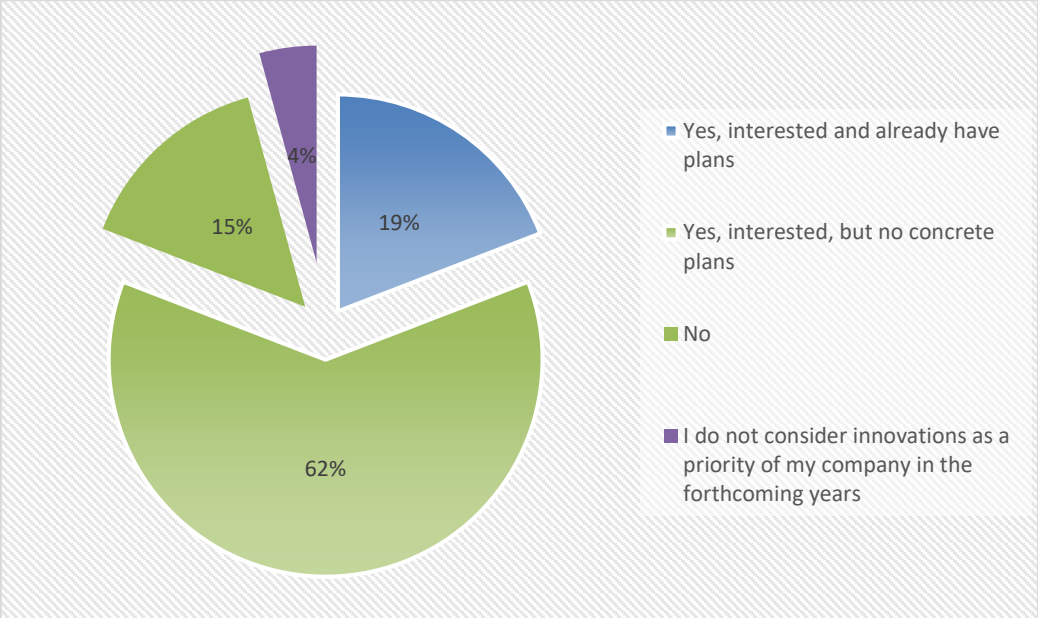
Q17: If yes, what was the source of that support?

Half of the respondents in Bulgaria (50%) indicated that they have received an advice / support / consultation from business support organizations or a private consulting company. One quarter stated that they have utilized the services of a private researcher and 30% of respondents shared that they have used a European project or other type of support to develop or manage their innovation project. **None of the surveyed business representatives indicated the Southwest University of Blagoevgrad** as a source of support in terms of R&D and innovation which clearly shows the gap between business and academia.

In Macedonia, the results were similar as from those enterprises that have received such support 3 out of 4 have utilized the services of either BSOs or private consulting companies. Only one company has applied for funding under an EU funded financial programme / instrument.

Q18: Are you interested in receiving support and consultancy regarding innovations and especially non-technological ones?

A positive trend of increased interest towards receiving support and advice in terms of business innovation is evident as **61,7% of respondents** declared that they were interested in receiving such specialized consulting service at a certain point of time. Almost one-quarter of the surveyed business representatives (19.1%) indicated that they had concrete plans in receiving support / advice / consultation for their innovative projects / endeavors. Only 2 survey respondents stated that their companies did not acknowledge innovations as a priority of their company's agenda.



Q19: According to your opinion what are the most important skills and competences that a person / entrepreneur should poses in order to develop innovations / manage innovation processes in a company?

This was a very important question which laid at the core of the **research phase of the project as it aimed to understand what skills and competences were preferred by SMEs representatives when it came to innovation management and development**. In general respondents seemed to point out as either "Important" or "Very important" most of the provided skills and competences. Nevertheless, the highest number of respondents considered that a person should above-all **organizational and managerial skills** if he or she is to successfully develop / manage innovation processes in an SMEs. Additionally, participants considered that **"Ability to take risks" (89,1.6%[51])** and **"Market knowledge" (91,3%)** as the most important skills for developing and/or managing projects related to innovations. An interesting fact, which came out of the survey, was **that the importance of technical (legal, tax issues) and R&D skills was neutrally approached** by respondents.

	1 Not important at all	2 Not very important	3 Neutral	4 Important	5 Very important
Ability to take risks	**0,00%**	**4,3%**	**8,7%**	**56,5%**	**32,6%**
Identifying business related strengths and weaknesses	0,00%	0,0%	17,4%	52,2%	32,6%
Planning skills	0,00%	2,2%	13,0%	50,0%	37,0%
Organisational skills	**0,00%**	**2,2%**	**8,7%**	**52,2%**	**39,1%**
Leadership skills	0,00%	4,3%	15,2%	52,2%	30,4%
Project management skills	0,00%	10,9%	13,0%	47,8%	30,4%
Soft skills (such as creativity, understanding and solving conflicts, orientation towards change, ability to identify opportunities, etc.)	0,00%	2,2%	15,2%	52,2%	32,6%
Technical skills (such as legal, tax and financial skills)	2,17%	6,5%	23,9%	56,5%	13,0%
Strong educational background and technological expertise	2,17%	13,0%	21,7%	50,0%	15,2%
Product/ service development skills	0,00%	8,7%	17,4%	54,3%	21,7%
Skills for commercialisation of products/services	2,17%	6,5%	15,2%	52,2%	26,1%
Market knowledge	**0,00%**	**0,0%**	**10,9%**	**54,3%**	**37,0%**
Research and Development skills	2,17%	10,9%	23,9%	50,0%	15,2%
Ability for team work	0,00%	4,3%	15,2%	60,9%	21,7%
Networking skills	2,17%	6,5%	21,7%	56,5%	15,2%
Knowledge on property rights, patents and trade marks	4,35%	10,9%	23,9%	50,0%	13,0%
Other, please specify					

[51] The percentage was calculated by summing-up scores provided for "Important" and "Very important".

Q20: According to your opinion what are the main motivators (internal and external) for introducing and developing innovation in your company / organization?

According to the majority of participants in the survey of both countries agreed that the main external motivator which drives the motivation of companies to become innovative was the customers' demands. In this aspect companies were mostly motivated to innovate or introduce something new to their products / services mostly if their customers demanded it. Additionally, the change in the market trends also dictated the need to innovate in order to remain competitive in a certain business field. **Managers and SME representatives that took part in the survey thought that the recognition of the society was the least important factor that would motivate them to innovate**.

In terms of internal motivators, participants in the survey of both countries agreed that the main motivation for introducing and developing innovation in their companies was the need to improve the quality of the products and services that were currently produced / offered by the company. Additionally, the need to develop new products and services was also mentioned as important in order to satisfy both the needs of the customers, as well as the present market trends. The "intensive introduction of technologies into the business environment", the "convergence of the various information and communication technologies" and the "structural changes in consumer demand" were the three most significant external factors which determined contemporary product, process, organizational and marketing innovations.

Q21: What would be your preferable learning tools in support of innovation development at your company?

When analyzing the results of responses to this particular question we found that when it came to innovation the most preferred learning tools for representatives of local businesses were **individual coaching/mentoring (80,4%), e-learning (73,9%) and blended learning (71,7%)**. In this regards it could be concluded that participants in the survey would prefer either to have a mentor / consultants that will guide and train them in the field of innovation or to attend an online learning class that would contain a lot of case studies of existing innovations.

Another important tendency that was highlighted by participants in the research was the lack of interest of business owners towards conventional learning methods (e.g. formal courses, hard copy textbooks and printed materials).

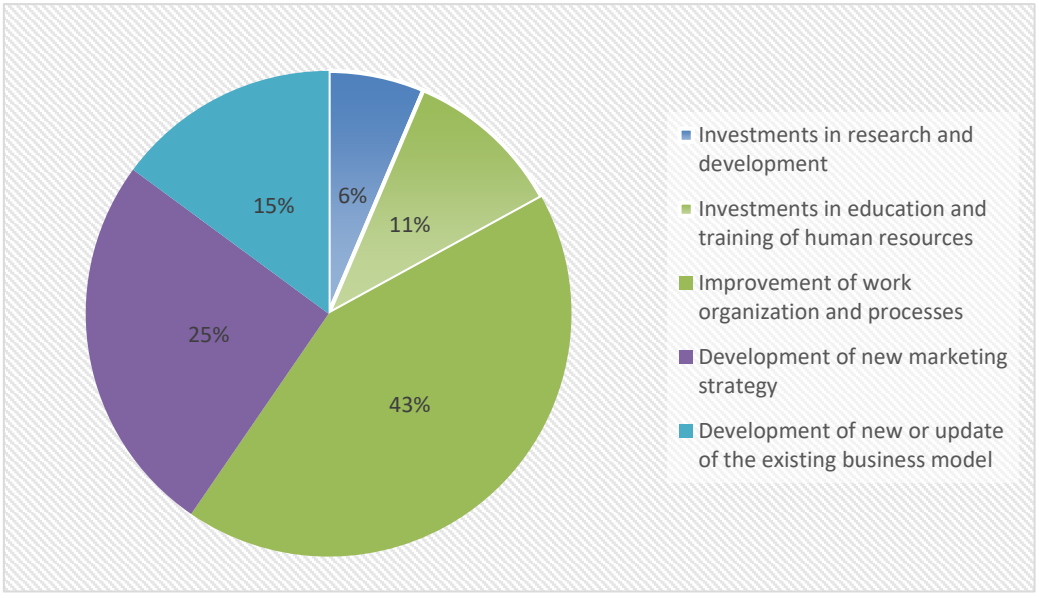
This was not the case in Macedonia, where many participants in the survey highlighted the traditional learning methods as appropriate and applicable to their needs. The later was further supported by representative of SMEs as well as by business consultants and practitioners in the area of business support and innovation during the open interviews who considered non-physical presence related training methods as more suitable for SME managers, due to their lack of time and constant engagement in the working process.

Nevertheless, many local businesses still seem to be unaware and non-experienced in participating at online trainings and other types of self-learning initiatives (e.g. webinars, e-learning platforms, etc.).

	1 Not suitable at all	2 Not very suitable	3 Neutral	4 Suitable	5 Very Suitable
e-Learning / On-line learning	**0,0%**	**8,7%**	**19,6%**	**54,3%**	**19,6%**
Individual coaching / Mentoring	**0,0%**	**4,3%**	**17,4%**	**54,3%**	**26,1%**
Case studies	0,0%	4,3%	30,4%	41,3%	26,1%
Networking	0,0%	4,3%	41,3%	41,3%	15,2%
Blended learning	**0,0%**	**6,5%**	**23,9%**	**54,3%**	**17,4%**
Workshops	0,0%	8,7%	23,9%	54,3%	15,2%
Traditional classroom training	2,2%	17,4%	39,1%	32,6%	10,9%
Self-test / self-assessment / quizzes	2,2%	13,0%	45,7%	30,4%	10,9%
Hard copy textbooks and printed material	2,2%	10,9%	39,1%	39,1%	10,9%

Q22: In your opinion what has contributed the most for the commercialization of your new products and/or services over the past three years?

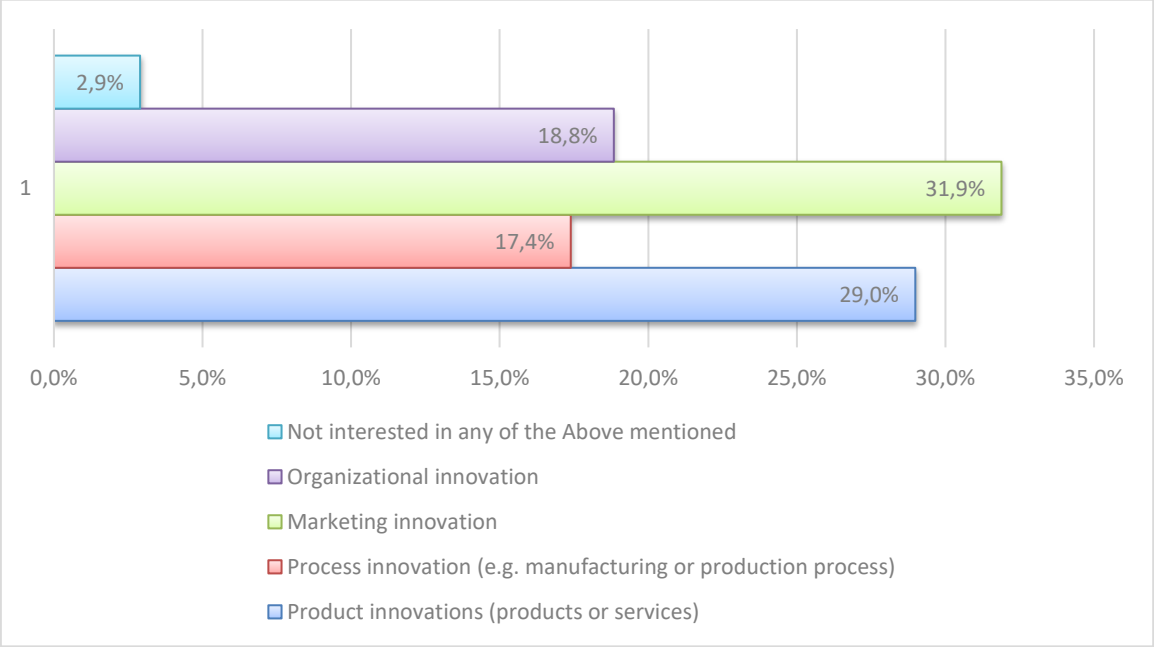
Almost half of the respondents (42,6%) stated that the **improvement of the work organization and processes** was the most important activity that aided their company in terms of increasing marketability and commercialization. **A merely 6% stated that investments in R&D have contributed for improving the commercialization of their products or services.** The results here indicated an interesting tendency which showed that **almost 68% of surveyed representatives of SMEs stated that non-technological innovations** (e.g. improvement of work organization, as well as the development of



a new marketing strategy) has contributed significantly for the improvement of their overall competitiveness.

Q23: Based on your personal interest and your company's main field of operation, in what type of innovations would you/your company be interested to introduce and develop in the future?

The closing question of the survey was one that allowed multiple choices for participants. It aimed to analyse the interest of local SMEs, based on their main activities, on the type of innovations that they would like to develop or introduce in the near future. According to results, more than half of the respondents (51,2%) would be interested in developing non-technological innovations (i.e. organizational or marketing innovations) in their companies in order to improve their competitiveness and expand their markets. In this regards, they can benefit a lot from the activities, events and products of project "Improving competitiveness of SMEs of the CB region by fostering and promotion of non-technological innovations".



Part 4

The closing section of the questionnaire aimed to gain more information from respondents on their particular interest in the activities of the project. **The majority of respondents (733%)** stated that would like to receive more information about the results, forthcoming events and activities of the project. However, **only 13 respondents out of 30 participants in the survey have provided a valid email address** and will be automatically subscribed to news and updates related to the project implementation. In general local businesses, by being overwhelmed with information and training opportunities were reluctant to give out their contact details. However, it is encouraging to acknowledge that almost 75% of participants in the survey have indicated their willingness to learn more about the project and to receive news and updates on forthcoming activities and events related to the main topic of the project, i.e. "non-technological innovations".

3. Results of the qualitative research phase

3.1 Introduction

The qualitative interviews that were conducted as part of the primary research process aimed to gain more in-depth, subtle and rather qualitative feedback on the attitude of members of the target group (i.e. SME managers, business consultants, policy makers, R&D institutions and academia) and other stakeholders on the current innovation environment in the cross-border region of Bulgaria, as well as the particular needs and deficiencies that both the local environment, external and internal factors were exerting on the process of introducing and developing innovations by local small and medium sized enterprises (SMEs).

As initially planned, in accordance with the approved methodology of the research a total of 10 interviews (5 in each country) were conducted with members of the target groups of the region of Blagoevgrad (Bulgaria) and the Southeast Planning Region (Macedonia). There were two interview templates that were followed by the external expert that conducted the open discussions – one for business advisors / policy makers / R&D institutions and the other for SME managers.

The specific questions to the first target group were related to policies, measures, networks, financial instruments and incentives, while the specific questions for the second target group were related to understanding and introduction of innovations with a specific section related to non-technological innovations. The same questionnaires were utilized by the research team in both countries throughout the entire research process.

The interviews were conducted in the period May – June 2017, either in person or through Skype after a preliminary arrangement between the interviewer and the interviewee.

3.2 Summary of the results

The results of the interviews are provided as a summary that follows the questions included in the interview templates that were utilized by the expert researcher's team during the research process. The overall summary and conclusions of results are presented in Chapter 4 (General Summary and Conclusions) of the present report. The template of the interview guidelines (for both target groups) are provided as annexes to the present report.

In Bulgaria, three participants in the interviews were pre-selected professionals and long-term experts in the field of local and regional economic development, support to business/ small and medium sized enterprises (SMEs) and education on innovation with various expertise and experience. Two participants in the interview were Managers of local SMEs.
Similarly, in Macedonia three participants in the interviews were pre-selected professionals and long-term experts in the field of local and regional economic development (LRED), support to business/ small and medium sized enterprises (SMEs) and education on innovation with various expertise and experience. Two participants in the interview were Managers of local SMEs.
The introductory part of the interviews aimed to either gain more information on the professional background and experience of experts in providing consulting/ training services to entrepreneurs/

SMEs in the field of innovation or present brief profile of company managed by the respondent and main barriers for their development. The professional profile of interviewees included business consultants, business support organizations and a university lecturer in marketing and economy, as well as 2 managers of local companies working in high-tech industries (electronic and electrical equipment) of Bulgaria and 2 managers of companies related to the food sector (machines and supplies for food processing companies and store for healthy food) of Macedonia.
Most of the interviewees had extensive experience in the provision of consulting services to SMEs on various subjects of business management and development such as:

- ✓ Human resource training and management;
- ✓ Financial, accounting and business planning services;
- ✓ Financial management;
- ✓ Banking instruments consulting;
- ✓ Project management and development;
- ✓ Specific business related legal consulting;
- ✓ Start-up consulting;
- ✓ Business diversification;
- ✓ Organizational consulting;

In addition, the representatives of the business that were interviewed in the research process had experience in implementing certain technological and non-technological innovations at their companies.

3.2.1 Specific features of the local business environment

General comments on the local business environment and the attitude of local SMEs towards innovation

In Bulgaria, according to interviewees as being in a strategic geographic location (in a border region with Greece and Macedonia) the region of Blagoevgrad has considerable potential for development of different business initiatives. In addition, the proximity (both in terms of logistics and distance) to the capital city of Sofia provided good opportunities for boosting the local economy. However, as being part of the Southwest Planning Region, Blagoevgrad District has suffered greatly from the regional imbalances which have accumulated even further in the past several years. **The concentration of economic, human and financial capital in the city of Sofia has increased the economic pressure on the region.** The town of Blagoevgrad, remained an "Iceland" of economic development in comparison to other smaller communities in the region. In addition, smaller communities such as Sandanski, Bansko, Razlog and Gotse Delchev have developed rather well due the utilization of their tourism potential. Other municipalities such as Petrich and Simitli have developed as a result of their location – near the border or close to the main transport infrastructure (i.e. E-79 main road). **The presence of two renowned universities in the region – the Southwest University and the American University in Bulgaria which provide quality education to more than 30000 students has brought additional economic benefits for the region. Population tendencies in the region were also positive in comparison to other regions in the country.**

On the other hand, the interviewed experts have expressed their concern of the fact that the volume of the s.c. "grey economy" still prevailed over the number of "real businesses" that had the potential to bring added-value to the region, attract investments and to improve the overall quality of life. In comparison to other developed regions Blagoevgrad, lagged behind in terms of economic development in comparison to the existing potential and opportunities. **There were no industrial zones (economic zones), nor developed long-term policies in support of business, investment promotion policies and incentives, etc.** The sporadic efforts of local administrations to plan activities related to business support remained only on paper and have been declared mostly in period prior elections (e.g. development of strategic documents for business support and economic development at local level, tax incentives, priority sectors, logistic support, logistic centers, local and regional trade shows / exhibitions, etc.). **According to interviewees, the business support sector in the region (e.g. accounting, legal and financial consulting) was well developed** and provided a solid basis for the establishment of new companies and the expert support of the existing ones.

In Macedonia, experts from BSOs, academia and local and regional authorities provided a brief overview of the Southeast planning region. According to their description, the region is consisted of ten municipalites. According the data for 2014, 8.4% of the total population in the country live in the region. The region has a total area of 2.835 km2, or 10.9% of the total area of the country, with a population density of 63.2 inhabitants/km^2. The average age of the population is identical to the national average of 38 years.
The South-east region had the second highest employment rate of 52.9% compared to other regions in 2014. With an unemployment rate of 20.8%, the region is far below the national average of 28%.
In 2013, the South-east region participated with 9.2% in the country GDP. When compared with the average GDP per capita of the Republic of Macedonia (index = 100), the South-east region has an index of 109.6 and it is a third region after Skopje region (143.5) and Vardar region with 110.6. The regional GDP per capita is 4334 EUR.
The region had the potential for development of SMEs and there are sufficient educational institutions with appropriate curricula in the field of business. From the other side some experts stated that entrepreneurs lack sufficient capacities and finances to manage the business. A large number of SMEs tend to grow and develop by introducing both technological and non-technological innovations.
The main factors that hinder the development of Macedonian SMEs in the target region were external factors such as price changes, economic environment and shortage of labour force with appropriate qualifications and skills.

SME managers of Bulgaria were asked to provide a brief profile of their companies and the main factors / barriers that hindered the development of their company over the past several years. **Interviewed representatives of SMEs identified the lack of business opportunities, as well as the lack of qualified personnel as some of the main constraints that hindered their development over the years.** In addition, the strong competition of big foreign companies (e.g. big food and construction equipment chains), as well as pressure from Asian producers and cheap but low-quality imports were also identified as some of the major obstacles that were currently present not only for local businesses but also for Bulgarian SMEs in general. **Interviewed SME managers expressed their concerns of the**

existing discriminatory financial and support policies for SMEs of the region of Blagoevgrad which resulted from the merging of the district into the bigger Southwest Planning Region. In accordance with the financial rules for the period 2014 – 2020 of the European Structural Funds and included financial mechanisms (i.e. Operational Programmes, etc.) enterprises of the entire SWPR (including the District of Blagoevgrad) have been currently receiving the same amount of grant percentage as SMEs located in the capital city of Sofia. The co-financing rate for beneficiaries of the Southwestern region, which included the districts of Sofia city, Sofia region, Blagoevgrad, Pernik and Kyustendil, was 25% lower than that in other regions. Micro and small enterprises were currently receiving 45% and medium-sized companies were capped at 35% of grant funding. For all remaining five regions the percentages were between 70% and 60%, respectively. **According to interviewed experts, the inclusion of Blagoevgrad region together with Sofia region in one region represented a real harm to the local businesses as it creates conditions for unfair competition and further interregional imbalances.**

According to interviewed experts of business support organizations and other stakeholders, in general local companies were aware of the term "innovation". They ere interested in innovation as they related it to the available funding of the European Structural Funds in support of innovation and SMEs in general. **Many local companies would state that they were aware of the true meaning of innovation, however the reality and the practical experience of business consultants and experts in economic development showed that only a few of local businesses were actually aware of what the term innovation really implied.** The interviewed business consultants and SME managers shared a common opinion that the local environment in the region of Blagoevgrad **was not prone to innovation nor creativity which laid at the core of innovation.** According to some of the interviewed business experts, companies of the region have developed their creativity skills with a negative charge related to finding ways to avoid laws and taxation and not to seek methods and to develop tools that would improve their competitiveness and sustainability. **In this regard, there should be more information and awareness raising campaigns among SMEs in order to improve their knowledge and skills in modern business practices and tools to enable and unlock their true entrepreneurial potential.**

Interest of local SMEs to receive advice / consulting / support related to innovation

The question was answered by all interviewees. **In Bulgaria,** both target groups of interviewees shared different opinions. In general, the interest of local businesses varied according to the different economic sectors (e.g. companies of the service sector were the least interested in innovations) based on the established traditions in the field of entrepreneurship in each sector. In Blagoevgrad Region, the predominant number of small and medium enterprises were carrying out their activities in the field of outsourcing of financial and accounting services, transport services, hotel and restaurant management, agriculture, etc. **Given the structure of the local economy and the fact that almost 94% of all companies were micro enterprises their interest was focused mainly on the introduction of organizational and some basic and very common marketing innovations (e.g. online commerce, social media marketing, branding, etc.).** In general, all interviewed business experts agreed that SMEs were generally interested in innovations. Moreover, there has been an increase in the number of SMEs of the region that were seeking support in relation to innovation and consulting in the field of

innovation. However, this was due mostly to the available financing from the EU Structural Funds under the Operational Programme "Competitiveness and Innovation" and Operational Programme "Human Resources Development". **Another rather negative trend that has been forming in the past several years and that was highlighted by participants was the lack of trust towards business consultants in general. This was due to the high number of consulting companies and the increasing bad practices in the field of business consulting.**

According to the interviewed SME managers they would like to receive more and competent information on the available funding instruments that could boost their competitiveness by modernizing their equipment, enhancing their organizational structure and boosting their marketing performance. They have also expressed their lack of trust to business consultants as they had negative experience with some consultants over the past programming period. **In any case, they have also stated the fact that there are trustworthy business support organizations in the region of Blagoevgrad that they could rely on in case some information or advice is needed.**

In Macedonia, according to interviewees there was an agreement that interest of local SMEs exists. However, some experts believe that there is no sufficient interest of local SMEs and that they are not ready to spent sufficient time on capacity development. The expert from the BSO, confirmed that they have had several cases where SMEs themselves asked for training on certain topics or advice how to cope with certain challenges that they encounter in their day-to-day operations. These requests sometimes have an innovative character, but in some cases these requests are more related to problems that require coordination between institutions or advisory from particular institutions or experts in a given field. Managers of SMEs are primarily interested in receiving information about all organizations and funds that could support SMEs in any way. They have expressed major interest for financial support, advice and information on opportunities for funding from different funds.

Main challenges when working with/ consulting / training SMEs from the region in the field of innovation

This question was answered only by the experts from BSOs, academia and local and regional authorities.

All Bulgarian interviewed experts shared a common opinion that SMEs of the region were indifferent and unmotivated to participate in trainings and activities related to improvement of their knowledge and skills in a certain topic. When consulting was concerned, interviewees stated that most SME owners in Bulgaria would seek advice and assistance through personal connections and contacts such as other family members, friends, relatives, business partners and even employees rather than a professional consultation on a certain topic. Nevertheless, this rather negative trend has been slowly changing over the past several years with the emergence of younger managers and the occurring change in the ownership of many family companies of the region (i.e. change to younger generations). **According to all interviewed business consultants in Bulgaria, business owners and managers of younger generations seemed more opened to external assistance and support.**

As far as innovation consulting was concerned, currently the interest remained rather low but most of the interviewed consultants did believe that in time it will increase. They would relate the lack of interest to the insufficient information on the topic as well as to the relatively low level of development

of local enterprises which had far more important problems to solve than the introduction of innovation or novel practices (i.e the perception that new things are expensive, unpopular and difficult to implement).
They also highlighted the fact that SMEs nowadays were constantly "bombarded" with all sorts of information, offers and promotion and that it was difficult for them to tell the difference between the real and misleading news/information/offer.
Another challenge that was pinpointed by interviewed business consultants was the specific mindset of local entrepreneurs who were resilient to change and new technologies / tools / practices. A good example to illustrate the current state of the **majority of small businesses** of the region of Blagoevgrad could be illustrated with expressions like: ***"I know my business best"***, ***"I do not trust outsiders to tell me what to do in my business"***, or ***"I will cross that bridge when I come to it".***

According to Macedonian participants in the interview, the main challenges were related to: the insufficient interest of SMEs to participate in trainings, and the lack of time to participate in activities that are not directly related to their daily work. It was sometimes difficult to convince SMEs that any new information and new knowledge/ skills are an opportunity to make progress with the operations and increase profits, which is their main goal. **Additional challenges mentioned were to understand the real needs of SMEs for consulting and to choose the right topics for advisory depending on those needs.**

General perception of SMEs of Blagoevgrad region on innovation and awareness of entrepreneurs on the benefits of introduction of innovations in their companies

This question was answered by all participants in the interviews**. In general, according to the practical experience of interviewed business consultants and stakeholders in Bulgaria there were several companies of the region of Blagoevgrad (mostly of the technological and ICT sectors) that were aware of innovations and have been developing and introducing innovations on regular basis.** However, still the number of such companies is still very small as the local business environment has been dominated by low-tech and service sector companies. All interviewed business consultants stated that local companies had the urgent need for investing in innovation. However, they did not realize this need as being urgent and important for their business. SME managers on the other hand, confirmed that they were aware of what "innovation" implied and stated that they could tell the difference between innovation and invention. They were also aware of the benefits that innovation brings. During the interviews, both interviewed SME managers were able to pinpoint some of the main benefits of innovation**. However, they stated that the majority of local entrepreneurs were not familiar with the exact meaning of the word "innovation", "Innovative business", etc., nor they were "truly aware" of the real benefits and importance of innovation for the improvement of the competitiveness of the company, market expansion, sustainability, etc.**

Macedonian business consultants were unanimous that there was an agreement about the understanding of the term innovation **as any novelty in the work that will facilitate or improve the**

way a company operates. However, there was a slight discrepancy in the perception of experts vis-à-vis perception of the SME managers about the awareness of entrepreneurs on the benefits of introduction of innovations in their companies. **From one side, experts believed that entrepreneurs were not sufficiently educated about the innovations, and that they do not have real understanding why innovations are needed and what are the potential benefits.** They had perception that entrepreneurs do not think sufficiently to introduce innovations which in the modern economy is a must for survival and business development. **From the other side, SME mangers confirmed that they are aware of the innovations and the benefits they bring.** SME managers state that every company should be innovative in something in order to succeed. They state that non-technological innovations have been part of their daily work in the company since long time bringing positive results.

Current situation with development of innovations in the companies

This question was answered only by the interviewed SME managers. **In general, Bulgarian interviewees stated that they have introduced both types of innovation in their companies**, as one of the companies has been currently in a process of developing a project proposal under the Operational Programme "Innovation and Competitiveness" 2014 – 2020 related to the development of an innovative product for fire prevention. The second company has introduced an organizational innovation by introducing a fully operational Quality Management System under EN ISO 9001:2008, EN ISO14001:2004, BS OHSAS18001:2007, as well as some technological innovations related to the coating of the electrical components that it has been producing. In addition, in 2007 the company has implemented a complete revamping of the manufacturing process through the expert / consulting assistance of Senior Experten Service – a German non-profit that provided consulting services to SMEs across many countries in the world.

In Macedonia, the interviewed managers acknowledged the fact that they introduce both technological and non-technological innovations in their companies. They were also able to quickly come up with examples from their work. For example the company that was producing machinery and supplies for food processing has introduced new types of foils for food vacuuming (technological innovation). They have also embarked on non-technological innovations, and in particular in marketing, by complementing the promotion not only through advertisements and fairs, but also by organizing various in-house events where all interested customers visit their company.
The other company that sold healthy food has lately introduced new product range of juices according original prescription (technological innovation). They have developed a non-technological innovations by promoting their store not only as a place to buy, but also as a place where all customers of healthy food can meet, have interesting conversations, get new friends, share and exchange tips on nutrition and recipes.

3.2.2 Main factors that support / hinder innovation

The second part of the open interviews aimed at receiving some general comments by participants on the main factors / aspects that would support or hinder innovation. The questions were asked to both

business consultants and SME managers in order to get a clearer picture on what are their specific needs and motivations when it came to innovation promotion, development and management.

Main incentives (internal and external) that may foster the introduction and development of innovation in local SMEs

In general, all interviewees in both Bulgaria and Macedonia shared a common opinion that the main factors that could increase the innovation culture of local SMEs were related to the improvement of the general business environment in the region. Such improvement could result from the following pre-conditions:

- Increased customers demand;
- Increased investments;
- Improved educational system and environment in the region;
- Facilitated access to information and competent advice for SMEs;
- Organized various events, trainings, cooperation and brokerage events, local, regional and cross-border trade fairs;
- Provided external incentives for constant improvement of the qualification of staff in SMEs, internships, staff-exchanges, etc.
- Reduced gap between business, research and academia;
- Promoted lifelong learning;

According to interviewed business experts, the first and foremost measure in order to increase the innovation capacity of local SMEs was related to the change of the mindset of local entrepreneurs by keeping them adequately informed on the various opportunities and benefits of innovation. In this regard, market standards such as ISO should be marketed among local SMEs not only for the purpose of the certification itself, but also for ensuring the quality management in their everyday activities. According to some of the interviewed experts, local companies were afraid of ISO certification because they would relate it to paperwork, more administrative burden and additional staff to manage it. **Therefore, this negative image and perception should be changed so that local enterprises could understand that by introducing a certain certification or a quality management system in their companies, they would be receiving an advantage / innovation in the form of a proven benchmarking tool and a way / method to manage the processes more efficiently.**

According to interviewed managers of Bulgarian SMEs **the access to various funding instruments as well as their flexibility and adaptability to the needs and possibilities (both technical and financial) of businesses** of the region of Blagoevgrad was considered as one of the main incentives that could improve their innovative potential. Current call for proposals under Operational Programmes of Bulgaria **should be targeted towards viable projects and marketable ideas that could bring additional benefits and added value to local communities.** The administrative burden should be also decreased as special attention should be provided to the development of more electronic services in order to remove red tape**. Another important incentive that could bolster the innovation potential of the region in general could be the organization of more entrepreneurial business contests as well as the identification and promotion of success stories of innovative companies of the region.**

Main factors (internal and external) that hinder the introduction and development of innovation in local SMEs

In Bulgaria, all interviewees agreed that the main barriers that hinder the introduction and development of innovation in SMEs of the region were related to the specifics of the local business environment which was determined by the constant shortage of finances to invest in business development, as well as the increased deficit of qualified (and motivated) staff. Another important obstacle, as stated above was the specific mindset of local entrepreneurs who were not willing to invest in improving the quality of human resources that were engaged in their companies. The majority of local businesses lacked any strategic planning skills as most of them would rely on day-to-day management and survival of their company. Furthermore, this would include the complete lack of innovation strategy, not to mention an innovation department, nor an employee to oversee the innovation processes. Other important factors as mentioned above were the resilience to change of the majority of local entrepreneurs.

SME managers highlighted some internal factors that hindered their innovation endeavors, such as high costs related to R&D or the revamping of the organizational / production processes.

In Macedonia, all interviewees agreed that the two main factors that hinder development and introduction of innovations in the local SMEs were: **(1) insufficient finances and (2) lack of time and appropriate staff in the SMEs dedicated to managing innovation process.**

Other negative factors that were mentioned by the experts were:

- No interest to monitor new trends,
- An obsolete (traditional) way of managing the company,
- Inexistent cooperation between SMEs and educational institutions,
- Lack of experience in managing innovation processes,
- Negative culture towards change, etc.

Actions needed at local / regional / national level in order to foster the development of innovations (including non-technological ones – organizational and marketing) in local businesses

An interesting proposal came from one of the interviewed business consultants in Bulgaria who stated that constant awareness raising campaigns are needed in order to "infest" local companies with the idea that innovations are modern, efficient and bring added value (e.g. like having an expensive SUV). According to the interviewed expert if companies truly comprehend the need for becoming innovative this could start a chain reaction that will be beneficial for the entire regional community. **For example, an innovative company will constantly: invest in developing new products and services; foster the constant development of its human resources; promote creativity of its workers; seek for highly qualified, creative and motivated staff; provide constant social benefits for its workers and the community in general; create a circle / chain of companies that will benefit from cooperation; attract R&D and research; etc.**

Interviewed SME managers in Bulgaria were unanimous that local innovation champions should be promoted and not kept in the dark. Innovative companies of the region should be visible and serve as a role model for other companies, as well as a prove that innovation is possible in the region of

Blagoevgrad and not only in bigger cities. **In addition, SME managers shared that they needed more trainings and cooperation events that will broaden their knowledge and skills in the field of business development. They wanted to learn from successful companies.** They needed new practices and proven methods that were applied by their partners or competitors. One of the interviewed owners of a middle – sized SMEs shared that there were no local trade exhibitions / fairs that promoted regional produce / economic potential.

It is interesting to note that the interviewed representatives of SMEs have highlighted the importance of investing in the constant update and raising of the qualifications of their personnel in order to keep them updated in the latest trends in the field of activity of their companies. On the other hand, interviewed business consultants shared their worries of the fact that the majority of local entrepreneurs were not eager to invest in raising the skills and qualification of their employees, which was one of the key preconditions for raising the innovative potential of their enterprises.

Business consultants and SME mangers shared a common opinion that additional activities and measures that could foster the development of innovations in general should be undertaken by the state authorities and institutions. Such measures could include tax incentives for innovative companies, innovation vouchers, low-interest loans, etc.

According to both SMEs and business experts, funding instruments should invest in feasible projects that bring added value. For this purpose, the evaluation of the projects that were being funded under the various grant schemes should be finetuned. Each Operational Programme should showcase its success stories and good practices. Business organizations should find the innovative projects and innovation champions that were existing in the region and show them to the rest of the business community.

Another important aspect of innovation support and development was the necceeducation in entrepreneurship and engineering majors. Education curricula and priorities should be fully coherent to the needs of the businesses in each community. One of the interviewed business owners shared a good practice from Upper Austria – a region with long-term traditions in the field of hydro-electric power generation. The region had more than 550 small hydro-electric power installations that produced clean energy. For this purpose, there were three engineering schools in the region that produced hydro-electrical engineers to satisfy the needs of the sector. As a result, there were many young people that were employed at the local small energy companies. In addition, research institutions in the region were constantly producing innovations for this particular business sector.

Consequently, according to participants in the interviews, SMEs managers should go more frequently to schools where they should present their business and educate younger generations in order to spark their interest towards entrepreneurship. In addition, SMEs should consult education and training providers on what should be the content of the training curriculum. Investments should be made in order to bridge the huge existing gap between academia, education and business - the three main pillars of the innovation dynamo at a local level.

In Macedonia, on the other hand, the interviewed experts and SME managers pointed out the need for more promotional campaigns, trainings, advisory events, and etc., related to the topic. Other

proposals were related to: better financial support, improved cooperation with educational institutions, opportunities for cooperation with companies from other countries, etc.

One specific proposal came from one of the managers highlighting the need for more SME support centres which would provide support and advice, and not only on legislation and accounting matters, but would also help SMEs follow the new trends in the world and introduce innovations.

It is also envisaged to establish a Steering Committee for implementation of the regional Innovation strategy will be composed of representatives from the main stakeholders: Centre for Development of the South-East Planning Region, regional Business Centre, LED offices in the local self-government units, universities, secondary vocational schools, CSOs and the business sector. The SC will also serve as a dialogue and coordination platform. By implementing the strategy, innovation as a concept will be brought closer the SMEs, but also to educational institutions, BSOs and CSOs.

In the frame of preparation of the regional Innovation strategy, the representatives of the surveyed SMEs provided suggestions for introducing certain institutional and regional measures that can stimulate regional innovation capacity as well as stimulate companies to invest in R&D and innovation:

- Development of innovation infrastructure,
- Education and provision of information to the SMEs in the region about the benefits of innovation, as well as about the laws and by-laws related to innovation
- Development of regional and local innovation fund for better access to finance.

3.2.3 Policies, measures, networks, financial instruments and incentives

The third part of the interviews was aimed to explore the existing support and training structures and services that support the introduction and development of innovation in companies of the District of Blagoevgrad from the point of view of the business support organizations and consultants working with SMEs.

Existing measures and support structures for innovation promotion (Regulations and plans; Public support (e.g. EU funding, national funding, other public funding, etc.); Public / private/ civil society organisations that support the introduction and development of innovations in local SMEs, etc.)

In Bulgaria and in Macedonia, all interviewees expressed their lack of knowledge of existing support structures at regional level (apart from Enterprise Europe Network) that dealt solely with innovation promotion.

In terms of available organizations / structures that were currently supporting / promoting the introduction of innovations in local SMEs in the Bulgarian part of the cross-border region, interviewed experts highlighted that there were several working non-profit organizations such as the Business Incubator in Gotse Delchev, the Chamber of Commerce and Industry in Blagoevgrad, the Association of Entrepreneurs of the Gotse Delchev Region, the Business Information and Consulting Center in Sandanski, etc. In addition, in Blagoevgrad region there has been an office of Enterprise

Europe Network – one of the biggest information and consulting networks of the European Commission in support of the internationalization and innovation potential of SMEs in Europe.

On national level, there were various support mechanism and funding instruments that were available to SMEs to expand their innovation potential and to support their innovative projects. Such initiatives and projects which were highlighted by the interviewed experts included:

- **Operational Programme "Innovation and Competitiveness"**– the biggest financial instrument that support innovative projects of SMEs;
- **Operational Programme "Science and Education for Sustainable Growth"** – the biggest financial mechanism in support of research and development activities in Bulgaria for the period 2014 – 2020;
- **National Innovation Fund** – a financial instrument that supports innovative projects of SMEs and fosters collaborations between science and business. Interviewed experts shared that the instrument was very popular among Bulgarian businesses but the period for approval of the projects has been very long which created issues for SMEs that wanted their innovative projects realized quickly.
- **National Research Fund** – a financial instrument funded by the state budget and aimed at providing support for research activities of Bulgarian science institutions and individual researchers.

Macedonian business experts pointed out that the main strategy at national level is the Innovation strategy of the Republic of Macedonia 2012 – 2020. Center for development of the South-East planning region is owner of the regional Innovation strategy 2016 – 2020.

The main objective of the regional Innovation strategy is to increase regional innovation by using limited funds at local, national and EU level; by optimizing research and development (R&D) capacities (both in the education and business sector), the existing business potential and the capacities of the companies for adoption and use of modern technologies. All efforts should be supported by the local and regional administration.

At the national level, Fund for innovations and technological development (FITD) was established to support the development and introduction of innovations in the SMEs.

Experts mentioned several public and civil society organisations (CSOs) that support the introduction and development of innovations in local SMEs.

Business Centre for support and consulting services for SMEs in the South-East planning region is established within the Centre for development of the South-East planning region. As a public organization it aims to help and support SMEs in their faster and dynamic development. The Business Centre supports the development and the introduction of innovations in local SMEs. The Business Centre contributes to strengthening the capacities of companies in the region by identifying current needs, lobbying, provision of information, capacity development measures and networking, and thus contributes in creating a climate for the development of sustainable and profitable businesses.

The Business Centre promotes often open public calls financed by the national FITD as well as EU and other international funds that support innovation: HORIZON 2020, COSME, etc. Another BSO in the South-east region is the Regional Chamber in Strumica which provides services for its members from the municipalities of Strumica, Radovish, Vasilevo, Bosilovo, Novo Selo, and Konce.

Foundation for Development of SMEs - Regional Center Strumica is part of the network of five regional business information and advisory centers for SMEs that were established in 1999 with financial and technical assistance of the EU.

Experts underlined that there is a very low utilization of the EU funds that support development and introduction of innovations in SMEs due to lack of information and insufficient skills to prepare project proposals. In addition, there are few CSOs that support innovation in SMEs.

Effectiveness and accessibility of the existing measures and support structures to their final beneficiaries, i.e. SMEs. Efficiency of the linkages between businesses; between SMEs and academia and R&D institutions, etc.

According to the interviewed experts in both Bulgaria and Macedonia, currently the efficiency of the linkages and cooperation between the various actors – part of the innovation environment could be estimated as very poor or even non-existing.

Interviewed experts in Bulgaria thought that a similar situation was existing on national level which was evident in the numerous strategic documents and analysis of the innovation system of Bulgaria that were existing. According to business consultants and academia experts that were interviewed in the qualitative research phase of the project, there were no existing cooperation initiatives between businesses, academia and R&D community in the region of Blagoevgrad. There were only a few cross-border cooperation projects that included different stakeholders (e.g. business and academia). However those projects did not produce any significant results, nor were efficient in establishing real and long lasting relationships between businesses and academia. Pilot projects such as “High school Practices” and “Student Practices” of the Ministry of Education and Science, as well as several initiatives that were aimed at updating the educational curriculum according to the needs of the labor market were highlighted as some of the initial steps in the process towards achieving a real collaboration and synergy between education and business sectors.

The interviewed experts in Macedonia were at opinion that better cooperation is needed between the BSOs and the SMEs in order to have a fully functional system for development of innovative products and services. One of the challenges is the interest and involvement of the SMEs. There is also a need to strengthen the links and cooperation between the SMEs themselves and between R&D centres and SMEs, in order to establish knowledge-based economy. In this regard, relations between the business sector and educational institutions, especially higher education institutions should be established.
Efficiency will increase when the cooperation will progress from information exchange, provision of advice and experiences towards creation of conditions for development and implementation of joint projects, harmonization of the rules and conditions for supporting R&D, setting standards/ legislation related to the development of the innovation capacity and competitiveness of the regions, and

afterwards towards creation of clusters and other innovative cooperation networks, development of mobility schemes between academia and industry, and etc.

The a.m. measures and structures are very important for development of the business environment in the South-east region. Measures should be adapted to the specific needs and in line with the capacity of the local SMEs.

3.2.4 Support and training needs

This part of the open interviews aimed to gather more information on the support and training needs of SMEs in terms of innovations from the perspective of both business consultants and SME managers.

Knowledge of existing trainings / courses / support programmes in Blagoevgrad region for introduction and development of innovations in SMEs. Popularity among local SMEs and their effectiveness.

The majority of interviewees in Bulgaria shared that they were not aware of any existing trainings or courses in innovation planning / management / development for small and medium sized enterprises. According to **interviewed business consultants** the deficiency of such training programmes has been resulted simply by the lack of demand. For example, the regional economy has specialized in sectors and activities which require comparatively low qualification and technologies. Therefore, the majority of existing SMEs have low level of technological development and limited potential for applied research. Their interest to innovation was low and therefore, the necessity of such trainings has not yet arisen. Interviewees shared that there were various courses that have been provided from different training centres but not specifically regarding innovation.
Nevertheless, they pointed out project "Improving competitiveness of SMEs of the CB region by fostering and promotion of non-technological innovations (INNOFOSTER)" as a very valuable initiative and a good practice which has been the first of its kind that targets solely the promotion of innovations. Additionally, there were workshops and events that have been organized by the Managing Authorities of the various Operational Programmes which aimed to present a forthcoming or an on-going call for proposals related to improving various aspects of SMEs, including their innovative potential.

All interviewees in Macedonia confirmed that information events and trainings for development and introduction of innovations were provided in the South-east region, while representatives of the SMEs have participated on some of them. Namely, the Centre for development of the South-east planning region, together with the Business Center in the framework of different projects, has offered support and trainings to improve the skills and knowledge of local SMEs for development and introduction of innovations. According the experience so far, trainings of this type are very popular, however experts pointed out that there is insufficient participation by the business sector due to time and human resources constraints. Trainings and workshops provided, does not only offer capacity building through familiarization with important issues, but also facilitate direct contact and cooperation of SMEs with representatives of organizations at national level (e.g. FITD). Some of the experts warned that support programmes could be effective to a certain level, but cannot be the sole basis for the introduction of innovations.

Most preferable learning tool that will help local SMEs in further developing and broadening their skills and competences on innovation.

Bulgarian business consultants shared various opinions on the most preferable and efficient learning content in terms of improving skills and knowledge of local SMEs in innovation related subjects. **All interviewees were aware of the fact that innovation training, as well as training contents that include many case studies, success stories, discussions and experience sharing between participants.** When asked about their opinion on what would be the most preferable and efficient training tools for SMEs in innovation related subjects, interviewed business consultants and other stakeholders shared that entrepreneurs nowadays, especially of smaller companies (94% of the existing companies in the region of Blagoevgrad), were very limited in terms of time. **On the other hand, as stipulated in previous sections of the repot, the current level of awareness of businesses on the true benefits of innovation has been rather low.** Therefore, raising the awareness on the topic should begin on a simpler level. It was important to teach business owners on the basics and benefits of innovation in order to make them more open minded towards novel technologies and innovative approaches (e.g. organizational and marketing) by showing them a lot of success stories, good practices, as well as by motivating them to share experiences and real stories. According to business consultants, SMEs of the region needed trainings that were not very engaging in terms of time and resources, such as online learning, one or two-day training workshops, etc.

Online training, if to be applied as a tool should include content that had more educational and awareness raising character (e.g. brief content, interactive, simple as possible with a lot of success stories, case studies, etc.). The more detailed, technical and complicated aspects of innovation should be taught at another level through mentoring, coaching, formal classes, etc. Webinars were also identified as appropriate by business consultants. In addition, they were gaining popularity mostly as a basic awareness raising tool that could attract the interest of SME representatives and staff to a certain “hot” topic. However, attention should be paid to the technical aspects of organizing such events as there were many technical difficulties that in many cases would demotivate participants to follow such trainings. Interviewed consultants thought that complete online learning was not suitable and not popular yet as local SME managers and staff were not experienced in such kind of learning and were never regarding it as a sound and trustworthy method for acquiring knowledge.

Other suggested training methods that could be provided and be attractive to SMEs included personalized staff trainings combined with team building, coaching and benchmarking. Coaching was considered as a very appropriate training method which was very underdeveloped and/or was completely missing in the region of Blagoevgrad. However, it was suggested by interviewed business consultants as very appropriate as it combined traditional training with soft skills development, etc.

Benchmarking was another training method that was suggested by one of the interviewed consultants. It implied comparing one's business processes and performance metrics to industry bests and best practices from other companies. In the business environment of the region of Blagoevgrad this method could be introduced by promoting successful companies that had traditions and experience in a certain field to promote and train in their quality standards and know-how so local companies could learn and benefit from that. An example was given with a large textile company

located in the town of Gotse Delchev, which has provided training for their local sub-contractors on how to comply with their quality standards when carrying out their sub-contracting agreements.
According to SME managers in Bulgaria the most preferable learning tool for them will be the most traditional one – training workshops, mainly due to their short-term character.

In Macedonia, according the experience obtained so far, the easiest and most affordable tool remained trainings or workshops, which primarily aim either at strengthening the knowledge and skills on a certain topic or providing information. But taking into account the a.m. problem with the presence of the representatives of the local SMEs, other way of delivering trainings through on-line platforms should be considered.
Experts in Macedonia mentioned some successful examples of trainings conducted by the Business Centre within the Centre for development of the South-east planning region such as the Camp for Young Innovators and Entrepreneurs -Innovation Bootcamp, where young entrepreneurs from the region were encouraged and supported to realize their business ideas.
In the framework of another CBC project a training programme entitled as "Management of SMEs" was implemented. The training programme consisted of a theoretical through classroom trainings and practical part through an on-line platform where the participants carried out the tasks given by the trainers. As a value added, the participants had the opportunity to visit selected companies, to review the products and services as well as to discuss and exchange experiences with the management teams. Some experts emphasized the importance of strategic management of innovations, while SMEs would appreciate very much peer-to-peer exchange of experience and best practices through direct meetings with other companies.

Most important skills and competences that SME employee/ entrepreneur should poses in order to develop innovations/ manage innovation processes.

In terms of skills and competences that SME employees / entrepreneurs should poses in order to develop innovations or manage innovation processes within their companies, **interviewed business advisors in Bulgaria highlighted organizational and management skills** as well as complete awareness of the business field where the company is operating (e.g. business environment, market trends, customers' demands, etc.). In terms of promoting a pro-innovation environment in their companies, business owners thought that creativity should be a skill that each entrepreneur should poses. Additionally, one should have an **open mindset to new trends and innovations in order to motivate / inspire his/her workers to be creative and aid in establishing a better company.**
Interviewed consultants would generally rate **soft skills** (such as critical thinking, identifying strong and weak features of a person/business, active listening, networking, leadership, etc.) **higher than purely technical (hard) skills** (e.g. R&D skills or legal, tax or financial skills) when innovation is concerned.
The interviewed SME managers shared a similar opinion that when innovation was concerned a successful entrepreneur should be able to plan and manage the process. An entrepreneur that has

the right leadership or organizational skills should therefore support and mentor instead of giving orders. Entrepreneurs should finally realize the need of investing in their workforce, as well as to promote creative and non-standard thinking, and above all team work.

As it was identified in the quantitative phase of the present research, when it came to innovation management and development, interviewed SMEs managers also identified skills such as "Market knowledge", "Understanding customers' demands", as well as "**Identifying business related strengths and weaknesses"** as some of the most important skills for developing and/or managing projects related to innovations. Similarly, as interviewed business consultants, SME managers pointed out that purely technical skills (e.g. **legal, tax issues, R&D skills, etc.) were not of particular importance for an entrepreneur to successfully develop, introduce and manage innovation.**

In Macedonia, there was a little agreement among the interviewees about the most important skills and competences that an employee/ an entrepreneur should poses in order to develop innovations/ manage innovation processes within particular SME. The respondents provided wide variety of skills and competences instead. Taking into account that innovations are essentially changes within a SME, the ability to adapt to changes was highlighted as an important skill.

The most important skills and competencies were:

- Good organization and willingness to improve organizational culture,
- Awareness of the current economic environment on regional and local level,
- Desire for research,
- Curiosity,
- Quick decision making,
- Communication,
- Cooperation with the competition and structures that support SMEs,
- Enthusiasm for the introduction of new measures and services,
- Knowledge of innovations at least at the local level,
- Peer-to-peer exchange with other companies,
- Ability and willingness to take risks,
- Creativity, etc.

3.2.5 Non-technological innovations

The most popular type of innovations in the SMEs of the region of Blagoevgrad

This question was answered only by the experts from BSOs, academia and local and regional authorities. **The interviewed experts in Bulgaria were not able to provide a single answer to the question what were the most popular type of innovations among enterprises of Blagoevgrad region.** According to experts the most popular type of technological innovations that were introduced in local companies were product innovations in the field of ICT and renewable energy sources. As far as non-technological innovations were concerned, the most popular and commonly adopted type of innovations were the organizational innovations, such as the introduction of various market standards, outsourcing of financial and accounting services, staff, etc. In terms of marketing innovations, local

companies were either unaware of the available instruments or were utilizing traditional marketing methods.

According to experts in Macedonia, the first notion of the term "innovation" was on technological innovations which seems to be the most popular innovations in the South-east region. When it comes to non-technological innovations the most popular are innovations in the field of marketing, which was confirmed also by the representatives of the local SMEs who mentioned that the companies in the region often use new methods of promotion. However, through provision of relevant information, appropriate training and advice, companies become aware that non-technological innovations are equally important and improve their day-to-day operational performance and marketing.
Again, SMEs from the region hardly decide to introduce also technological innovations because either they are not yet well acquainted with available sources of funding or they lack trust in them.

Potential benefit for local SMEs from developing & introducing non-technological innovations

This question was also solely posed to the experts from the first target group of BSOs, academia and policy makers. **Business experts of Blagoevgrad region expressed their main concern that local companies were either indifferent or not completely aware of innovations, nor the benefits that they were providing.** According to interviewed experts, the change of mindset of local entrepreneurs would be the biggest benefit of introducing innovations of any kind. This would mean that local entrepreneurs have acknowledged the need of analyzing the existing processes within their companies related to organization improvement / efficiency and effectiveness / productivity of the workforce, etc. This would naturally lead to increasing their business potential, competitiveness, export potential, market expansion, etc.
In general, innovation involves investment, that is related to the costs that should be invested in either intangible or fixed assets, as well as other types of expenditure (e.g. R&D). Non-technological innovations (such as organizational and marketing innovations) would require much less investments since they usually do not involve fixed investment or longer periods for return of investments.
According to interviewed experts in Bulgaria, the adoption of non-technological innovations was not beneficial only to the company that had introduced them. Consequently, the benefits of innovative activities may only partially be appropriated by the innovating firm while other firms may benefit from these innovative efforts through learning, imitating and adopting.
Innovation would ultimately aim at achieving a higher competitiveness of the company by either increasing product quality or opening to new markets, as well as through reducing costs related to the various stages of product development and marketing. In this regards non-technological innovations that lead to new business models may reduce costs of products. Marketing innovations could provide short term boost over competitors through addressing a new group of customers.
According to interviewed business consultants there were numerous benefits of introducing non-technological innovations, however the most important one would be the fact that most such innovations are fairly easy to implement and could unlock hidden potential of both the company in general and its employees.

According to members of the business support community in Macedonia, local SMEs will benefit only if they make efforts to introduce non-technological innovations. Innovations, when introduced, are beneficial to both customers/ consumers and the company's management team. On the one hand, they support the process of competitiveness of the enterprise itself and strengthen its services/ products, while on the other hand they optimize the internal work processes. With the introduction of innovations, with the improvement of the quality of the company's products/ services, the quality of the work of the employees is also improved.

The remaining questions of this chapter were answered only by the interviewed managers of local SMEs.

Confidence and preparedness of SMEs about planning, developing and introducing (non-technological) innovations

SME managers that were interviewed over the course of the qualitative phase of the research stated that they were quite confident and prepared in terms of planning, developing and introducing innovations. However, they stated that they needed to be informed on the different types of non-technological innovations. When asked to point out some non-technological innovations both interviewed business representatives indicated organizational and marketing innovations as two of the most predominant types of non-technological innovations. Both SME managers were interested in such innovations. As being mostly, technological innovators, interviewed companies expressed their motivation to further enhance their skills and knowledge, as well to receive training or consultation in the field of non-technological innovations.

When asked of their opinion on the overall innovation environment in the region of Blagoevgrad and the state of preparedness of local SMEs to innovate, both interviewed business representatives were not very optimistic in their answers. They were both unanimous that the local business environment did not support innovations, nor creativity. The lack of qualified personnel as well as the lack of culture of the majority of local entrepreneurs to invest in the development and qualification of their staff has influenced negatively on the local business climate and made it not-favorable towards innovation. According to interviewed business managers, the majority of their colleagues were not completely aware of the term "innovation" as well as the true benefits that it implied. Many local companies had introduced various market standards in order to become more competitive or simply to answer their partners' or clients' demand. Standardization and the introduction of QMS were primarily considered by local SMEs as an additional administrative and financial burden for their companies and not as a chance to optimize their production or organizational structure and processes. In terms of marketing practices SME managers indicated that they required more information and knowledge on the modern marketing tools and approaches that could improve the perceived quality of their products or open new market opportunities.

Interviewed SME managers in Macedonia stated with great level of confidence that they are ready to develop and introduce incremental non-technological innovations that do not require substantial funds. This is in line with the statement of the experts that many companies from the region tend to

grow and develop, introducing new innovative elements in their operations that are not only about technological innovations, but also innovations that relate to the organisation, administration, communication with employees and/or clients.

Description of already introduced non-technological innovations in local SMEs

In general, interviewed SME managers in Bulgaria stated that they have introduced both types of innovation in their companies, as one of the companies has been currently in a process of developing a project proposal under the Operational Programme "Innovation and Competitiveness" 2014 – 2020 related to the development of an innovative product for fire prevention. The second company has developed an organizational innovation by introducing a fully operational Quality Management System under EN ISO 9001:2008, EN ISO14001:2004, BS OHSAS18001:2007, as well as some technological innovations related to the coating of the electrical components that it is producing. In addition, in 2007 the company has implemented a complete revamping of the manufacturing process through the expert / consulting assistance of Senior Experten Service – a German non-profit that provides consulting services to SMEs across many countries in the world.

When asked to describe already introduced non-technological innovations in their companies, the interviewed managers of Macedonian SMEs were immediately able to provide brief description. Both non-technological innovation refers to marketing understood as 4Ps: Product, Price, Placement (Distribution) and Promotion. The non-technological innovation in the first company refers to the promotion/ sales. At the very beginning, sales on the domestic market were done only by the sales persons in direct face-to-face contact with the clients.
Two years ago they started with another way of promoting products and expanding the market. They organise "an open door week" event as well as several culinary events where customers can test the machines and supplies on their own.
The second company introduced non-technological innovation related to product/ promotion. The store for healthy food is positioned/ promoted as a place where everyone can come and share a recipe or give advice. This way they offer value added to the products they sell, make new customers, maintain relationships with existing customers and are able to respond quickly and in quality manner to their needs.

Challenges/ needs of local SMEs with regards to work organization and internal processes and marketing

Interviewed business representatives in Bulgaria shared that their primary concerns were related to the old and non-productive organization of their work processes. One of the companies had functional organizational structure and the other a kind of flat organizational structure due to the fact that it was a micro-company (family owned). The first company expressed their concerns in relation to the hindered collaboration and communication between different departments inside the company. Currently the company has introduced a QMS under ISO 9001 which has significantly improved the communication in the organizational structure. However, there were some existing problems. One of

the main challenges was to motivate employees to follow the policy that was defined for communication to flow easily between each department. In addition, as it was specialized in the production of various electrical components the manager of the company stated that the existing technological equipment was outdated and could not cope with bigger volumes of orders. In terms of marketing the company stated as one of their bigger challenges wasthe improvement of their presence in Internet and Social media. The company manager shared that they were not paying attention to advertising and promotion of their products on local level (community where they were based) due to the fact that they had enough orders from abroad and did not really need to be present at the local market. However, in the past several years, things have changed and now the company would need to look down at the local market and try to improve its presence there.

The second interviewed SME manager stated that their current urgent need was related to optimization of the work processes inside the company as they were planning expansion – hiring more staff and moving into a bigger production facility.

Interviewed managers of the SMEs of the Southeast Planning Region of Macedonia underlined that innovation in marketing is a key tool for their success. For the first company, the results of the sale are dependent on the motivation and the engagement of the employees. This means that they often need to apply new methods of promotion. They need new ways of selling in order to win new customers.

The other company also relates their ability to expand with the improvements in the marketing of their products.

Both managers believe they are on a good track when it comes to the organisation issues, probably due to their direct responsibility.

Opportunities for introduction of non-technological innovations in local SMEs with regards to mentioned needs/ challenges

Both interviewed SME managers in Bulgaria stated that new methods related to both work process organization as well as marketing tools for improving their presence on the Internet and Social media could be beneficial to cope with the identified current needs.

Macedonian managers of the SMEs that participated in the interview only briefly mentioned the opportunities for introduction of non-technological innovations which are related to:

- New methods of organizing the work as well as the services of the firm.
- Constantly extend their portfolio by offering new products and useful recipes.

Interest of local SMEs in receiving support and consultancy regarding innovations and especially non-technological ones

The answer to this question during the interview phase of the present research has confirmed the findings of the online survey. Interviewed entrepreneurs highlighted the need of receiving a competent advice and support for improving their skills and knowledge in the field of innovations, including non-

technological ones. In addition, interviewed managers stated the importance of raising the qualification and motivation of their employees.

According to the interviewed SME managers they would likin Bulgaria they would like to receive more and competent information on the available funding instruments that could boost their competitiveness by modernizing their equipment, enhancing their organizational structure and boosting their marketing performance. They have also expressed their lack of trust to business consultants as they had negative experience with some consultants over the past programming period. In any case, they have also stated the fact that there are trustworthy business support organizations in the region of Blagoevgrad that they could rely on in case some information or advice is needed.

In Macedonia, interviewed mangers just briefly confirmed their interest in receiving support and consultancy regarding innovations and especially non-technological ones, underlining that receiving advice/ consultancy is always welcomed for all employees. They did not reflect on the (un)availability for participation at trainings and workshops, as a problem mentioned by the interviewed experts.

The biggest contribution for commercialization of new products and/or services in local SMEs over the past three years

Interviewed managers of SMEs in both countries shared that the biggest contribution for improving the commercialization of their products over the past several years was resulted from:

- Constant dedication of the management to participate at various public procurements related to the main activities of the organization;
- Strong marketing strategy focused on foreign markets by participating at various industrial and trade shows across Europe;
- Participation at European programmes for improving the production capacity and productivity of the labour force.
- Diversifying the portfolio of offered products;
- Investing in the introduction of international market standards to improve work organization and meet partners' and customers' demands.
- Participate in numerous activities and initiatives related to increasing skills and qualification of both managerial and manufacturing staff of both companies.

Examples of non-technological innovations in the local business environment (e.g. in suppliers/ clients, competitors, etc.)

One of the interviewed managers shared his opinion on the existing trend in Bulgarian companies to introduce different market standards such as ISO, OHSAS, QMS, etc. in order to meet both their partners' and their customers' demands. Many companies introduced innovations in marketing, management and design. Since they were not primarily driven by technological inventions or improvements, they were referred to as non-technological innovations.

SME managers in Macedonia were observing that recently, companies in the South-east region are often using new promotion methods.

4. General summary and conclusions

4.1 General summary

The present Common report presented the results on the conducted detailed analysis of the existing innovation environment in the region of Blagoevgrad, Bulgaria and the Southeast Planning Region of the Republic of Macedonia. The report was carried out in the frame of project "Improving competitiveness of SMEs of the CB region by fostering and promotion of non-technological innovations (INNOFOSTER)". The project is a joint initiative of Association Business Information and Consulting Center – Sandanski, Bulgaria in partnership with Centre for Development and Promotion "Promo Idea" – Strumitsa, Macedonia. The funding for the project and the present research was provided under the First call for proposals of the INTERREG IPA CBC Bulgaria – the former Yugoslav Republic of Macedonia Programme (CCI Number: 2014TC16I5CB006).

The main objective of the research was to define the main characteristics of the local environment in the region of Blagoevgrad and the innovation needs and key issues of small enterprises operating the region. The research activities were carried out according to a pre-developed and approved methodology that envisaged the following stages:

- Desk research on the current economic and innovation environment in target cross-border region of Bulgaria and Macdonia (i.e. existing policies, stakeholders, support and funding instruments).
- Quantitative research through an online survey of SMEs representatives to identify the main factors that favor or hinder the development of innovations (non-technological).
- Qualitative research through field interviews with SMEs managers, business consultants, policy makers, R&D and academia to provide a more detailed analysis of the needs of the target group, related to innovation support and training.

Innovation has been recognized by the European Community as key driver of economic growth. The European Union's growth strategy Europe 2020 where the EU is seen to **become a smart, sustainable and inclusive economy** is built upon five ambitious objectives - on employment, **innovation**, education, social inclusion and climate/energy - to be reached by 2020. These three mutually reinforcing priorities should help the EU and the Member States deliver high levels of employment, productivity and social cohesion.

Innovation, according to the definition provided by the Oslo Manual (OECD/Eurostat, 2005), consists in "the implementation of a new or significantly improved product, a new process, a new marketing method or a new organisational method in business practices, workplace organisation or external relations. Innovation therefore goes beyond R&D and covers a broad range of activities that help firms become more productive and competitive".

Innovation has both technological and non-technological aspects. Non-technological innovations are comprised of: (1) Marketing innovations and (2) Organisational innovations. Technological innovations are usually associated with product and process innovation. The main starting point for separating between the two types is of course the different role of technology. While technological innovations are typically characterized by developing or using new technologies, i.e. new technical knowledge and technical inventions, non-technological innovation need not necessarily involve a change in technology, or the adoption of new technology, but may solely rest on the use of new business methods, new organizational concepts or other immaterial ways of changing business activities. The commercialization of a new product often requires development of non-technological innovations. That includes sometimes new marketing methods, but also new production techniques which increase productivity only if supported by organizational changes. Marketing and organizational innovations are important activities of companies, particularly in services.

4.2 Findings and conclusions

The economy of the cross-border region of Bulgaria and Macedonia, which represents the target area of the present research and needs analysis has suffered greatly from the increasing regional disproportions in terms of economic, social and educational development. As a result, the cross-border economy has specialized in sectors and activities which require comparatively low qualification and technologies, which exports mainly low added value products. The majority of existing SMEs have low level of technological development and limited potential for applied research. SMEs do not have knowledge and lack experience with introducing of innovations, which causes potential loss of markets. SMEs lack also finances for education of their experts to introduce innovations. Another major obstacle represents the lack of understanding of factors that drive and hinder non-tech innovations in the CB region (e.g. ability of SMEs to adapt to different client demands; cost factors; R&D incentives; property rights; legislation, etc.).
Given the importance of the development of the regional economy and the need to reduce imbalances, **there is a need to increase the productivity of local SMEs by facing the contemporary challenges related to the specific mindset of local entrepreneurs (e.g. lack of vision, resilience to change, scepticism to innovation, etc.) by providing them with various solutions related to raising their awareness and improving their skills for introducing and developing innovations**

The quantitative part of the research included 64 (sixty-four) representatives of small and medium sized enterprises of the region of Blagoevgrad (Bulgaria) and the Southeast Planning Region (Macedonia) that were surveyed though an online questionnaire. The qualitative interviews were implemented with 10 (ten) SME managers, business consultants, policy makers and academia representatives which were interviewed face-to-face or online via Skype. The majority of participants in both research phases were representatives of **small and medium sized companies** that operated in the most predominant industry sectors of the cross-border region such as **tourism, services, retail trade and light industry**. The qualitative phase of the research included mostly business advisors in the age between **35 and 54 years**, **predominantly men – managers or CEOs** at consulting companies

that have sufficient, long-term experience in providing consulting services to SMEs on various topics, including innovation.

Local environment

According to the results of the research it can be concluded that the business environment of the cross-border region of Bulgaria and Macedonia is rather favorable and provides good conditions for business start-up and development. This has resulted from the strategic geographic location of the region (in a border region of three countries, two of which being EU member states), as well as the favorable climate conditions the common cross-border region has considerable potential for development of different business initiatives. In addition, the proximity (both in terms of logistics and distance) to the capital cities of Sofia (Bulgaria) and Skopie (Macedonia) provides good opportunities for boosting the CB economy. The level of ICT development and broadband infrastructure, especially in the Bulgarian part of the region is sufficient as the development of digital and wireless services is satisfactory. The Utilities (energy, heating, water and sewage) and transport infrastructure are also in a good condition and provide a favourable environment for doing business. However, this is mostly relevant for the Bulgarian part of the cross-border region as the transport infrastructure in Macedonia has remained in relatively poor state over the past 10 years. There is still plenty of arable (free) land for agricultural activities, mostly in the Bulgarian part. Office rents however are still quite high and there are no incubator services available (or are very poor developed). There are many organizations and companies in both target regions that provide different type of advisory services including services related to business consulting, training, financial and accounting consulting, project development and management, etc.

However, as being part of the Southwest Planning Region, Blagoevgrad District has suffered greatly from the regional imbalances which have accumulated even further in the past several years. The concentration of economic, human and financial capital in the city of Sofia has increased the economic pressure on the region. **The town of Blagoevgrad, remained an "Iceland" of economic development in comparison to other smaller communities in the region. In addition, smaller communities such as Sandanski, Bansko, Razlog and Gotse Delchev have developed rather well due the utilization of their tourism potential. Other municipalities such as Petrich and Simitli have developed as a result of their location – near the border or close to the main transport infrastructure (i.e. E-79 main road).** The presence of two renowned universities in the region – the Southwest University and the American University which provide quality education to more than 30000 students creates additional economic benefits for the region. Population tendencies in the region are also positive.

Southeast Planning Region of Macedonia had the potential for development of SMEs and there are sufficient educational institutions with appropriate curricula in the field of business. From the other side some experts stated that entrepreneurs lack sufficient capacities and finances to manage the business. A large number of SMEs tend to grow and develop by introducing both technological and non-technological innovations.

The main factors that hinder the development of Macedonian SMEs in the target region were external factors such as price changes, economic environment and shortage of labour force with appropriate qualifications and skills.

The economy of the cross-border region has specialized in sectors and activities which required comparatively low qualification and technologies (e.g. furniture production, textile industry, food processing, etc.) and exports mainly low added value products. With a few exceptions, the majority of SMEs in the region currently have low level of technological development and limited potential for applied research. **The backbone of the regional economy is represented by micro enterprises (93.3%) which are predominantly family owned enterprises with not less than 10 employees.**

Awareness and perception of innovation

According to the results that were observed in both phases of the research enterprises in the cross-border region are well aware of the term "innovation" and the specifics that it implies. The majority of local companies firmly stated that stated that they considered their company as an innovative one. However, very few companies of the region have a specific department or a person that coordinates innovation processes / projects of the company.

Every 9 in 10 companies of the cross-border region of Bulgaria and Macedonia acknowledges that their company needs innovation to grow and achieve sustainability. However, in terms of their confidence in developing and introducing innovation at their companies, the majority of local businesses state that they would consider this at a later stage of their company's lifecycle due to the fact that they have more urgent matters to deal with at present (e.g. survival of the company, financial matters, etc.).

Still, the majority of local businesses will be interested in innovation only in particular cases (e.g. based on the demand of their business partners or clients). A rather surprising fact, that came out as a result of the research was the fact that almost a quarter of all businesses in the region declared that innovations were at the core of their company's strategy. The same number of companies answered that they were interested in innovation but lack either the right information or the knowledge to implement it. None of the representatives of SMEs that have participated in the research has answered that their company was not interested in innovation.

We observed a difference of the opinion of SMEs and other stakeholders (e.g. business consultants, business experts and representatives of academic institutions) in terms of their attitude and perception of innovation. According to experts of business support organizations, in general local companies were aware of the term of innovation. They were interested in innovation as they would relate it mostly to the available funding of the European Structural Funds in support of SMEs and innovation. This was fully applicable to SMEs of the Bulgarian part of the cross-border region. According to the practical experience of business consultants and experts of business support organizations the majority of companies would state that they are aware of the true meaning of innovation, however the reality shows that very few are actually aware of its true meaning.

The majority of SME managers and representatives are confident in their knowledge and awareness of innovation and confirm that they were aware of the benefits of innovations – both technological and non-technological.

Business consultants and SME managers agree that the local environment in the region of Blagoevgrad and Southeast Macedonia is not favorable to innovation nor does it support or promote creativity which lies at the core of the innovation processes. Many local companies would prefer to find ways to avoid laws and taxation and not to seek methods and develop tools to improve their competitiveness and sustainability. In this regards, there should be more information and awareness raising campaigns among SMEs in order to improve their knowledge and skills in modern business practices and tools to enable and unlock their entrepreneurial potential.

When asked of their opinion on the main barriers that prevent their companies of innovating, most SMEs of the region will highlight "Financial deficiencies", "Lack of initiatives that foster cooperation / networking among the participants in the innovation process", as well as the "Lack of access to qualified personnel" as being major obstacles for their innovation projects or plans.

Additional barriers towards the improvement of the innovation potential of businesses in the cross-border region are related to the specifics of the local business environment (i.e. specialized in low-tech activities, as well as the low productivity and creativity of labor force). Those specifics were determined by the constant shortage of finances to invest in business development, as well as the constant deficit of qualified (and motivated) staff. Another important obstacle is the specific mindset of local entrepreneurs who are not willing to invest in improving the quality of human resources. Still, the majority of local businesses lack any strategic planning skills as most of them rely on day-to-day management and strive to ensure the survival of their company. This include the complete lack of innovation strategy, not to mention an innovation department, nor an employee to oversee the innovation processes.

Support and training needs

When analysing data of the research we observed a rather surprising tendency that still the majority of SMEs of the cross-border region of both countries were **not aware of any firms / institutions of their region that provided support and specialized consulting targeted to innovation in small businesses.** The results of the research clearly show that there is a deficiency in both available organizations and tools that were specifically tailored to the needs of the companies when innovation is concerned. Furthermore, it is clear that non-governmental, business-support and branch association should really focus on making their services more popular and accessible for SMEs of the region.

The majority of SMEs of the cross-border region have never received any support, nor have participated in any trainings or initiatives related to the improvement of their innovative potential. In addition, many companies remain indifferent to innovation as they **have never searched were interested** in obtaining information or advice related specifically to matters of business innovation.

From the companies that have received such support / advice / consultation the majority indicated that they have utilized the services of business support organizations or a private consulting company. A good few of companies of the Bulgarian part of the cross-border region have applied for

funding of European Structural Funds or other funding programme to support their innovative projects and endeavours.

A positive trend of increased interest towards receiving support and advice in terms of business succession is evident as there are many SMEs that expressed they were interested in receiving such specialized consulting service. The level of interest varies according to the different economic sectors (e.g. companies of the service sector were the least interested in innovations) based on the established traditions in the field of entrepreneurship. **Given the structure of the CB economy and the fact that almost 94% of all companies are micro enterprises their interest was focused mainly on the introduction of organizational and some basic and very common marketing innovations (e.g. online commerce, social media marketing, branding, etc.).**

Many local companies are interested in receiving more and competent information on the available funding instruments that could boost their competitiveness by modernizing their equipment, enhancing their organizational structure and boosting their marketing performance. They have also expressed their lack of trust to business consultants as they had negative experience with some consultants over the past programming period. In any case, they have also stated the fact that there are trustworthy business support organizations that they could rely on in case some information or advice is needed.

Similar to the situation with the number of companies that received support in business innovation matters, the majority of businesses of the region of Blagoevgrad and the Southeast Planning Region of Macedonia are not aware of any existing trainings or courses in innovation planning and development for small and medium sized enterprises. According to experts in the area of business consulting and provision of specialized trainings, the deficiency of such training programmes has resulted simply by the lack of demand. For example, as stated above the majority of existing SMEs have low level of technological development and limited potential for applied research. Their interest to innovation was low and therefore, the necessity of such trainings has not yet arisen. Interviewees shared that there were various courses that have been provided from different training centres but not specifically regarding innovation.

SMEs of the target cross-border region are not motivated and remain indifferent to participate in trainings and activities related to the improvement of their knowledge and skills in certain topic. Most SME owners in Bulgaria would seek advice and assistance through personal connections and contacts such as other family members, friends, relatives, business partners and even employees rather than a professional consultation on a certain topic. Nevertheless, this rather negative trend has been slowly changing over the past several years with the emergence of younger managers and changing of the ownership in many family companies of the region to younger generations. In this regards, business owners and managers of the younger generations seemed more opened to external assistance and support.

Existing organizations and financial tools

Unfortunately, based on the results of the research there were no existing support structures at regional level that dealt solely with innovation promotion in companies of both Blagoevgrad District and the Southeast Planning region in Macedonia. In the Bulgarian part of the region, there are several working non-profit organizations that are actively supporting local SMEs such as the Business Incubator in Gotse Delchev, the Chamber of Commerce and Industry in Blagoevgrad, the Association of Entrepreneurs of the Gotse Delchev Region, the Business Information and Consulting Center in Sandanski, etc. In addition, in Blagoevgrad region there has been an office of Enterprise Europe Network – one of the biggest information and consulting networks of the European Commission in support of the internationalization and innovation potential of SMEs in Europe.

In the Macedonian part there are the Business Centre for support and consulting services for SMEs in the South-East planning region is established within the Centre for development of the South-East planning region and the Regional Chamber in Strumica which provides services for its members from the municipalities of Strumica, Radovish, Vasilevo, Bosilovo, Novo Selo, and Konce. Foundation for Development of SMEs - Regional Center Strumica is part of the network of five regional business information and advisory centers for SMEs that were established in 1999 with financial and technical assistance of the EU.

On national level in both countries, there are various support mechanism and funding instruments that are available to SMEs to expand their innovation potential and to support their innovative projects. However Bulgarian SMEs have better access (however not sufficient nor tailored to their needs) than their colleagues in Macedonia. Such initiative which were highlighted by the interviewed experts included:

- **Operational Programme "Innovation and Competitiveness"** in Bulgaria – the biggest financial instrument that support innovative projects of SMEs;
- **Operational Programme "Science and Education for Sustainable Growth"** in Bulgaria – the biggest financial mechanism in support of research and development activities in Bulgaria for the period 2014 – 2020;
- **National Innovation Fund** in Bulgaria – a financial instrument that supports innovative projects of SMEs and fosters collaborations between science and business. Interviewed experts shared that the instrument was very popular among Bulgarian businesses but the period for approval of the projects has been very long which created issues for SMEs that wanted their innovative projects realized quickly.
- **National Research Fund** in Bulgaria– a budgetary funded financial instrument in support of research activities of Bulgarian science institutions and individual researchers.
- **Fund for Innovation and Technological Development (FITD) in Macedonia** – a bank instrument provided from the World Bank to encourage and support innovation activities in micro, small and medium-size enterprises (MSMEs) in order to achieve more dynamic technological development based on knowledge transfer, development research and on innovations that contribute to job creation, and to economic growth and development, while

simultaneously improving the business environment for the development of competitive capabilities of companies.

Currently there are no existing cooperation initiatives between businesses, academia and R&D community in Blagoevgrad region and Southeast Planning Region of Macedonia. There were a few cross-border cooperation projects that included different stakeholders (e.g. business and academia) which did not produce any significant results, nor were efficient in establishing real and long lasting relationships between businesses and academia.

Skills for innovation

One of the main objectives of the research was **to understand what skills and competences are preferred by SMEs representatives when it comes to innovation management and development**. In general SMEs of **Blagoevgrad region and Southeast Planning Region of Macedonia** are aware of the skills that were needed to develop and manage innovation process in a company. They highlighted that a person should have **management and organizational skills** if he or she is to successfully develop / manage innovation processes in an SMEs. An entrepreneur that has the right leadership or organizational skills should therefore support and mentor instead of giving orders. Entrepreneurs should finally realize the need of investing in their workforce, as well as to promote creative and non-standard thinking and above all team work.

Other important skills that were identified included: **"Ability to take risks", "Identifying business related strengths and weaknesses"**, and **"Market knowledge".**

An interesting fact that came out of the research was related to the increased interest of local businesses and business consultants that work with SMEs towards soft skills. According to the participants in the different phases of the research soft skills (such as critical thinking, identifying strong and weak features of a person/business, active listening, networking, leadership, etc.) were considered as more important than purely technical (hard) skills (e.g. R&D skills or legal, tax or financial skills) when innovation was concerned.

In terms of promoting a pro-innovation environment in their companies, business owners thought that creativity should be a skill that each entrepreneur should poses. Additionally, one should have an open mindset to new trends and innovations in order to motivate / inspire his/her workers to be creative and aid in establishing a better company.

Learning tools

When analyzing the most preferred learning tools to SMEs for improving their skills in innovation and management of innovation processes within their companies, business representatives of the both countries preferred training methods that included more case studies, individual coaching/mentoring, etc. A large number of enterprises recognized e-learning methods as a suitable form for improving their skills on a certain topics. This new tendency was related to the constant lack of time and constant engagement of SME managers in the working processes, especially in micro enterprises. Nevertheless, many local businesses still seem to be unaware and non-experienced in

participating in online trainings and other types of self-learning initiatives (e.g. webinars, e-learning platforms, etc.).

Another important tendency is decreasing interest of business owners towards the traditional face-to-face workshops and other traditional learning methods (e.g. formal courses, hard copy textbooks and printed materials).

Innovation training, as well as training contents should be teeming with case studies, success stories, discussions and experience sharing between participants. As the current level of awareness of businesses on the true benefits of innovation has been rather low it is important that raising the awareness on the topic should begin on a simpler level. It is important to teach business owners on the basics and benefits of innovation in order to make them more open minded towards novel technologies and innovative approaches (e.g. organizational and marketing) by showing them a lot of success stories, good practices, as well as by motivating them to share experiences and real stories.
Therefore, online training, if applied as a tool should include content that has more educational and awareness raising character (e.g. brief content, interactive, simple as possible with a lot of success stories, case studies, etc.).
However, attention should be paid to the technical aspects of organizing such events as there were many technical difficulties that in many cases would demotivate participants to follow such trainings. Interviewed consultants thought that fully online learning was not suitable and popular yet as local SME managers and staff were not experienced in such kind of learning and were never regarding it as a sound and trustworthy method of training.
The more detailed, technical and complicated aspects of innovation should be taught at another level through mentoring, coaching, formal classes, etc. Webinars were also identified as appropriate by business consultants. In addition, they were gaining popularity mostly as a basic awareness raising tool that could attract the interest of SME representatives and staff to a certain “hot” topic.
Other suggested training methods that could be provided and attractive to SMEs included personalized staff trainings combined with team building, coaching and benchmarking. Coaching was considered as a very appropriate training method which was very underdeveloped and/or was completely missing in the region of Blagoevgrad.

Recommendations

The recommendation that came out of the participants at the research are applicable to the target cross-border region in both Bulgaria and Macedonia and could be summarized as follows:

- **Increase the number of awareness raising campaigns in order to “infest” local companies with the idea that innovations are modern, efficient and bring added value.** Local enterprises need to comprehend the need for becoming innovative this could start a chain reaction which will be beneficial for the entire local community. For example, an innovative company will constantly: invest in developing new products and services; foster the constant development of its human resources; promote creativity of its workers; seek for highly qualified, creative and motivated staff; provide constant social benefits for its workers and the community in

general; create a circle / chain of companies that will benefit from cooperation; attract R&D and research; etc.

- **Promote local innovation champions instead of keeping them in the dark. Innovative companies of the region should be visible and serve as a role model for other companies**, as well as a prove that innovation is possible in the region of Blagoevgrad and not only in bigger cities.
- **Organize more trainings and cooperation events that will broaden knowledge and skills of local SMEs in the field of new business practices and business development.** They need to learn from successful companies. They needed new practices and proven methods that were applied by their partners or competitors.
- **Introduce and develop training activities for raising the awareness of SMEs on various topics** (including innovation) based on innovative and web-based methods (e.g. online learning, mentoring and coaching, benchmarking, shadowing, webinars, etc.);
- **Promote cooperation among SMEs of the region** (including cross-border partnerships). Cooperation networks for SMEs. Creating networks of cooperation will help SMEs through the provision of key market information and market research and analysis to find new markets and will support the implementation of ideas for new products and services; activities for the creation and development of new technologies, leading to competitive advantage and increase value to local products and services.
- **Organize local trade exhibitions / fairs** to promote the regional industry / economic potential.
- **Improve the skills and competences of human resources** by investing in the constant training and enhancing the qualification of existing personnel at SMEs in order to develop and implement innovations and introduce “best practices” in different industrial sectors and economic spheres of the regional economy;
- **Introduce various incentives and instruments on regional level by regional and local authorities in order to foster the development of innovations** such as tax incentives for innovative companies, innovation vouchers, low-interest loans, entrepreneurship and innovation business contest, etc.
- **Introduce targeted investments** aimed to support and promote local sustainable entrepreneurship and innovations in economy sectors that are well developed in the region, e.g.: wine, food, beverages and tobacco, tailoring and textile industries, especially machinery for the food industry.
- **Enhance work of business organizations in order to find and promote innovative projects and innovation champions** of the region and show them to the rest of the business community.
- **Develop one-stop-shop services for innovation management.** Provide more transparency and increase the popularity, facilitate the access to the existing service tailored to individual needs of SMEs (e.g. technological audit that identifies the specific technological needs and assess the technological portfolio of the company; provide more information on **available innovation support organizations, structures and projects in the region;** connect businesses with

academia and R&D institutions, promote R&D; consult SMEs in subjects related to innovation, etc.).

- **Foster and support education in entrepreneurship and engineering majors**. Education curricula and priorities should be fully coherent to the needs of the businesses in each community. In this regards, SMEs managers should go more frequently to schools where they should present their business and educate younger generations in order to spark their interest towards entrepreneurship. In addition, SMEs should consult education and training providers on what should be the content of the training curricula.
- **Invest and develop project that will aid in bridging the gap between academia, education and businesses - the three pillars of the innovation dynamo at a local level**. An important step is to provide support for the establishment of intermediary units between research organizations and business in the form of technology transfer offices, innovation and enterprise centers, etc.

Annex 1: Questionnaire for online survey

ONLINE QUESTIONNAIRE

Activity 3 – Research and needs analysis of the current innovation environment in the target cross-border region

Innofoster

Improving competitiveness of SMEs of the CB region by fostering and promotion of non-technological innovations

Association Business Information and Consulting Center – Sandanski

Sandanski, Bulgaria

05.04.2017

This project is co-funded by European Union through the Interreg - IPA CBC Programme Bulgaria-The former Yugoslav Republic of Macedonia

Introduction

Dear Participant,

Innovation is a key driver of economic growth. It includes a wide range of activities that help firms become more productive and competitive.

Companies are often scared of the term "innovation" and mistakenly consider innovation as "Too complicated", "Something that is not for me" or "I am too small to innovate". In addition many small businesses are often unaware of the fact that innovation is not only about technologies, complicated research & development and engineering. Very often SMEs at local level are innovating without even knowing it and therefore exploiting it. Nevertheless, an innovation has both technological and non-technological aspects. Non-technological innovations such as marketing and organizational innovations are fairly easy to be introduced at companies just by providing them with easy to understand tips, guidance and good examples of how others did it.

In this regard, the present survey aims to study the level of awareness and knowledge of local businesses in the field of non-technological innovations. In addition, it strives to identify the main factors that favour or hinder the development of innovations (non-technological) at SMEs of the target cross-border region (consisted of District of Blagoevgrad in Bulgaria and South-east planning region in Macedonia) as well as their specific training and support needs in relation to innovation (e.g. learning formats, tools and content, etc.)

This survey is conducted in the frame of the project "Improving competitiveness of SMEs of the CB region by fostering and promotion of non-technological innovations (INNOFOSTER)" which is co-funded by the European Union under the INTERREG - IPA CBC Programme Bulgaria – the Former Yugoslav Republic of Macedonia.

The survey includes **20 multiple choice questions and will take you no more than 10 minutes to complete.** All information will be treated confidentially and no personal data or information will be disclosed or be otherwise used except for research purposes.
For more information, please visit our website at: www.innofoster.eu and follow us on Facebook: **facebook/projectinnofoster**

Thank you!
The InnoFoster project team

PART 1: PERSONAL INFORMATION

(Please provide us with more information on yourself / the company / business that you own / are currently employed in)

1.1. Gender

- Male
- Female

1.2. What is your role in the business that you own or work for? (Multiple answers possible)

- Owner
- Manager
- Employee
- Other (Please specify):_____

1.3. What is your age?

- Less than 25 years;
- 25 – 34 years;
- 35 – 44 years;
- 45 – 54 years;
- 55 – 64 years;
- 65 + years;

1.4. Where does your business currently operate?

- Bulgaria (dropdown menu with all municipalities of the Blagoevgrad region):
  - Bansko
  - Belitsa
  - Blagoevgrad
  - Garmen
  - Gotse Delchev
  - Hadzhidimovo
  - Kresna
  - Petrich
  - Razlog
  - Sandanski
  - Satovcha
  - Simitli
  - Strumyani
  - Yakoruda

- Macedonia:
  - Bogdanci
  - Bosilovo
  - Valandovo
  - Vasilevo
  - Gevgelija
  - Dojran
  - Konche
  - Novo Selo
  - Radovish
  - Strumica

1.5. In which industrial sector does your business/ company operates in?
(Please choose from the list below)

- A - Agriculture, forestry and fishing
- B - Mining and quarrying
- C – Manufacturing
- D - Electricity, gas, steam and air conditioning supply
- E - Water supply; sewerage; waste management and remediation activities
- F - Construction
- G - Wholesale and retail trade; repair of motor vehicles and motorcycles
- H - Transporting and storage
- I - Accommodation and food service activities
- J - Information and communication
- K - Financial and insurance activities
- L - Real estate activities
- M - Professional, scientific and technical activities
- N - Administrative and support service activities
- O - Public administration and defence; compulsory social security
- P - Education
- Q - Human health and social work activities
- R - Arts, entertainment and recreation
- S - Other services activities
- T - Activities of households as employers; undifferentiated goods - and services - producing activities of households for own use
- U - Activities of extraterritorial organisations and bodies

1.6 Number of employees

- 0-9
- 10-49
- 50-249
- Above 250 employees

1.7 What is the predominant level of education of the majority of the staff members of your company / organization?

- Higher education;
- Secondary education (e.g. high school, technical school, etc.);
- Primary education;
- No education whatsoever;

PART 2: INNOVATION PERCEPTION

2.1 Are you familiar with the term "innovation"?

- Not familiar at all
- Not familiar
- Neutral
- Familiar
- Very familiar

2.2 How do you perceive innovation in relation to development of your company?

- I am not interested in innovations.
- I am interested in innovations only in specific cases.
- Innovations are at the core of our company's strategy.
- I am interested in innovation but lack the necessary information / knowledge / potential.

2.3. Do you consider your business/ business of the company where you are employed being an innovative one?

- Yes
- No

2.4 If yes, what type of innovation you have developed or are currently in a process of development?

- Product innovations (products or a service)
- Process innovation (e.g. manufacturing or production process)

- Marketing innovation
- Organizational innovation

Please provide a brief description of the innovation you have developed or you are currently developing: _____

2.5 Does your company have its own innovation department or an employee that coordinates / manages the innovation processes?

- Yes
- No

2.6 What, in your opinion, are the main barriers that hinder the introduction and development of innovations (including non-technological ones) in your company?
(Please rate each of the statements below)

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree (neutral)	4 Agree	5 Strongly agree
Financial deficiencies					
The high costs of innovations					
Not sufficient information on the existing support for innovations at SMEs					
Lack of initiatives that foster the cooperation / networking between the various parties that participate in the innovation process					
Limited access to networks (cluster initiatives, business networks)					

Lack of access to qualified

and creative skills / staff

Lack of innovation

management skills

Lack of time

The specifics of the local business environment

Other, please specify

2.7 At present how confident and prepared do you feel about planning, introducing and developing innovation in your company/organization?
(Please rate each of the statements below)

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree (neutral)	4 Agree	5 Strongly agree
I will be considering this in a later stage of my company's lifecycle					
Survival of our company is more important than innovation					
I am confident and I have a plans for innovative projects in my company					
I do not have the knowledge and skills to implement an innovation					

I consider innovation as something that is not necessary for my business

I lack time and resources (financial, human, etc.) to develop innovations

I would like to introduce innovations but do not have access to R&D knowledge (e.g. methodology, technology)?

I would like to introduce innovations but do not have access to R&D infrastructure (e.g. labs)?

Other, please specify

PART 3: SUPPORT AND TRAINING NEEDS IN INNOVATION RELATED ASPECTS

3.1 Are you aware of any firms / institutions in your region that provide support and specialized consulting targeted to innovation in small businesses?

- Yes
- No
- Never needed or searched for such support.

3.2 Have you received such support and/or consulting already?

- Yes
- No
- Never searched or was interested

3.3 If yes, what was the source of that support?

For Bulgaria

- Southwest University of Blagoevgrad;
- Private researcher / expert;
- Business Support Organizations / consulting companies;

- Other /e.g. European funded project, etc./

For Macedonia

- University (University Goce Delchev/ Economic Faculty; FON University; Institute for south agricultural crops)
- Private researcher / expert;
- Business Support Organizations / consulting companies;
- National Fund for innovations and technology development
- Other /e.g. European funded project, etc./

3.4 Are you interested in receiving support and consultancy regarding innovations and especially non-technological ones?

- Yes, interested and already have plans
- Yes, interested, but no concrete plans
- No
- I do not consider innovations as a priority of my company in the forthcoming years.

3.5 According to your opinion what are the most important skills and competences that a person / entrepreneur should poses in order to develop innovations / manage innovation processes in a company?

(Please rate each of the statements below)

	1 Not important at all	2 Not very important	3 Neutral	4 Important	5 Very important
Ability to take risks					
Identifying business related strengths and weaknesses					
Planning skills					
Organisational skills					
Leadership skills					
Project management skills					
Soft skills (such as creativity, understanding and solving conflicts, orientation towards					

change, ability to identify opportunities, etc.)

Technical skills (such as legal, tax and financial skills)

Strong educational background and technological expertise

Product/ service development skills

Skills for commercialisation of products/services

Market knowledge

Research and Development skills

Ability for team work

Networking skills

Knowledge on property rights, patents and trade marks

Other, please specify

3.6 According to your opinion what are the main motivators (internal and external) for introducing and developing innovation in your company / organization?
(Please rate each of the statements below)

	1 Not important at all	2 Not very important	3 Neutral	4 Important	5 Very important
External motivators					
Customers' demand and needs					

Innovation culture

Public funding

Regulatory incentives for innovations

Innovations developed by competitors

Changes in market trends

Recognition of the society

Internal motivators

Improving existing products and services

Developing new products and services

Diversifying company's risks

Increasing / sustaining market share

Reduce operational/ production costs

Improve internal processes

Improve product/ service quality

Improve marketing of my company's products / services

Becoming market leader

Becoming technology leader

Other, please specify

3.7 What would be your preferable learning tools in support of innovation development at your company?

(Please rate each of the statements below)

	1 Not suitable at all	2 Not very suitable	3 Neutral	4 Suitable	5 Very Suitable
e-Learning / On-line learning					
Individual coaching / Mentoring					
Shadowing					
Case studies					
Networking					
Blended learning					
Workshops					
Traditional classroom training					
Self-test / self-assessment / quizzes					
Hard copy textbooks and printed material					
Other, please specify					

3.8 In your opinion what has contributed the most for the commercialization of your new products and/or services over the past three years?

- Investments in research and development;
- Investments in education and training of human resources.
- Improvement of work organization and processes;
- New marketing strategy;
- Development of new or update of the existing business model;
- Other, please specify:……

3.9 Based on your personal interest and your company's main field of operation, in what type of innovations would you/your company be interested to introduce and develop in the future?

- Product innovations (products or services);
- Process innovation (e.g. manufacturing or production process);
- Marketing innovation;
- Organizational innovation;
- Not interested in any of the above mentioned;

PART 4: FURTHER COOPERATION

Would you be interested in further cooperation with the project **"InnoFoster"** by receiving additional information on various trainings/events that will be organized in the frame of the project and/or learning materials / content that will be developed (e.g. the results of the present survey, etc.)?

- Yes
- No

If yes, please provide us with a valid e-mail address: _____

Thank you for participating in our survey!
More information at: www.innofoster.eu

This survey has been produced with the assistance of the European Union through the INTERREG - IPA CBC Bulgaria - Macedonia Programme,
CCI No. 2014TC16I5CB006.

The contents of the present document are the sole responsibility of Association Business Information and Consulting Center – Sandanski and can in no way be taken to reflect the views of the European Union or the Managing Authority of the Programme.

Annex 2: Questionnaire for open interviews with business advisors, policy makers, stakeholders, etc.

Document Title	**Interviews / open discussions guidelines with business advisors, policy makers, stakeholders, etc.**
Date of Issue	05.04.2017
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QUALITATIVE INTERVIEW GUIDELINES

Activity 3 – Research and needs analysis of the current innovation environment in the target cross-border region

Innofoster

Improving competitiveness of SMEs of the CB region by fostering and promotion of non-technological innovations

Association Business Information and Consulting Center – Sandanski

Sandanski, Bulgaria

05.04.2017

This project is co-funded by European Union through the Interreg - IPA CBC Programme Bulgaria-The former Yugoslav Republic of Macedonia

Table of Contents

Introduction

The qualitative interviews to be conducted in the framework of Activity 3 (A.3) are part of the primary research process. A qualitative interview aims to gain a deep insight into the topics and themes under examination. In other words, it seeks to understand the respondents' opinion and their perception about their experience. In this case interviews and open discussions aim to gain more in-depth, subtle and rather qualitative feedback on the attitude of members of the target group (i.e. SME managers, business consultants, policy makers, R&D institutions and academia) and other stakeholders on the current innovation environment in the cross-border region of Bulgaria and Macedonia, as well as the particular needs and deficiencies that both the local environment, external and internal factors are exerting on the process of introducing and developing innovations by local small and medium sized enterprises (SMEs).

In order to achieve its goals, the qualitative research phase of A.3 will include a series of open discussions in the form of interviews (either face-to-face or on-line) which will be organized by each research coordinator in both countries.

Methodology

Interviews or open discussions with members of the target groups are useful tool for gaining additional data in research and to determine areas needing further examination such as soft skills. Participants usually bring up more issues and concerns outside the prepared question path.

The interview themes and questions

The interview should try to cover the following topics that are essential for the needs of the research:

A. Respondent background and experience.
B. The specifics features of the local business environment, including the level of innovation development of local businesses, their level of perception , knowledge and attitude to the term "innovation", as well as the specific mindset of the local business community.
C. What are the main factors that support/hinder the innovation process at local companies and at local / regional level.
D. The existence of specific policies, measures, networks, financial instruments and incentives that support the introduction, promotion and development of innovation in SMEs of the region.

E. The specific support and training needs that SMEs of the region require in order to improve their skills and knowledge in the field of introducing and developing innovations. The particular knowledge/ skills/ attitudes needed by local SMEs in order to introduce and develop innovation in their companies.
F. The role of non-technological innovations in support of business development.
G. Closing questions

In any case, the above mentioned topics could be adjusted or modified based on the eagerness of the interviewee and the level of knowledge and practical experience in the topic. In this regards both the topics and the duration of the interview should be left to the individual judgement of the interviewer.

Interview process

Beginning the interview

The interview includes **15 open questions** and should take around **20 to 30 minutes to complete** face-to-face or via Skype. The interview should start by a short presentation of the project aims and objectives to the interviewees.

Also, it is very important that you ask the respondents' permission to record the interview (if applicable) as well as reassure them about their anonymity and confidentiality of the data they provide. All data gathered during the interview will be only for the sole purposes of the project only.

At the beginning of the interview, in order to build rapport and make interviewees feel comfortable, the interviewer should use the opportunity to discuss their background, such as their job and work experience.

During the interview

During the interview, you can follow the 80%-20% pattern (let the interviewees speak for 80% of the time while you speak for 20% when needed to clarify points or prompt the interviewee to elaborate more on a given question).

Concluding the interview

To conclude the interview, allow the interviewees some time for any comments, ideas, points they might want to add or elaborate more on an issue previously discussed by asking *"Is there anything else you'd like to add?"*.

The interviews should be conducted either face-to-face, in written (via email) or via online communication tools (such as Skype, GoToMeeting, etc.) for approximately **20 – 30 minutes** depending on the questions asked and the eagerness of the interviewee.

There will be at least **5 interviews conducted with members of the target group** (SME managers, business consultants, policy makers, R&D institutions and academia members) in each country. In total at least 10 open discussions / interviews should be implemented in the frame of the **qualitative research phase of Activity 3**. In order to provide a balanced sample of the profile of interviewees the following example distribution is provided:

- SME Managers – 2 interviews;
- Business advisors, policy makers, R&D institutions and academia members – 3 interviews;

Questions

The interviews have been designed in a semi-structured format (i.e. open questions grouped under specific themes in a specific order) so that they cover the different aspects of innovation development in small businesses that are relevant to the aims of the project.

In general, the following interview / open discussion should be followed:

- **Introductory part**
  - Introducing yourself or the team that participates at the discussion.
  - Presenting project "InnoFoster" and its aims and foreseen results.
  - Defining and explaining the goals of the interviews and establish ground rules.
- **Going deeper section –** this will be based on the topics and the detailed structure of the interview which is provided below.
- **Closing part** - summarizing the key issue raised and key points made and explaining what actions will be taken as a result of their feedback, and how this will be communicated.
- Inviting to participate in project "InnoFoster" activities, sharing project links and contacts.
- Thanking participant/s for their time and input.

Note: Total time of the interview should be between 20 – 30 minutes depending on the eagerness of the interviewee.

Interview contents

Dear Participant,

The present interview is conducted in the frame of project "Improving competitiveness of SMEs of the CB region by fostering and promotion of non-technological innovations (INNOFOSTER)". The action is currently being implemented by Association Business Information and Consulting Center – Sandanski in partnership with Association for development and promotion "Promo Idea" - Strumica under the First call for proposals of the INTERREG IPA CBC Bulgaria – the former Yugoslav Republic of Macedonia Programme (CCI Number: 2014TC16I5CB006).

The main objective of the project is to improve the knowledge and capacities of SMEs to develop and adopt non-technological innovations.

Innovation is a key driver of economic growth. It includes a wide range of activities that help firms become more productive and competitive. The economy of the cross-border region of Bulgaria and Macedonia has specialized in sectors and activities which require comparatively low qualification and technologies and which exports mainly low added value products. The majority of existing SMEs have low level of technological development and limited potential for applied research. SMEs do not have knowledge and lack experience with introducing of innovations, which causes potential loss of markets. SMEs lack also finances for education of their experts to introduce innovations.

In this regard, the main aim of the present interview is to provide a more detailed analysis of the specific needs of SMEs related to innovation support and training. In addition, based on the knowledge and practical experience of the interviewees in supporting and working with SMEs we would like to find out more on the present innovation environment in target cross-border region (consisted of District of Blagoevgrad in Bulgaria and South-east planning region in Macedonia).

The interview itself features **a total of 15 open questions and will take you not more than 20 to 30 minutes to complete**. With regards to confidentiality, the respondent is assured that no personal data or information will be disclosed or be otherwise utilized except for research purposes.

If you have additional questions in regards to the information and scope of the research part of the interview or the project as a whole, please do not hesitate to contact us via e-mail: …. and/or tel.: …..

Thank you!

The InnoFoster project team

Interviewee profile sheet for business advisors / policy makers / R&D institutions

INTERVIEWEE PROFILE	
Name:	**Surname:**
Institution / Organisation / Company:	**E-mail address (optional):**
Location:	**Country:**
Age:	**Gender:**
Educational level:	
Position:	
Do you have experience in innovation / business support / policy making?	
Yes ☐ No ☐	
Other important aspects that you would like to highlight:	

CONTROL DATA (To be fulfilled by the interviewer)

INTERVIEW DATA

DATE:

PLACE:

HOUR:

METHOD (e.g. on-line, Skype, face-to-face, via e-mail, etc.):

On-line ☐ Skype ☐ Face-to-face ☐ e-mail ☐

Interest of the interviewee to the main topic and activities of the project:

YES ☐ NO ☐

PART A: BACKGROUND AND EXPERIENCE

(Professional background of the business consultant/advisor/policy maker/ researcher in regards to supporting innovation in SMEs from the target region)

Question / Topic for discussion	Summarize the responses below…
1. Do you have any specific background and experience in providing consulting / training services to entrepreneurs/ SMEs in the field of innovation? If yes, please provide more detailed information on the specific consulting / training services that you have offered in the field of innovation?	

B. THE SPECIFIC FEATURES OF THE LOCAL BUSINESS ENVIRONMENT

(General comments on the local business environment and the attitude of local SMEs towards innovation)

1. Some general comments and thoughts on the socio – economic features of the region: business development, population trends, education, innovation, etc. 2. In your opinion, are SMEs in your country interested to receive advice / consulting / support related to innovation? 3. What are the main challenges when working with/ consulting / training SMEs from the region in the field of innovation? 4. What is the general perception of SMEs of your region on innovation? To what extent would you say the entrepreneurs are aware of the benefits of introduction of innovations in their companies?

C. MAIN FACTORS THAT SUPPORT/HINDER INNOVATION.

(Main factors that support/hinder the innovation process at local companies and at local / regional level)

1. According to your opinion, what are the main incentives both (internal and external) that would foster the introduction and development of innovation in local SMEs?
2. According to your opinion, what are the main factors (internal and external) that hinder the introduction and development of innovation in local SMEs?
3. What needs to be done at local / regional / national level in order to foster the development of innovations (including non-technological ones – organizational and marketing) in local businesses

D. POLICIES, MEASURES, NETWORKS, FINANCIAL INSTRUMENTS AND INCENTIVES

(The existence of specific policies, measures, networks, financial instruments and incentives that support the introduction, promotion and development of innovation in SMEs of the region)

1. What are the existing measures and support structures for innovation promotion?
    - Regulations and plans;
    - Public support (e.g. EU funding, national funding, other public funding, etc.),
    - Public / private/ civil society organisations that support the introduction and development of innovations in local SMEs, etc.
2. Do you consider the above mentioned measures and structures, effective, tailored and accessible for the SMEs? What is the efficiency of those linkages (e.g. between businesses; between SMEs and academia and R&D institutions , etc).

E. SUPPORT AND TRAINING NEEDS

(The specific support and training needs that SMEs from the cross-border region require in order to improve their skills and knowledge in the field of introducing and developing innovations. The particular knowledge/ skills/ attitudes needed by local SMEs in order to introduce and develop innovations.)

1. Are you familiar with any existing trainings / courses / support programmes in your region for introduction and development of innovations in SMEs? If yes, do you think such trainings/ support programmes / initiatives are popular among local SMEs? Are they effective in achieving their goals? In what ways?
2. When we consider innovation in local SMEs, what will be the most preferable learning tool that will help SMEs in further developing and broadening their skills and competences on the topic?
3. Based on your experience what are the most important skills and competences that SME employee / entrepreneur should poses in order to develop innovations / manage innovation processes?

F. NON-TECHNOLOGICAL INNOVATIONS

(The role of non-technological innovations (e.g. organizational, in marketing, etc.) in support of business development. The level of awareness of local businesses on such types of innovations; The attitude of SMEs to the topic, etc.)

Based on your personal experience, what type of innovations are the most popular in the SMEs of the region ?
In your opinion, how could local SMEs benefit from developing & introducing non-technological innovations?

CLOSING QUESTIONS AND OPEN DISCUSSION

1. In case a face-to-face or an open discussion via Skype is taking place please close the interview with the following wrap – up statements:

- Summarize the key issue raised and key points made and explaining what actions will be taken as a result of their feedback, and how this will be communicated
- Allow interviewee to add something or reflect on the interview
- Invite interviewee to participate in project “InnoFoster” activities, by sharing project links and contacts.
- Thank interviewee for his/her time and input.

Thank you for your time and participation!

Project InnoFoster team

Annex 3: Questionnaire for open interviews with SME managers.

Document Title: Interviews / open discussions guidelines with SME managers

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QUALITATIVE INTERVIEW GUIDELINES

Activity 3 – Research and needs analysis of the current innovation environment in the target cross-border region

Innofoster

Improving competitiveness of SMEs of the CB region by fostering and promotion of non-technological innovations

Association Business Information and Consulting Center – Sandanski

Sandanski, Bulgaria

05.04.2017

This project is co-funded by European Union through the Interreg - IPA CBC Programme Bulgaria-The former Yugoslav Republic of Macedonia

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Introduction

The qualitative interviews to be conducted in the framework of Activity 3 (A.3) are part of the primary research process. A qualitative interview aims to gain a deep insight into the topics and themes under examination. In other words, it seeks to understand the respondents' opinion and their perception about their experience. In this case interviews and open discussions aim to gain more in-depth, subtle and rather qualitative feedback on the attitude of members of the target group (i.e. SME managers, business consultants, policy makers, R&D institutions and academia) and other stakeholders on the current innovation environment in the cross-border region of Bulgaria and Macedonia, as well as the particular needs and deficiencies that both the local environment, external and internal factors are exerting on the process of introducing and developing innovations by local small and medium sized enterprises (SMEs).

In order to achieve its goals, the qualitative research phase of A.3 will include a series of open discussions in the form of interviews (either face-to-face or on-line) which will be organized by each research coordinator in both countries.

Methodology

Interviews or open discussions with members of the target groups are useful tool for gaining additional data in research and to determine areas needing further examination such as soft skills. Participants usually bring up more issues and concerns outside the prepared question path.

The interview themes and questions

The interview should try to cover the following topics that are essential for the needs of the research:

H. Respondent background and experience.
I. The specifics features of the local business environment, including the level of innovation development of local businesses, their level of perception , knowledge and attitude to the term "innovation", as well as the specific mindset of the local business community. All of this should be presented from the point of view of the interviewee (SME managers, owners, etc.);
J. What are the main factors that support/hinder the innovation process at businesses.
K. The specific support and training needs that SMEs of the region require in order to improve their skills and knowledge in the field of introducing and developing innovations. The particular knowledge/ skills/ attitudes needed by local SMEs in order to introduce and develop innovation in their companies.
L. The role of non-technological innovations in support of business development.

M. Closing questions

In any case, the above mentioned topics could be adjusted or modified based on the eagerness of the interviewee and the level of knowledge and practical experience in the topic. In this regards both the topics and the duration of the interview should be left to the individual judgement of the interviewer.

Interview process

Beginning the interview

The interview includes **18 open questions** and should take around **20 to 30 minutes to complete** face-to-face or via Skype. The interview should start by a short presentation of the project aims and objectives to the interviewees.

Also, it is very important that you ask the respondents' permission to record the interview (if applicable) as well as reassure them about their anonymity and confidentiality of the data they provide. All data gathered during the interview will be only for the sole purposes of the project only.

At the beginning of the interview, in order to build rapport and make interviewees feel comfortable, the interviewer should use the opportunity to discuss their background, such as their job and work experience.

During the interview

During the interview, you can follow the 80%-20% pattern (let the interviewees speak for 80% of the time while you speak for 20% when needed to clarify points or prompt the interviewee to elaborate more on a given question).

Concluding the interview

To conclude the interview, allow the interviewees some time for any comments, ideas, points they might want to add or elaborate more on an issue previously discussed by asking *"Is there anything else you'd like to add?"*.

The interviews should be conducted either face-to-face, in written (via email) or via online communication tools (such as Skype, GoToMeeting, etc.) for approximately **20 – 30 minutes** depending on the questions asked and the eagerness of the interviewee.

There will be at least **5 interviews conducted with members of the target group** (SME managers, business consultants, policy makers, R&D institutions and academia members) in each country. In total at least 10 open discussions / interviews should be implemented in the frame of the **qualitative research phase of Activity 3**. In order to provide a balanced sample of the profile of interviewees the following example distribution is provided:

- SME Managers – 2 interviews;
- Business advisors, policy makers, R&D institutions and academia members – 3 interviews;

Questions

The interviews have been designed in a semi-structured format (i.e. open questions grouped under specific themes in a specific order) so that they cover the different aspects of innovation development in small businesses that are relevant to the aims of the project.

In general, the following interview / open discussion should be followed:

- **Introductory part**
  - Introducing yourself or the team that participates at the discussion.
  - Presenting project "InnoFoster" and its aims and foreseen results.
  - Defining and explaining the goals of the interviews and establish ground rules.
- **Going deeper section –** this will be based on the topics and the detailed structure of the interview which is provided below.
- **Closing part** - summarizing the key issue raised and key points made and explaining what actions will be taken as a result of their feedback, and how this will be communicated.
- Inviting to participate in project "InnoFoster" activities, sharing project links and contacts.
- Thanking participant/s for their time and input.

Note: Total time of the interview should be between 20 – 30 minutes depending on the eagerness of the interviewee.

Interview contents

Dear Participant,

The present interview is conducted in the frame of project "Improving competitiveness of SMEs of the CB region by fostering and promotion of non-technological innovations (INNOFOSTER)". The action is currently being implemented by Association Business Information and Consulting Center – Sandanski in partnership with Association for development and promotion "Promo Idea" - Strumica under the First call for proposals of the INTERREG IPA CBC Bulgaria – the former Yugoslav Republic of Macedonia Programme (CCI Number: 2014TC16I5CB006).

The main objective of the project is to improve the knowledge and capacities of SMEs to develop and adopt non-technological innovations.

Innovation is a key driver of economic growth. It includes a wide range of activities that help firms become more productive and competitive. The economy of the cross-border region of Bulgaria and Macedonia has specialized in sectors and activities which require comparatively low qualification and technologies and which exports mainly low added value products. The majority of existing SMEs have low level of technological development and limited potential for applied research. SMEs do not have knowledge and lack experience with introducing of innovations, which causes potential loss of markets. SMEs lack also finances for education of their experts to introduce innovations.

In this regard, the main aim of the present interview is to provide a more detailed analysis of the specific needs of SMEs related to innovation support and training. In addition, based on the knowledge and practical experience of the interviewees in supporting and working with SMEs we would like to find out more on the present innovation environment in target cross-border region (consisted of District of Blagoevgrad in Bulgaria and South-east planning region in Macedonia).

The interview itself features **a total of 18 open questions and will take you not more than 20 to 30 minutes to complete**. With regards to confidentiality, the respondent is assured that no personal data or information will be disclosed or be otherwise utilized except for research purposes.

If you have additional questions in regards to the information and scope of the research part of the interview or the project as a whole, please do not hesitate to contact us via e-mail: …. and/or tel.: …..

Thank you!

The InnoFoster project team

Interviewee profile sheet for SME managers

INTERVIEWEE PROFILE	
Name:	**Surname:**
Institution / Organisation / Company:	**E-mail address (optional):**
Location:	**Country:**
Age:	**Gender:**
Educational level:	
Position:	
Do you have experience in innovation / business support / policy making?	
Yes ☐ No ☐	
Other important aspects that you would like to highlight:	

CONTROL DATA (To be fulfilled by the interviewer)

INTERVIEW DATA

DATE:

PLACE:

HOUR:

METHOD (e.g. on-line, Skype, face-to-face, via e-mail, etc.):

On-line ☐ Skype ☐ Face-to-face ☐ e-mail ☐

Interest of the interviewee to the main topic and activities of the project:

YES ☐ NO ☐

PART A: BACKGROUND

(Background of the business representative and experience in innovation management)

Question / Topic for discussion	Summarize the responses below…
1. Please provide a brief profile of company that you own / manage. What are the main factors / barriers that hinder the development of your company?	

B. THE SPECIFIC FEATURES OF THE LOCAL BUSINESS ENVIRONMENT

(General comments on the local business environment and the attitude of local companies towards innovation)

1. In your opinion, are SMEs in your country interested to receive advice/consulting/support related innovation?
2. What is your perception on innovation? To what extent would you say that you are aware of the benefits of introduction of innovations in your company?
3. What type of innovation you have developed or are currently in a process of developing in your company?

C. MAIN FACTORS THAT SUPPORT/HINDER INNOVATION.

(Main factors that support/hinder the innovation process at local companies and at local / regional level)

1. According to your opinion what are the main incentives both (internal and external) that would foster the introduction

and development of innovation in your company?

2. According to your opinion what are the main factors (internal and external) that hinder the introduction and development of innovation in your company?

3. What needs to be done at local / regional / national level in order to foster the development of innovations (including non-technological ones – organizational and marketing) in local SMEs?

D. SUPPORT AND TRAINING NEEDS

(The specific support and training needs that SMEs from the cross-border region require in order to improve their skills and knowledge in the field of introducing and developing innovations. The particular knowledge/ skills/ attitudes needed by local SMEs in order to introduce and develop innovations.)

1. Are you familiar with any existing trainings / courses / support programmes in your region for introduction and development of innovations in SMEs?

2. When we consider innovation in local SMEs, what will be the most preferable learning tool that will aid you in further developing and broadening your skills and competences on the topic?

3. Based on your experience what are the most important skills and competences that you as an entrepreneur/ manager should possess / develop in order to develop innovations / manage the innovation processes?

F. NON-TECHNOLOGICAL INNOVATIONS

(The role of non-technological innovations (e.g. organizational, in marketing, etc.) in support of business development. The level of awareness of local businesses on such types of innovations; The attitude of SMEs to the topic, etc.)

1. At present, how confident and prepared do you feel about planning, developing and introducing (non-technological) innovations in your company?

2. Have you introduced any non-technological innovations in your company?

If yes, please describe it in brief:

3. What are the challenges/ needs of your company with regards to:

a) Work organization and internal processes

b) Marketing (understood as 4Ps: Product, Price, Placement (Distribution) and Promotion)

4. Do you see any opportunity to introduce innovations with

regards to a.m. needs/ challenges (ref. to Question 3)?

If yes, which opportunities?

5. Are you interested in receiving support and consultancy regarding innovations and especially non-technological ones?

6. In your opinion what has contributed the most for the commercialization of your new products and/or services over the past three years?

7. Can you please point out any example of non-technological innovations in your business environment (e.g. in your suppliers/ clients, your competitors, etc.)?

CLOSING QUESTIONS AND OPEN DISCUSSION

1. In case a face-to-face or an open discussion via Skype is taking place please close the interview with the following wrap – up statements:

- Summarize the key issue raised and key points made and explaining what actions will be taken as a result of their feedback, and how this will be communicated
- Allow interviewee to add something or reflect on the interview
- Invite interviewee to participate in project "InnoFoster" activities, by sharing project links and contacts.
- Thank interviewee for his/her time and input.

Thank you for your time and participation!

Project InnoFoster team