



New Generation Skills

WP3 D.3.2.1

Local-level comparative case study of

SOFIA MUNICIPALITY

BULGARIA

Sofia Municipality

September 2017

Project co-funded by European Union funds (ERDF, IPA)

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1. OVERVIEW

Country: Bulgaria

Name of the organization: Sofia

Municipality

Topic: Local comparative case study on Innovation and (Social) Entrepreneurship with the focus on young people from 15-29

Duration of the project: 01.01.2017-30-06.2019

Funding program: Danube Transnational Programme

Total budget: in EUR ERDF: 1.564.067,83 und IPA: 238.934,95

Key partners:

Local Government and Municipality of Újbuda	Hungary	Lead Partner
PRIZMA Foundation for the Improvement of Employment Possibilities	Slovenia	ERDF Project Partner 1
Municipality of Maribor, Department for Culture and Youth	Slovenia	ERDF Project Partner 2
NOWA Training Counselling Project management	Austria	ERDF Project Partner 3
akzente - center for equality and regional cooperation	Austria	ERDF Project Partner 4
North-West Regional Development Agency	Romania	ERDF Project Partner 5
Intercommunity Development Association Cluj Metropolitan Area	Romania	ERDF Project Partner 6
Sofia Development Association	Bulgaria	ERDF Project Partner 7
Sofia Municipality	Bulgaria	ERDF Project Partner 8
DEX Innovation Centre	Czech Republic	ERDF Project Partner 9
Institute Mihajlo Pupin	Serbia	IDA Project Partner 1
Municipality of Savski Venac	Serbia	IDA Project Partner 2
Corvinus University of Budapest Small Business Development Centre	Hungary	Associated Strategic Partner 1
City of Graz	Austria	Associated Strategic Partner 2
City of Belgrade	Serbia	Associated Strategic Partner 3

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Current status:

The following activities have been implemented by Sofia Municipality up to date:

- *Identification and mapping of relevant stakeholders;*
- *Organisation and implementation of 1st workshop with Local innovation advisory group (June 1st, 2017);*
- *Preparation and conduction of youth survey in June 2017;*
- *Preparation and conduction of interviews with the respective target groups in June 2017;*
- *Collection and selection of good practices among the relevant project holders in the Sofia region;*
- *Analysis of the existing sources and literature, linked to the youth in Sofia, social innovation and social entrepreneurship;*
- *Analysis of the obtained results and prepared of the study outlined in current document;*
- *Preparation of the roadmap and identification of expert in the transnational innovation advisory board;*
- *Evaluation of results and transfer into an analysis report.*

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2. INTRODUCTION

Analysis of the local situation:

Identification of relevant stakeholders following the quadruple helix method and young people (pupils and students).

Stakeholders of all relevant sectors and all LIAG members were informed regarding NGS project contents and requirements of the local level comparative study.

Selection of good practices was made according identification of good examples on local level.

Creation of questionnaire and interview guide-lines

1 questionnaire for young people, aged 15 – 29th was developed and provided (*See Annex Nr 1*).

16 individual questionnaires with young people were conducted by Sofia Development Association. A contract for external expertise was submitted for providing expertise in the transfer of good European practices and description of successful examples from the local innovation ecosystem with emphasis on policies for young people, education and employment for Sofia Municipality.

Appointments and conducting of interviews

Due to local conditions and available time resources, with the most comprehensive analysis possible, both, group and individual interviews were conducted.

Transcription, evaluation of results and transfer into an analysis report

Templates were prepared to evaluate the results of the interviews. The interviews were evaluated and summarized. The results were incorporated into the provided template for the local level comparative study.

2.1. Definitions and acronyms:

There are no special definitions or acronyms in the report.

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3. METHODS AND SOURCE OF DATA USED DURING SITUATION ASSESSMENT

- **3.1. Literature, document and website analysis:**

National strategic documents:

- National Smart Specialization Strategy, 2010-2020
- National Youth Programme, 2016-2020
- National Youth Strategy, 2010-2020
- National Plan for the Implementation of the European Youth Guarantee, 2014-2020
- National strategy for the development of scientific research 2020
- National roadmap for science infrastructure
- National strategy for life-long learning 2014-2020
- National strategy for the effective application of ICT in the education and science, 2014-2020
- National strategy for vocational education and training, 2015-2020
- National social economy concept

Sofia municipal documents:

- Sofia Innovative Smart Specialization Strategy, 2016-2020, and Action Plans
- Sofia Youth Strategy, 2017-2027
- Strategy for the personal development of children and students, 2017-2019
- Strategy for Education, 2016-2023

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Analyses, research, reports:

- “Social entrepreneurship as an opportunity for discouraged young people”, Nadya Shabani and Pavleta Aleksieva, UNICEF, Sofia 2016, ISBN 978-954-92855-9-8
- “Young people in European Bulgaria”, Petar-Emil Mitev and Siyka Kovacheva, Sofia 2014, ISBN 978-954-2979-21-0
- http://computerworld.bg/45643_za_predpriemachestvoto_v_bulgariya - Costanca Grigorova , Sofia, February 2014, br. 8 - *Computerworld* ;
- First national report of GEM Bulgaria on entrepreneurship 2015-2016, Veneta Andonova and Mira Krasteva, ISBN 978-619-90724-2-4

Websites:

- <http://mg2007.bg/%D0%B7%D0%B0-%D0%BD%D0%B0%D1%81/> - Youth Voice in Bulgaria national association;
- <https://www.etwinning.net/bg/pub/about.htm> : eLearning, eTwinning programme integrated into Erasmus+ (in Bulgarian);
- https://www.schooleducationgateway.eu/bg/pub/teacher_academy/teaching_materials/young-entrepreneurs.htm - European online platform for school education (in Bulgarian);
- <https://www.ablebulgaria.org/bg/about/> - Association of Business Leaders and Entrepreneurs (ABLE);
- <http://bbforums.bg/home/> - Bulgarian Business Fora;
- <http://www.onprs.eu/?page=about> - Organization for practical scientific development of students;

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- <https://sites.google.com/a/piamater.org/theinstitute/home> - Institute for Social Entrepreneurship;
- <http://nmf.bg/> - National Youth Forum – the biggest youth platform with over 40 youth NGOs;
- www.edit.bg - Economic Development via Innovation and Technology Network;
- www.move.bg - MOVE.BG Innovation platform;
- www.brain-workshop.org – Brain Workshop Institute;
- www.startupnavigator.eu - StartUp Navigator.

• 3.2. Desk research of existing statistical data

For the analysis of statistical data, the following sources were used:

National Statistical Institute in Bulgaria - <http://www.nsi.bg>

Research on the status and needs of youth from the Ministry of Youth and Sport:

<http://mpes.government.bg/Pages/Programmes/Default.aspx?evntid=6pqkIMK9dTA%3d>

and from the Ministry of education and science:

<http://www.mon.bg/?go=page&pagelid=74&subpagelid=143>

And on the basis of the following Sofia strategic documents, processes and developments:

- Sofia Strategy for the Young People (2017 – 2027);
- Sofia Education Strategy (2016 – 2023);
- Sofia Cultural Strategy (2016 – 2020);
- Sofia Strategy for the Development of Physical Culture and Sports (2012 – 2020);
- Sofia Innovation Strategy for Smart Specialization, 2016.

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- **3.3. Qualitative data collection:**

SDA developed a questionnaire (enclosed in Appendix 1) to circulate among the major project target group (youth aged 15-29). 16 young people were interviewed: 9 female and 7 male; 5 in secondary school (aged 15-19) and 9 pursuing tertiary education or graduated (20 – 29). The questionnaire covered eventual interest in becoming an entrepreneur, self-assessment of current skills and readiness, obstacles, enabling factors, needs to be addressed by the stakeholders in Sofia.

The results of this qualitative data collection method are as follows:

Slightly over 50% of the respondents consider becoming entrepreneurs. The percentage is higher when there is some role model – most often among friends, less often in the family. The potential intention to be entrepreneur is slightly higher among male respondents (60%) than female ones.

One third feel they are well prepared and have the necessary skills and attitudes. Most highly rated are the following skills: business planning and management. Average skills include legal and regulatory issues and resource management. Low developed skills and competences are risk mitigation, commercialization and investment models.

All of the respondents claim they would like to develop further their skills and competences. The area that most of the young people want to improve is financial management (nearly 80%), followed by marketing, innovation, digital skills and investments. There is less interest in areas like communication, human resources, patenting.

None of the respondents know where and how to fill these gaps in their competences. Some believe that there must be some offering in Sofia but have no idea where to look for it.

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However, the lack of sufficient skills is not among the obstacles that prevent young people from starting their own business initiative, whereas the lack of relevant information regarding funding; R&D in the respective area is a hindrance to only one respondent. The major obstacle according to ALL respondents is the lack of initial capital, while 50% also point out that they have no office or venue necessary for the operations, and have to team or idea where and how to meet and select team members. Also relevant, though less volunteered, are obstacles like risk and insufficient self-confidence. An interesting obstacle given several times in an open-ended question is that some respondents claim they have other duties and obligations that would not allow them to follow this career path. These are most often either financial issues (paying back student loans or other credits that require regular and predictable income), or family issues.

- **3.4. Quantitative data collection:**

Quantitative data were collected via interviews and the survey on-line sent to the email addresses of the representatives of the target groups. Two types of questionnaires were sent through the mail address, through stakeholders who are part of the eco system. The questions asked cover the field of education and career expectations:

- *What are the three things more important when you choose a job?*
- *Do you think you can find the job you want in Sofia?*
- *What arguments would make you happy when choosing a job?*
- *What are the most useful methods for learning?*
- *What channels you use to be informed on a daily basis?*
- *What are the motives that drive you?*

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- 3.5. SWOT analysis:

<p>STRENGTHS</p> <ul style="list-style-type: none"> ✓ Young population ✓ Over 20 universities and tertiary education institutions ✓ Access to venture capital (Eleven and LaunchHub funds) ✓ Favourable environment (taxation policy, excellent ration between cost of living and quality of life) 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> ✓ Legal and law enforcement issues (judiciary system efficiency, IPR and patent protection) ✓ The lowest income member state, therefore less competitive than others ✓ Lack of entrepreneurship culture (market economy is only 20 something years old)
<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> ✓ Decentralization (Sofia would have more opportunities for intervention) ✓ Open and innovative local government ✓ Sofia is becoming a trendy European destination for the young 	<p>THREATS</p> <ul style="list-style-type: none"> ✓ Brain drain ✓ End of EU funds without proper local/national readiness for that ✓ Prolonged exclusion of Bulgaria from the Eurozone and Schengen space

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4. THE REGIONAL AND LOCAL-LEVEL CONTEXT

The aim of this chapter is to give an overview of your local-level policy instruments in Sofia and Sofia-city region.

Areas recommended for examination are as follow:

4.1. Youth in Bulgaria:

➤ Demography

There is not an age range, which strictly cover the Youth period in a person life time. For the purpose of the current study, the youth period will cover age range from teen age till 29.

NUMBER OF POPULATION BY REGION, AGE, GENDER 31.12.2016

Region/ Age	Total			In the cities			In the villages		
	total	men	women	total	men	women	total	men	women
15 - 19	309 596	159 294	150 302	226 530	116 235	110 295	83 066	43 059	40 007
20 - 24	350 006	180 552	169 454	261 326	133 426	127 900	88 680	47 126	41 554
25 – 29	465 523	239 641	225 882	362 133	183 202	178 931	103 390	56 439	46 951

Total number of people in age range 10-29 living in the country 1 446 519, which is 20% of the whole country population.

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➤ **Youth in education**

NUMBER OF HIGH SCHOOL GRADUATES BY REGION AND TYPE OF EDUCATION FOR 2016

Region	Total	Common education Schools	Schools with specialization	Art Schools	Professional Schools
Total for the country	44975	24381	16	1407	19171

Total number of people graduated with high school degree in 2016 – 44975, which is 0.03% of total youth population in the country

➤ **Employment, risk of poverty and quality of life among young people**

NUMBER OF EMPLOYED PEOPLE BY ECONOMIC SECTOR FOR 2016

Total	2 232 840
Private sector	1 702 404
Government sectors	530 436

RISK OF POVERTY, RESEARCH CONDUCTED in 2016, referral year 2015, BY REGION

Bulgaria	One person/ poverty limit in BGN	Two adults with two or more children/ poverty limit in BGN
Total in BGN	3 698	7 765
Sofia region	3 528	7 409
Sofia capital	5 671	11 909

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Data shows that limit of poverty for the country and the capital region is quite different. Sofia city has 45% higher limit of poverty in BGN, compared to the overall limit for the country.

➤ **Migrations**

MIGRATION OF THE POPULATION INSIDE THE COUNTRY 2016

Located	2016		
	Dislocated		Located Total
	From the cities	From the villages	
In the cities	42 599	23 696	66 295
In the villages	20 646	9 073	29 719
Dislocated total	63 245	32 769	96 014

MIGRATION OF THE POPULATION OUTSIDETHE COUNTRY, AGE and CITYZENSHIP of the migrators 2016, in numbers

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Age	Immigrants					Emigrants				
	Total	BG	Foreign	Incl.		Total	BG	Foreign	Incl.	
				EU	Outside EU*				EU	Outside EU
15-19	989	439	550	49	501	2 095	1 960	135	19	116
20-24	1 450	569	881	76	805	4 701	3 892	809	114	695
25-29	1 807	875	932	68	864	4 653	3 884	769	74	695

* citizens of third countries or without identification

In 2016 **25 795 Bulgarians** left the country **10 595 young people** in age range **10-29**, which is **41%** of the total number of Bulgarian emigrants.

4.2. Study of innovatory capacities of the Sofia region:

➤ Demography

Youth Population – Regions, Age, Gender

NUMBER OF POPULATION BY REGION, AGE, GENDER 31.12.2016

Region/ Age	Total			In the cities			In the villages		
	total	men	women	total	men	women	total	men	women
15 - 19	309 596	159 294	150 302	226 530	116 235	110 295	83 066	43 059	40 007

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Region/ Age	Total			In the cities			In the villages		
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20 - 24	350 006	180 552	169 454	261 326	133 426	127 900	88 680	47 126	41 554
25 – 29	465 523	239 641	225 882	362 133	183 202	178 931	103 390	56 439	46 951

NUMBER OF POPULATION IN SOFIA REGION, AGE, GENDER 31.12.2016

15 - 19	10 614	5 519	5 095	6 965	3 604	3 361	3 649	1 915	1 734
20 - 24	10 284	5 295	4 989	6 505	3 333	3 172	3 779	1 962	1 817
25 - 29	12 339	6 655	5 684	7 813	4 095	3 718	4 526	2 560	1 966

NUMBER OF POPULATION IN SOFIA CITY (CAPITAL) REGION, AGE, GENDER 31.12.2016

15 - 19	52 349	26 821	25 528	49 830	25 490	24 340	2 519	1 331	1 188
20 - 24	80 715	40 984	39 731	77 895	39 464	38 431	2 820	1 520	1 300
25 - 29	118 540	59 968	58 572	114 806	58 054	56 752	3 734	1 914	1 820

- Total number of people in age range 10-29 living in the country 1 446 519
- Total number of people in age range 10-29 living in Sofia Region 43 812
- Total number of people in age range 10-29 living in Sofia City – Capital 304 766
- 0.3% of youth country population is living in Sofia Region and 21% in the capital.
- Total number of young people living in Sofia as city and region 21.3%.

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➤ **Youth per activity and employment**

NUMBER OF EMPLOYED PEOPLE BY GENDER, REGION, AGE AND EDUCATION/ 2016

Indicator	Employed people
Total	3 016 800
Men	1 607 600
Women	1 409 200
In the cities	2 403 100
In the villages	613 700
Age 15-24	133 400
Age 25-34	669 200
University education	979 300
High School Education	1 725 100
Collage	1 073 500
Primary Education	275 200
Less than primary	37 100

Total employment rate for 2016 – 49.30%

➤ **Education**

NUMBER OF HIGH SCHOOL GRADUATES BY REGION AND TYPE OF EDUCATION FOR 2016

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Region	Total	Common education Schools	Schools with specialization	Art Schools	Professional Schools
Total for the country	44975	24381	16	1407	19171
Sofia Region	1421	722			699
Sofia City	8321	5363	6	518	2434

Total number of people graduated with high school degree in 2016 – 44975, 21% of which are living in Sofia city and region.

4.3 Introduction of economic operators of the region:

The innovations and the digital technology integration are becoming sufficient part of the economic operations and competitiveness of the Bulgarian business environment. Below you will find some key players that promote such practice, provide tools and environment to facilitate innovation.

Executive Agency for Small and Medium size Enterprises Development – supports small and medium size enterprises to increase their competitiveness and innovation capacity, ecological and export potential. The agency efforts are directed in creating environment for easy access to export markets, financial funds and corporate training through combining the resources of different local and global entities.

National Online Export Portal – with the support of the European Financial Fund the National Export Portal is a tool, which facilitates the easy market entry of local companies to

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global market, by providing data, expertise and knowledge in different markets, supporting innovative approaches and digital access.

Sofia Tech Park – technology innovation estate – a state organization, which main purpose is to develop and implement projects to create accommodating environment for research, innovation and increase of technology potential of the country. Sofia Tech Park is partnering with private entities to facilitate the innovation environment and create and manage entrepreneurial ecosystem in the region.

European Investment Bank – supporting innovation in Bulgaria. Under the Innovation Finance the EIB designed financial products for different sizes of enterprises. Advisory corporate services. EIB group invests in research and support of innovation practices by offering easy to access financing.

Other practices stimulating innovation following research by “DIGITAL INNOVATION HUBS CATALOGUE”-SMART 2016/0002” commissioned by the European Commission following the EU Digital Strategy plan and targeting to create a catalogue as comprehensive as possible of the digital innovation hubs in Europe, providing a landscape of the Digital Innovation

Hubs in Europe:*

Digital Innovation Hubs (DIHs) are one-stop-shops that help companies to become more competitive with regard to their business/production processes, products or services using digital technologies. They are based upon technology infrastructure (competence centre) and provide access to the latest knowledge, expertise and technology to support their customers with piloting, testing and experimenting with digital innovations. DIHs also provide business and financing support to implement these innovations, if needed across the value chain. As proximity

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is considered crucial, they act as a first regional point of contact, a doorway, and strengthen the innovation ecosystem. A DIH is a regional multi-partner cooperation, and can also have strong linkages with service providers outside of their region supporting companies with access to their services.

Summarizing, the following characteristics are demarcating a DIH:

- They help companies with exploring and implementing digital technologies in their manufacturing, products and services in order to enhance their competitiveness.
- They are one-stop-shops, providing an open access doorway for companies to technological and business services.
- They support companies with technology and business oriented services, as well as strengthening the regional innovation ecosystem.
- They are a multi-partner cooperation, including organizations like RTOs, universities, industry associations, chambers of commerce, incubator/accelerators, regional development agencies and even governments.

Identified potential Bulgarian DIHs so far:

Work & Share Coworking Space	Coworking Community building Networking Startup development	Work & Share is built with the sole purpose to allow freelancers, startup founders, executives and coworkers to share experiences and grow together. Creating the right ecosystem could do miracles in terms of productivity and our goal is to nurture that ecosystem by providing all the necessary ingredients to our members.
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STARTUP BG	Entrepreneurship Startup Development Events	The first organization in Bulgaria which stimulates and promotes the entrepreneurship on a local level by organizing numerous events
<p>EDIT.BG is an open network initiative that aims to recognize, promote and foster the potentially successful sectors of the Bulgarian economy with a focus on digital innovation. Their common goals are to: Consolidate the digital community. Share skill, knowledge and technology. Benchmark the Bulgarian digital industry. Improve the business environment</p>		
Bulgarian Centre of Women in Technology	Science Technology Research	They bring together stakeholders from the business sector, the government, the academia and from non-governmental organizations, giving them the opportunity to support and to work for increasing the women's professional participation in the sphere of ICT, as well as to take part in the development of technological and engineering products.
Transformatori.net (VIAS)	NGO	An initiative build in cooperation with University of Architecture. Core purpose is to help community build prototypes using 3d printers and laser cutting machines

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Technology Transfer Office (Sofia University)	Technology Consulting Training	Technology transfer of research results through marketing of research results, and organisation of meetings between developers and users of technology, seminars, conferences, and training courses.
Incubator	Art Culture Architecture Digital art	An art complex that unites art collectives in the fields of design, architecture, digital and visual art. It's aim is to interconnect them, to support them in the process of development and to improve their online visibility,
Transformatori.net (ВИАС)	NGO	An initiative build in cooperation with University of Architecture. Core purpose is to help community build prototypes using 3d printers and laser cutting machines

SmartFabLab - SmartFabLab is the first digital fabrication laboratory in Bulgaria. The labs are available for wide usage. Access to them have individuals, specific programmes and institutions.

It provides the following services:

1. Ecosystem building, scouting, brokerage, networking
2. Collaborative Research
3. Concept validation and prototyping
4. Testing and validation
5. Pre-competitive series production
6. Mentoring
7. Education and skills development

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Innovation Starter - is the first Bulgarian Agency for Innovations. They cultivate innovation culture in Bulgarian business and academic communities. Their efforts are focused on distribution of Systematic Innovation methodologies by training, seminars and consultancy to promote sustainable growth is through innovation. Their services help companies focus their efforts in practical actions in the areas of new business development, problem solving and organizational setup. The main expertise is in SIT methodology and its applications in the business processes. Bulgaria does not fit Europe's sector distribution, as almost half of the new entrepreneurship ventures belong to retail or wholesale, which are extremely vulnerable to economic downturns. A quarter of the new ventures belong to the higher value-added sectors of manufacturing and health, education, government and social services, whereas transportation and communication, information and professional services account for less than 15% of early-stage entrepreneurship. In essence, Bulgaria has a smaller share of early-stage startups belonging to knowledgeintensive industry sectors than innovationdriven economies, many of which are Bulgaria's EU partners. The industry sector distribution for Bulgaria is similar to the distribution in factor- and efficiency-driven economies, probably reflecting the scarcity of skills that are required by knowledge-intensive industries.

A comparison with the good practices of leading countries such as Germany, Finland, Estonia, and Poland is needed primarily from the point of view of strategic benchmarking. The basis for this comparison can be uses the measurement of progress and the means to achieve it - policies, legislation, tools, common to the EU "Measures in support of the digital economy", namely: digital entrepreneurship, the use of ICT by SMEs, standardization in the field of ICT, development of e-skills, etc.

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There is also a specific framework to be used for a similar one Comparison. As such, the methodology for analysis of the progress behind the European Commission's Digital Scoreboard. Apart from the partnership experience, the national one has been successful implemented measures and procedures in the previous programming period can also to be used to derive new support policies, in particular on the development of research and innovation to achieve of digitally-driven growth and a balanced innovative SME-ecosystem in Europe the field of ICT. The National Innovation Fund is one of those mechanisms, who prioritize addressing this goal.

To be able to do this, the rules for managing the funds of the National Innovation Fund by model, similar to that of the new operational programs - ensuring the principle the openness of data in project implementation and access society to the direct results of the relevant projects. This will allow for the multiplication of these micro results level and increase the efficiency of the public resources invested macro level (projects under initiatives such as Eureka and Eurostars also take place funded under NIF rules).

4.4. Introduction of the system of council and state institutions.

Sofia Municipality is leading in Bulgaria in terms of good and effective regulation, management and provision of electronic services for citizens and businesses. Since 2013, Sofia Municipality has had an automated electronic system for 50 major administrative services for citizens and companies. The virtual office has been an established practice for several years.

The decision-making process in Sofia Municipality in the field of research and innovation is supported by the Expert Council on Science, Innovation and New Technologies and the Advisory

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Council on Economic Policy and Finance. Leading stakeholders from academic and research institutions, employer associations and businesses participate in the two councils. In order to promote cooperation between business and science, the two councils hold regular joint meetings and contribute to decision-making on important issues related to the development of Sofia.

None of the elements in the innovation ecosystem exists and develops in a vacuum. The saturation with talent and opportunities for interaction in a given geographical location greatly increases the potential for entrepreneurship and innovation by creating a mix of competition and cooperation.

Main tasks:

- Support for continuing clusterization in Sofia through various methods such as logistical and financial support, partnership, transport links, etc.;
- Creation (and support for existing ones) of physical locations to work on innovations - shared workspaces, innovation centres, etc., which give access to the necessary infrastructure and equipment, to a variety of expertise while maintaining market focus. In addition to research centres, these hubs are home to entrepreneurial and start-up business community;
- Increasing the visibility and public recognition of innovative entrepreneurs and companies through interaction with the media and commitment of local authorities;
- Encouraging the creation and participation in regional and European networks, including networks of mentors;
- Connecting the academic and research institutes and businesses for joint co-funding of research and development, access to development, and attracting investors and mentors;
- Sofia wins recognition as a capital of the new digital market at the regional and European level;

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➤ **Human capital:**

- Support for managerial and entrepreneurial capacity, for example vouchers for participation in Bulgarian and internationally recognizable accelerators;
- Support for training institutions in the field of ICT, for instance vouchers to attract specialists and/or online and distance learning;
- Improving the quality of the workforce - training of personnel needed for the industry and services, increasing the number of students studying engineering and natural sciences, ICT, entrepreneurship, innovations and innovations in finance, retention and attraction of talent, introduction of the dual education system;
- Promotion of internal and external trainings to improve the quality and, respectively, the productivity of the workforce;

➤ **Saturation and access to the market:**

- Sofia becomes a host to at least one globally recognized platform in the field of ICT, which holds every year world forums in the city, at which it brings together investors, entrepreneurs, decision-makers at the national and local level, researchers and inventors. (Example: WEBIT, INNOVATION EXPLORER, DIGITALK);
- Support for the creation of a centre of excellence in the two thematic fields identified in this Strategy: Informatics and ICT and New Technologies in Creative and Recreative Industries, as well as additional priority areas;
- Attracting leading investors in high-tech industries and services who invest in research and development in the priority areas;
- Development of research and innovation infrastructure, including e-infrastructure;

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- Effective implementation of innovative ICT products and services in all spheres of social and economic life;
- Encouraging international cooperation by attracting doctoral students from outside the EU, participation in networks, European and trans-border projects, international conferences, working meetings and forums as a prerequisite for accomplishing higher capacity of the education system, the innovative development at the company level and successful state and municipal practices to stimulate innovation;
- Continuing clusterization as a form of specialization and cooperation between business partners and potential partners, in order to increase the value of the final product that is sold on the global market;
- Establishing innovation centres in addition to research infrastructure which has no commercial focus;

➤ **Financial capital**

- Establishing new mechanisms for incubation and finance, especially in the early stages.
- Combining funding with commercial mentoring.
- Encouraging international and foreign venture capital funds for investing in Sofia through promotion and other mechanisms.

➤ **Digital technologies:**

- Developing regulatory and non-financial incentives for the technological modernization in the manufacturing sector and SMEs, using ICT and resource-efficient/low-waste technologies, reducing pollution at the source and reducing carbon emissions.

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- Encouraging internal company productivity improvements based on new management techniques and new business models.
 - Encouraging the introduction of high-tech elements and knowledge-intensive business services in traditional productions and services.
 - Stimulating the internationalization of enterprises to enter the international online markets.
- **Regulatory environment and management:**
- Expanding the use of public tenders to promote innovation, create demand for innovative products, and stimulate research and knowledge transfer. Public tenders can support and engage SMEs to research the use of innovation.
 - Lowering barriers to innovation by promoting a balanced risktaking.
 - Supporting the export of high-technology products and services with high added value through the participation of Sofia in international exhibitions, fairs, and so on.
 - Creating mechanisms for annual collection of data on the implementation of the ISSS (for example - number of patents, licenses, funding for R&D, market share of new innovations, etc.), as well as subsequent analysis and opening of these data.

The role of local government and administration is a key success factor, as it creates the necessary conditions for innovation culture and concentrates its efforts on the establishment, functioning and interconnection of platforms for efficient transfer of knowledge and technology and commercialization. Sofia has established traditions in the implementation of the 12 principles of good governance. To achieve the goals and objectives set in this document, Sofia will develop and implement innovative and user-oriented models of good governance related to the provision

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of better, cheaper and time- and resources-saving services. The focus in this direction will be the facilitating of conditions for doing business, especially for start-ups. Thus, companies will have more time and resources to introduce new technologies and seek innovative solutions. The larger share of responsibilities in terms of creating a sustainable, predictable and supportive regulatory environment for entrepreneurs and investors is within the powers of the legislation, government and the judiciary.

4.5. Introduction of services in the fields of knowledge-sharing and knowledge management available in the region.

The process of knowledge-sharing and knowledge management is going through two major aspects. The social dimension includes training practices for people and the technological dimension is focused on creating value through technology, based on Internet distribution. The two aspects are executed by individual learning programs, communities, as a demand side, and cultural initiatives, practical programmes and training programmes as a supply side. Mainly supported by European funding the providers are private and state organizations, which efforts are directed mainly in offering consulting and training programs. Innovation and entrepreneurial skills are becoming more integrated in the university education, offered as master or extra qualification programs.

Awareness and career guidance usually starts early youth age. It is not a coincidence that many efforts are directed precisely towards developing entrepreneurial thinking in these years and stimulating the desire to start independent initiatives in order to learn basic business skills.

Collaborations between schools, universities, technology parks, private and public parks

Public organizations have proven the most successful formations.

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Implementing Entrepreneurship Courses in universities and stimulating initiatives such as hacking, racing, challenges of a different nature leading to the creation of a product, pass innovative models for learning and absorbing entrepreneurship and business principles and stimulate the exchange of ideas.

University environments can offer support at different levels – through training programs by providing exchanges between researchers university and business by sharing space for work and business laboratories. Many large and world - renowned technology companies are launching University environments, among the best-known examples being Google, Facebook, Sun Microsystems, and Deepmind.

➤ **Positive Bulgarian initiatives in this direction are:**

Entrepregilrl - Bulgarian competition for girls aged 16-25 years with interest in entrepreneurship, innovation and technology that want to start their own company. The award winner receives a scholarship for training in the Alternative MBA (aMBA) program of the Business Institute (The Business Institute), one-year business mentoring and one year membership in the Bulgarian Center of Women in Technology;

The UniStart Program - 6-week Entrepreneurship Course, organized by Youth Business Club, gathering students with similar interests from different universities in Bulgaria;

The Junior Achievement Bulgaria organization, which is mainly privately owned funding creates and develops various promotional projects entrepreneurship from childhood to university years. Today, accelerator programs exist in most developed countries economies around the world and successful companies that have passed through them are numerous. They represent training and

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support programs accelerating the launch of new businesses to be prepared for fundraising and marketing.

Mentoring, the strong network they build, contacts and synergies between companies that are in a highly collaborative environment, are the key to success and effective development of startups so that they can overcome the first difficult years and become able to develop working business models.

The Pre-Acceleration Program of the Founder Institute was opened in Bulgaria in 2015, an organization with a huge worldwide network and multiple locations cities. It has a 3-month term, participation criteria and a fee of nearly 500 dollars, being extremely intense and selective in character. About the time in which there are 2 300 start-ups in the world scale, 72% of them continue to exist after it and create over 20,000 jobs. Another similar program made the organization Start It Smart - in March 2017, the 6th consecutive season of the pre-acceleration program, and over 265 companies have passed through it, which have funded a total of over 2 million euros.

Shared workspaces provide the opportunity to freelancers and start-up companies to exchange ideas and share services, positioning them territorially in the same place by providing them more flexible conditions of use. The number of these spaces has increased significantly in recent years, since they have a beneficial effect on the development of the environment companies in the early stages. The help these spaces could have is obtained in the administrative settlement of the buildings being used or support with the provision of municipal premises necessary for events to build or maintain the network.

Examples of shared workspaces in Bulgaria are few. With the emergence of the first model of the big brand Betahaus, currently in Sofia there are nine such spaces and others occur in cities like

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Plovdiv, Varna, Burgas, Rousse, and Veliko Tarnovo. Some of them are: Work & Share Co-Working, Puzl, SOHO, Bizlabs, etc.

Bulgaria's low levels of entrepreneurial activity are driven by environmental conditions and individual intentions. Regarding individual intentions, an educational system that helps to establish self-confidence and supports the improvement of entrepreneurial skills is particularly important. A sizable increase in entrepreneurial intentions and activity are not likely to happen immediately and without a significant improvement in multiple components of the economic context, including access to finance, trust in public officials, a well-enforced rule of law, good-quality infrastructure, vibrant markets and the increased customer spending.

All good practices and intentions for political action in perspective should be considered through the prism of the risk of forming "Bulgaria at two speeds" when talking about digital-powered economic development - dynamically developing hubs around Sofia and Plovdiv and stagnating areas of the Northwest (and not only).

Economic and technological lagging and negative demographic processes in a number of regions of Bulgaria can actually lead to turning them into "desert areas" of an innovative nature. More and more public sector leaders are aware of the danger of inter-regional differences become the most serious problem for sustainable economic development of the country and this is reflected in the Government Strategy for Smart Specialization.

For the moment, the most decentralized efforts are the most tangible, though limited in scope and resources, such as Google's funding "Vratza Software Society", as well as the ZaraLab and Rousse Stara Zagora Startup Factory. To be able to talk about the deployment of such practices on a scale, governmental measures in the implementation of which the regions themselves have a leading role - such as the management of the financial sector support for start-up technology

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enterprises, etc., we should we can operate under conditions of developed autonomous functioning regional innovation systems that have not yet been built.

Such are available when the Knowledge Generation Subsystem (universities, research companies, agencies, experts, etc.), involved in a two - way process of learning, of exchange information networks in the so - called "knowledge networks", together with the subsystem knowledge exploitation (regional industrial structures, clusters and clusters) etc.).

All actions to support digital propulsion and support for digital SMEs in Bulgaria should be in line with the broader a global context, namely the transformation of the global economy into the EU the Context of the Fourth Industrial Revolution - The Leading Topic by the last two editions of the World Economic Forum.

Enhancement of this transformation, including a change in patterns development with the emergence of new technologies and tools and a merger of information and production technologies, physical and digital environment is associated with the dawn of the financial crisis, and the reason for this lies in the historical legality, expressed as a connection between the periods of economic stagnation and the following are peaking at innovation development.

This new direction of inter-system integration, defined as the fourth industrial revolution, has a tremendous impact on all established ones industries. That is why identifying those profitable solutions that are already forming in the system and developing exponentially in new ones conditions of the changed environment is critical to the success of the every economy.

The example of the education system that was mentioned earlier as a key pillar in an economy driven by increased efficiency production is appropriate. Through the so-called "MOOC" - mass open online courses - interactive courses combining video, texts and exercises, the difference

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between potential and factual can be analyzed implementation of innovations with transformation for the economy potential.

Here comes the untapped opportunity that the masses open online courses in the context of the Fourth Industrial Revolution - to deploy "hybrid" forms of training through which they can be reaching larger and inhomogeneous groups of learners at decreasing marginal costs.

A solution that correlates with some of the issues already mentioned (like the high percentage of young people in the NEETs group) and some of the recommended ones approaches to political action (such as supranational cooperation level), as one such course allows for adaptation within the framework of over-institutional and over-national training programs driven from the needs of the business.

At the European level under the auspices of Startup Europe and the European Commission there is already a network to develop similar educational resources, targeting digital skills and coping with those fewer than 900,000 professionals in the ICT sector by 2020 and some of the national ones governments - in France and Germany, for example, actively support platforms at national level, including France Université Numérique (French Digital University), iVersity and others.

In this sense, Bulgaria lags behind the European example because the realization of such distributed, inter - institutional and similar whole inter-institutional efforts still do not have a broad institutional dimension support, perhaps also because of the predominantly closed and fragmented institutional culture. In conclusion, in the "economy of ideas", in the time of global chains of the added values in which an economic unit of importance is not the particular industry or sector, and the individual business activities and functions, the role of an integrator is becoming more critical to achieving digitally-driven (and any other) economic growth.

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4.6 Examination of collaboration of existing services, their potential for improvement.

The efforts connected to connectivity and innovation efficiency grounded on entrepreneurial mentor programs, accelerators and incubators are a key factor for building successful cooperation between the state organizations, enterprises and educational academic centers. The programs of developing entrepreneurial and digital skills are a priority for the government. The current practice and available data shows that most of the contemporary digital skills are acquired from alternative sources. These practices are becoming more formal integrated with government organizations and plans. Such activities are included in financial plans of educational institutions. To guarantee the success of practices and policies of innovations the focus should be on troubleshooting the foundation defining the local competitiveness, institutions digital facilitation, policy, measures and programs transparency. Prioritize the digital education is critical for wider society integration, focus on innovation and entrepreneurial motivation.

Changing the model of financing the government university education and allocating funds in academic entities with bigger innovation capacity and entrepreneurial focus is strongly recommended.

4.7. Potential for improvement

The broad institutional make-up and the government policies, as well as regulations, play an essential role in creating an enabling entrepreneurial environment.

The generalized view of the experts is that entrepreneurship has not been identified as strategically important by the government and as such, it needs to receive special treatment regarding regulatory requirements as well as regarding media and communication exposure.

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1. An urgent implementation of electronic government to reduce opportunities for corruption and effective jail time for corruption by public officials.
2. Allow for extrajudicial conflict resolution mechanisms, such as mediation and arbitration, in order to avoid using the judicial system. According to the national experts, the judicial system needs a deep reform and better accountability.
3. Introducing regular reviews and establishing a practice of competency checks upon hiring public officials; on-going assessment of competencies supported by training or even making redundant incompetent civil servants is seen as a much needed step in the direction of creating a service oriented public administration.
4. Imprinting a service-oriented culture in the public administration is seen as a burning need. The administration must support private initiative within the boundaries of the law. A preliminary step is making the entrepreneurial culture better understood and accepted, and consequently, better supported by public servants.
5. Stimulate innovation by public institutions and create a strict system for impact measurement of public entities to quantify their role in the entrepreneurial success of Bulgarian businesses.
6. Transparent and efficient mechanisms for impact assessment of proposed public programs and instruments about all aspects of entrepreneurship.
7. Expand the role of public-private partnerships, while building in guarantees that corruption practices will be prosecuted.
8. Support regional clusters and programs to stimulate entrepreneurship across the national territory will enable the grass-root creation of more widespread entrepreneurial activity. It would lead to increased job creation and economic growth for the local communities.

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9. Liberalization of the electricity sector is pending and will solve one of the most critical pains for Bulgarian businesses. The electricity bills represent a huge share of the spending for many companies, and the reluctance and failure of Bulgarian governments to establish some degree of competition on the market has been draining competitiveness of the economy for decades.

10. Transparent government purchases are seen as an effective instrument to stimulate entrepreneurship and national industry.

11. Media coverage and recognition by the government of truly successful entrepreneurial ventures is considered as a soft but necessary mechanism to encourage entrepreneurial culture.

12. Change some specific administrative arrangements that have very important impact on the cost of engaging in entrepreneurial efforts such as the level of registration for VAT, or a joint stock company.

Creating a wide-spread culture of entrepreneurship requires a broad base of welltrained entrepreneurs. This can only be achieved through a considerable effort in the formal, nonformal and informal educational environments, and national experts have a number of ideas about the best way to achieve this.

13. Activities that educate entrepreneurial mindset and skillset can be introduced as early as elementary school level.

14. Entrepreneurial role models need to enter middle and high schools, where students need to undertake a large number of hands-on projects and initiatives.

15. The education must be more marketoriented, and those in charge of educational policies and educational management and regulation understand the market needs, have a very clear map of skills deficiencies – both for knowledge intensive industries and low tech. Specific measures

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might include strengthening the STEM (science, technology, engineering, math) disciplines and dual education, for example.

16. Provision of training and complementary assessment of high-school graduates and university students in soft skills, among which entrepreneurial mindset has to be covered.

17. Enable and promote collaboration between public, private and non-profit sectors to introduce sooner and likely more efficiently new educational tools (new as not used currently, not necessarily recent), methods and hands-on experiences that are closely related to forming an entrepreneurial mindset less rigid rules for experimentation with new tools and methods are required.

18. Facilitate the hiring of foreigners through a special provision for companies that cannot find local talent, as the Bulgarian educational system coupled with an on-going process of youth emigration is draining the talent pool of workers with requested skills. The inability to find local talent does impact the growth of companies.

19. Introduce specific support programs for high-growth companies as these are also high-impact companies and have the potential to generate the highest economic value-added in their local environment.

20. Special programs for entrepreneurs 55+-year-old, as they have a different skill set and different motivation but could contribute to economic growth if eager to engage in entrepreneurial efforts.

21. Generate learning opportunities for active entrepreneurs and allow them to learn best practices and engage in opportunities to exchange experience with foreign entrepreneurs. Among the most critical skills that Bulgarian entrepreneurs need to master are those related to the identification of foreign markets and building a product-market match with foreign partners.

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22. Capitalizing on the R&D potential of entities, such as the Bulgarian Academy of Sciences, by linking them to business opportunities. The focus of this effort can be on existing technologies and the optimization of their market potential as this is more cost-effective than undertaking new fundamental research. Academic entrepreneurship presents another opportunity to capitalize on advanced R&D.

23. Provide mentorship and support for international patent protection.

24. Stimulate market-based financial instruments and avoid over-reliance on grants, even though their role has been enormous for the inception of an entrepreneurship community in Sofia.

25. Introduce sector-specific grants and actively develop instruments for impact assessment.

26. Where grants or other public (including EU) funds are used, flexibility to fund based on project potential as a whole (patents, paying customers, etc.) rather than solely on providing an assurance for the project execution.

27. Better collaboration with professional business organizations on topics important for entrepreneurship, including finance.

28. Establish a special regulatory regime for high-risk financing and recognize its role in stimulating R&D activity.

5. IDENTIFICATION OF RELEVANT POLICIES AND LEGISLATION

5.1 General overview of the policy instrument

The most entrepreneurially active group is the group of 18-24-year olds

Young entrepreneurs have some important strengths including the low opportunity cost of time and stimulating entrepreneurship among them might be particularly effective. Providing

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conditions for entrepreneurial opportunities for the youth has the potential to decrease the rate of youth emigration and even become one of the key factors to stimulate returnees.

In Bulgaria, early-stage entrepreneurs are especially cautious about future hires, as 72% do not expect to create any jobs, while 20.3% expect to create between one and five jobs in the next five years. This rate of hiring is indicative of a very slow pace of entrepreneurial growth. Almost three-quarters of all earlystage ventures do not expect to hire at all.

The process of innovation is complex and systemic and involves many participants and a long maturation period. Innovation-related policies require horizontal, vertical and temporal coordination in order to be effective. Achieving such coordination faces important challenges, the first of which is to achieve a national consensus on innovation as the correct path to economic growth. Then, the government should have a broad and long-term vision to be able to guide the development of an innovation system through the joint efforts of the public and private sectors where the business is responsible for turning knowledge into innovation and wealth, and the government – for creating an environment that is conducive to longterm investment. The main innovation-related difficulty is in its complexity, in the fact that innovation is an organic, nonlinear phenomenon which depends on the merger of many factors and actors and their linkages. The role of the government to promote smart specialisation is not limited to the support and dissemination of new products, processes and scientific achievements. The government plays an equally important role in the development of the human capital and knowledge, in promoting organizational improvements that are a basic prerequisite for innovation, in prioritising the development of opportunities for research, and in considering the formation of human resources and needs for knowledge in the key sectors. Achieving these conditions is expensive and slow, with uncertain results, and the government should maintain a balance between strategic

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investments in the development of scientific discoveries and human capital formation in the long run, while also responding to the demand from the business for innovative products and processes in the short run. Sectoral specificities and long lag times require an effective coordination of these two important pillars. The fulfilment of the responsibilities of the Bulgarian government is based on the Division of Labour Model⁴⁴ (like Germany, Norway, Finland, Chile and the Netherlands), which clearly defines the responsibilities of the Ministry of Economy and Energy for industrial innovation and technology, the Ministry of Education and Science for the responsibility of human resources and research, the Ministry of Transport, Information Technology and Communications – for ICT, etc. The danger in this model (which has been observed so far) is remoteness of education and research policies from the businesses and limited innovation policy.

The state has demonstrated a willingness to solve the problem of youth employment through a variety of strategies implemented in the previous period (2007 – 2013), such as:

- Innovation strategy for smart specialization of the Republic of Bulgaria 2014-2020,
- National Development Programme: Bulgaria 2020;
- Analytical materials prepared in connection with the Partnership Agreement and the Operational Programmes;
- National Scientific Research Strategy of the Republic of Bulgaria to 2020;
- National Spatial Development Concept for the period 2013-2025;
- National Programme “Digital Bulgaria”;
- Strategy for the development of e-Government in the Republic of Bulgaria;
- National Strategy for Development of Broadband Access;

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- National Strategy for Regional Development of the Republic of Bulgaria in the period 2012-2020;
- National Strategy for population demographic development in Bulgaria (2012-2030);
- Data and analysis from the Investment, Innovation and Entrepreneurship Directorate, Department of Innovation and Entrepreneurship MEE

<http://www.mi.government.bg/bg/themes/inovacionna-strategiya-za-intelignentnaspecializaciya-1193-287.html>

However, these strategies are not fully implemented. Likewise, measures that are implemented are not working effectively enough. The reason is mainly the lack of institutional capacity and lack of clearly defined priorities.

5.2. Strengths and weaknesses of the policy instrument

According to the national experts, Bulgaria has a number of significant weaknesses. The most critical ones have to do with the entrepreneurship education at primary and secondary levels and the lack of explicit government support and initiatives that turn entrepreneurship into a government priority. Another key weakness is the quality of its public institutions and especially the low public trust in politicians, the lack of judicial independence and efficiency in settling legal disputes, as well as favoritism in decisions of government officials and lack of transparency of government policy making.

Access to finance comes an important obstacle for entrepreneurship endeavors mostly due to: low financial culture of early-stage entrepreneurs, lack of adequate funds, lack of competent fund managers and proficient investors, conservatism and risk-aversion of more

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traditional fund providers such as banks, and lack of a critical mass of angel investors. These are common to all immature entrepreneurial environments.

The most significant strength is the access to physical infrastructure and services, followed by access to commercial and professional infrastructure and supportive government policies related to taxes and bureaucracy. The experts gave strong negative ratings for the time required to get the necessary permits and licenses, as well as for the difficulty in dealing with government bureaucracy, regulation and licensing. Experts cannot identify a “one-stop shop” entity that supports small and medium businesses and think that the support offered by existing entities is deficient. They recognize the increased number of government programs for startups and entrepreneurial ventures, but they also criticize the ways in which these initiatives are implemented. Moreover, there are serious reserves about the capacity of government officials engaged in these activities to efficiently and competently carry out their tasks.

Among Bulgaria's strengths are its technological readiness related to the excellent internet bandwidth infrastructure, ICT use and mobile-broadband subscriptions per 100 inhabitants.

In addition, healthcare and primary education are also recognized as strengths in contrast to the state of higher education and training, among which the on-the-job training and the quality of management schools appear to be of remarkable low quality.

5.3 The influence of the policy instrument

Sofia is an exclusive place for innovation. Prominent higher education institutions and innovation driven companies are located in the district. Sofia Tech Park is Bulgaria's first science and technology park. The three focuses of Sofia Tech Park are ICT, Applied Sciences (Biotechnology, Project co-funded by European Union funds (ERDF, IPA)

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Natural Sciences) and energy (energy efficiency, renewable energy, smart networks). The Park, in collaboration with academic departments, industry and the state, has the potential to become the core of one of the most modern innovation ecosystems in the region by demonstrating a working model of how scientific output can be useful for the region, maintaining contact with local industries, encouraging the creation of start-ups and the increase of skilled labour.

Public institutions such as universities are not playing a central role in facilitating knowledge transfer and stimulating innovation. A common view is that universities have little to no role in supporting entrepreneurship.

Exploiting these features and acknowledging the need for promoting entrepreneurship and innovation Sofia started cooperating with universities as well as with the business sector (both large, innovative and small, dynamic companies). It has initiated a number of successful support programmes.

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6. GOOD PRACTISES

The good practices that are offered in this case study were selected so that they reflect the quadruple helix approach applied by the New Generation Skills project, including a significant involvement of the local self-governance.

6.1. GOOD PRACTICE 1: SOFIA HACKATHONS

1. Background of the good practice example:

- **Problems before implementation:**

Unsatisfying innovation performance of Sofia according to the European indexes, lack of local responsibilities and resources to foster innovation (innovation is supported through structural funds at the national level), less engagement of Sofia local government with the innovation development processes, including social innovation.

- **Preparation:**

Sofia considered research line the European innovation scoreboard, not favorable for the city innovative capacity, but also research regarding its competitive ICT positioning. Additional facts like business driven ICT development, little cooperation between business, university and local government were considered, while the challenges to be addressed were identified by stakeholders.

- **Project objectives and purposes:**

1/ Set the local agenda for problem solving with social value; 2/ encourage a variety of actors (businesses, NGOs, citizens, universities) to participate and innovate, unlike public tenders; 3/ encourage diverse solutions without pre-deciding what they should be like; 4/ encourage entrepreneurship culture and digital skills development.

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- **Project beneficiaries:**

The city hackathons aim to engage cross-disciplinary ICT savvy teams to develop innovative solutions of acute urban and/or social issues (like improving municipal social and health care through digital solutions, or addressing the lack of interpretation

2. Implementation of the good practice example:

- **Project activities:**

1/ setting up the partnership between Sofia municipalities, business companies (in the role of sponsors and mentors), universities and business organizations (recruiting teams), media and NGOs; 2/ selecting through participatory design thinking process urban/social challenges to be addresses and generating the necessary online resources like open data, etc.; 3/ announcement, promotion, logistic and carrying out the 24-hour hackathon; 4/ prizes given and projects realized with the support of the city and the partnership.

- **Management:**

The management and coordination is delegated to Sofia Development Association. Partners include Sofia Municipality, businesses, universities, NGOs. They have different roles: mentors, sponsors, judges, and recruiters/promoters.

- **Monitoring and evaluation system:**

We monitor and evaluate: number of competing teams and number of individual participants; number of minimum viable products or demos created; number of projects awarded prizes; number of challenges that found solutions; number of projects implemented.

- **Obstacles and problems:**

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Identifying the right challenges to attract significant sponsorship; venues to host a couple of hundred persons for 24 hours with fast reliable internet; recruiting cross-disciplinary experts; providing online resources to work with (open data).

- **Problem solving practices:**

Nothing succeeds like success: the first hackathon is most risky and its good results are guarantee for further events.

- **Innovative elements and novel approaches:**

Identifying and addressing acute urban/social problems that for different reasons are outside of the business interest; opening up the problem solving and innovation process to everyone interested by applying the principle “innovation via competition”; application of the developed projects (apps, web solutions) in real life with the support of Sofia Municipality and municipal enterprises.

3. Transferability and lesson learnt

- **Evaluation results:**

Sofia managed to provide innovative solutions in several different areas: cultural heritage, access to sport facilities and events, equal right citizenship for people with disabilities, etc. by involving hundreds of people. It is both efficient and effective approach, and fun and attractive to the media and citizens.

- **Lessons learnt:**

The biggest challenge is to manage to attract the right people to participate. Since ICT experts are in demand and quite well paid, the prizes are important but not critical. Developers are

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attracted either because the challenge is a good cause for them, or because they see a chance for a large-scale project, unlikely to happen without the commitment of Sofia municipality.

- **Success factors:**

Supportive and open local government; open data available; critical mass of ICT experts and developers and companies; appealing challenges; good facilities and logistics.

- **Transferability:**

If the success factors are fulfilled, the practice is quite easy to transfer. We have transferred it ourselves between departments for instance by organizing a municipal architectural hackathon.

6.2.GOOD PRACTICE 2: ACADEMY FOR SOCIAL ENTREPRENEURSHIP

1. Background of the good practice example:

- **Problems before implementation:**

Although entrepreneurship is fast developing in Sofia, social entrepreneurship is still a relatively new, unpopular and unclear concept therefore less likely choice for the young people's career path. In addition, unlike start-ups, social enterprises have very limited access to funding and raise suspicion in the process of market entry and commercialization.

- **Preparation:**

Needs assessment process including NGOs supporting social entrepreneurs, business support organizations, social entrepreneurs; Exchange of experience with European business mentorship programmes; Recruiting partners from the business, academic sector, media and local government.

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- **Project objectives and purposes:**

1/ To select 60 young social entrepreneurs per year based on their idea to support them through mentorship and structured training, networking and promotion to launch a sustainable business.

2/ To help address acute societal issues like youth unemployment, internet security for kids, integration of minorities, etc.

- **Project beneficiaries:**

Young people, particularly those who are committed to a social cause and would like to develop it into financially sustainable endeavor but lack certain skills and knowledge.

2. Implementation of the good practice example:

- **Project activities:**

Selection of 60 candidates, recruitment of 40 mentors, identifying lecturers, hosting company; developing 5 local training case studies; implementing the training, followed by ongoing mentoring, networking events like companies' open doors, speed dating, etc., awarding grants to best performers.

- **Management:**

The Academy is managed by Reach for Change foundation, with support from Nova TV (one of the 3 national TV outlets). The host company is different every year and varies from a co-working space (betahouse) to leading ICT company like SAP. Mentors come from different businesses on a voluntary basis. Financial support is given by Sofia Municipality and businesses.

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- **Monitoring and evaluation system:**

The indicators monitored are number of applicants, number of participants, number of mentors, additional support (financial, promotional, etc.) attracted and given to aspiring social entrepreneurs, number of enterprises started.

- **Obstacles and problems:**

The biggest challenge for the effectiveness of the programme is to secure ongoing support to starting business projects beyond the continuation of the programme. As for the programme itself, problems include financing and finding the right mentors.

- **Problem solving practices:**

Enough preparation time, attracting “stars” who attract others by giving visibility and prestige to the academy.

- **Innovative elements and novel approaches:**

Though mentorship programmes are not new in Europe, it is new to Sofia, particularly teams of mentors who come from different walks of life. Also innovative is the involvement of a major TV channel that promotes the academy with regular materials on the participating projects and organizing popular vote for the award.

3. Transferability and lesson learnt

- **Evaluation results:**

The project is evaluated through follow up activities involving all participants: observation of social enterprises operations, documenting, etc.

- **Lessons learnt:**

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The project receives a lot of public attention mainly due to the involvement of the television outlet, and thus has great impact on social entrepreneurship awareness building and promotion.

- **Success factors:**

The involvement of interdisciplinary teams of mentors, the involvement of a television.

- **Transferability:**

The good practice requires a relatively well-developed ecosystem for entrepreneurial discovery.

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6.3. GOOD PRACTICE 3: THE FOUNDERS INSTITUTE

1. Background of the good practice example:

The Founder Institute (FI) is the world's premier startup launch program for talented entrepreneurs. Its comprehensive step-by-step curriculum gives the structure, mentor support, and global network for starting an enduring company. This idea-stage accelerator and startup launch program was started by Adeo Ressi in Silicon Valley almost 10 years ago and now is presented in more than 60 countries, 2200+ companies launched with a survival rate of 81%.

In September 2015 FI launched its Bulgarian chapter in Sofia. Its first season consisted of 28 founders. Less than half of the enrolled entrepreneurs managed to pass through the program and the batch graduates with 13 founders and incubated 12 companies. In 2016 FI started a second cohort in Sofia which. It consisted of 24 founders from which only 9 made it to the end of the program who created 9 companies. At the end of October 2017 FI is starting the 3rd season of the program with 30 founders confirmed to date.

• Problems before implementation:

Generally, there are two basic problems that stand in particular with youth entrepreneurship:

1. Most young people start up without knowing the process and effort involved. There's too much focus on the startup **HYPE**, and not enough on the **PROCESS** and **HARD WORK**
2. Too many companies fail due to critical early mistakes. Over **50% of new companies fail** in just the **first 12 months**

The entrepreneurship is a skill, which should be cultivated, it's a process with constant development, connected to life time learning mindset. The clear definition of the problems, which stands in the very beginning of each entrepreneurial attempt, together with the solutions

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that could be offered, are the answers to success for such practices. The preparation of an entrepreneur for its journey is a target for the supporting organizations, which successfully implement some good practices for stimulating the entrepreneurial spirit and development.

- **Preparation:**

FI approach is unusual, and so are the results. FI is extremely rigorous, real-world program for talented people that are motivated, open to honest and critical feedback, and ready to perform the hard work needed to build an enduring company. In fact, less than 30% of accepted Founders are typically able to make it to Graduation.

The Founder Institute will push you to make years of progress in just 3.5 months' time. Every week the young entrepreneurs pitch their ideas and strategies to top startup mentors in, picked up from the local business society. They provide feedback, ratings, and evaluation. The business idea owners get Office Hours with top entrepreneurs, and weekly real-world assignments and milestones to push business forward. Founders that do not complete their assignments or meet a minimum rating from the Mentors may be asked to leave and join a future program.

The Founder Institute provides the structure, mentorship and network, which give the best possible chance of startup success. The Founder Institute is also designed to accommodate founders at many different points of idea stage, and as the program goes on Founders are given custom assignments based on the progress of their business.

- **Project objectives and purposes:**

The Founder Institute curriculum provides early-stage and aspiring entrepreneurs with a practical, step-by-step roadmap to building an enduring business. It was built using Silicon Valley Project co-funded by European Union funds (ERDF, IPA)

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best practices and with input from hundreds of successful technology entrepreneurs from across the globe.

Each week, participating Founders attend a 3+ hour session to pitch the mentors and receive training and feedback on a specific topic, and then build their business for the rest of the week through a series of practical and challenging assignments, office hours, and group meetings.

FI curriculum is also updated frequently to reflect the latest best practices in early-stage tech entrepreneurship, leveraging the feedback and experience of global Directors running programs in 170+ cities worldwide.

The purpose of the program is totally dedicated on helping founders building meaningful companies.

- **Project beneficiaries:**

FI focuses on the Founder versus the idea in the admissions process, and welcomes applications from aspiring founders with a full-time job, students, solo founders, teams, and founders of established companies (pre-funding). As the FI CEO and Founder Adeo often says: “ideas don’t matter, it’s execution that matters - execution depends on the founders.” After a short written component, applicants take a Predictive Admissions Assessment – two hours long collection of aptitude and personality tests that have been in development with leading social scientists since 2008 to identify people with the highest potential to adapt and thrive in a fast-paced entrepreneurial environment.

The so called ‘**Entrepreneurial DNA**’ / <http://fi.co/dna> / test measures personality traits, IQ, fluid intelligence, among others, and is identifying who has the potential to build a successful business.

According to the test there are 6 entrepreneurial profiles:

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- 1) **The Hustler.** This person is a go-getter. With an outgoing personality and a presence that exudes confidence, they can sell just about anything;
- 2) **The Innovator.** Armed with an adventurous and forward-thinking attitude, Innovators are all about experimenting with the old and exploring the new.
- 3) **The Machine.** Equipped with a strong sense of duty and an aptitude for solving problems, The Machine always delivers a product on schedule.
- 4) **The Prodigy.** The Prodigy is blessed with an inherent business sense and instinct, and leverages these skills across all facets.
- 5) **The Strategist.** A creative and tactical thinker, The Strategist is always coming up with effective and efficient game plans.
- 6) **The Visionary.** The Visionary is constantly on the lookout for new and innovative ideas, and devising new ways to put them into action.

1. Implementation of the good practice example:

Project activities:

PROGRAM CURRICULUM

The Founder Institute curriculum provides early-stage and aspiring entrepreneurs with a practical, step-by-step roadmap to building an enduring business. It was built using Silicon Valley best practices and with input from hundreds of successful technology entrepreneurs from across the globe.




Each week, participating Founders attend a 3+ hour session to pitch the mentors and receive training and feedback on a specific topic, and then build their business for the rest of the week through a series of practical and challenging assignments, office hours, and group meetings.

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FI curriculum is also updated frequently to reflect the latest best practices in early-stage tech entrepreneurship, leveraging the feedback and experience of global Directors running programs in 170+ cities worldwide.

 1. IDEA	 2. BUSINESS	 3. LAUNCH
1. Orientation	7. Startup Legal & IP	11. Sales & Traction
2. Vision & Ideas	8. Team & Advisors	12. Branding & Marketing
3. Research & Cust Dev	9. Product Development	13. Bootstrapping & Fundraising
4. Revenue Modeling	10. Mentor Progress Review	14. Graduation
5. Naming & Positioning		
6. Mentor Idea Review		

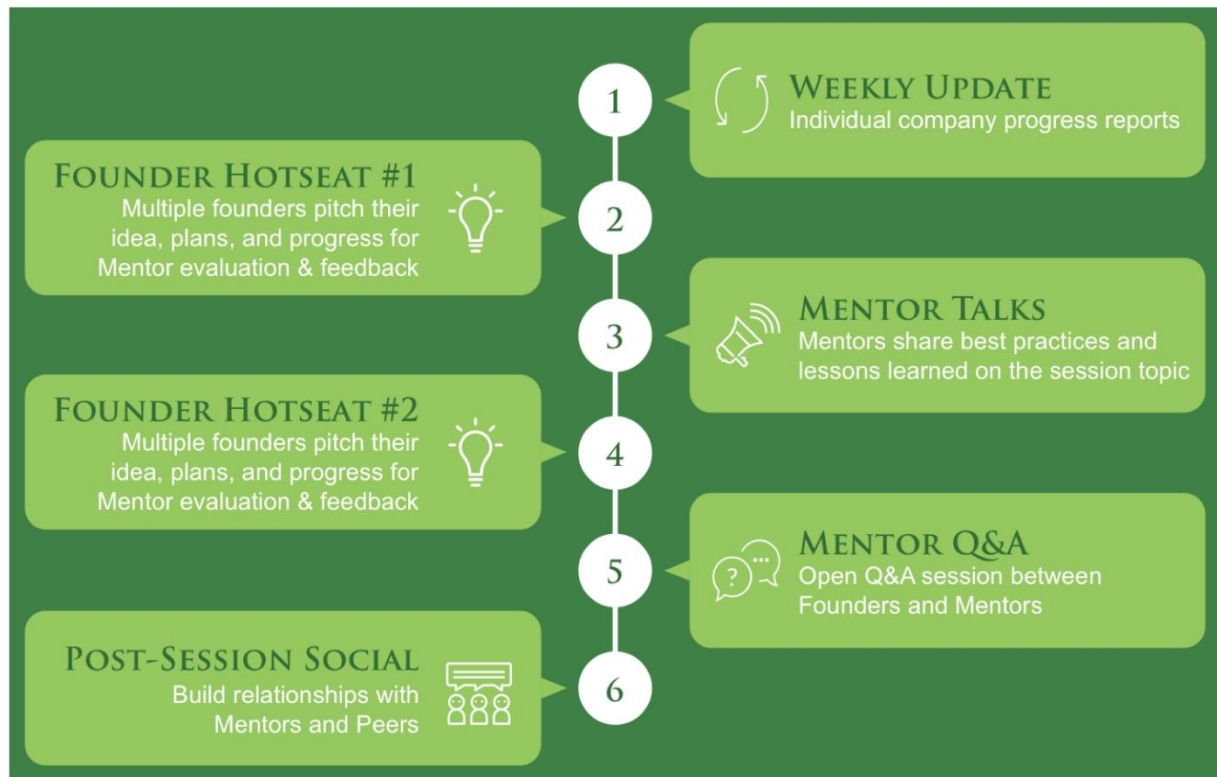
SESSION FORMAT

Each Founder Institute session contains a mixture of progress reporting, training, feedback, evaluation, and networking with at least 2-4 program mentors.

Founders are also constantly evaluated and rated by the FI Directors, Mentors, and their peers, all with a goal of achieving as much learning and progress as possible in a short period of time.

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PROGRAM ASSIGNMENTS

Founder Institute assignments

include challenging, real-world tasks

critical to building a business like interviewing customers, filling a mailing list, generating revenue, and forming an advisory board. Each week's assignments are based on the topic of that week's session, and are designed to take approximately 20 hours.

Founders in the program also get customized assignments to push their particular business forward based on their recent progress, challenges, or feedback from Mentors.

Founders that do not complete their assignments are given an extremely challenging "Special Assignment" to rectify the issue, or they may be asked to leave and join a future program.

PROGRAM MENTORS

Each Founder Institute program includes 20-40 Mentors that have built, led, or invested in high-growth technology businesses, and the average Mentor:Founder ratio is over 2:1.

Mentors lead the weekly training sessions, and their mandate is to help participants by sharing their experience, outlining the latest tactics, and providing critical feedback.

Unlike most programs, FI avoids consultants, academics, and service providers whenever possible. In addition, Founder Institute Mentors are compensated through a Shared Liquidity Pool, so they are typically much more supportive than Mentors in other programs. In fact, FI Mentors either become formal advisors or investors in Graduates in almost every cohort worldwide.

Upon completing the program, Graduates have access to the Founder Institute's Global Mentor Network, which includes 9,000+ Founders and CEOs from 6 continents.

- **Management:**

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The Sofia chapter is run by two local directors and the help of mentors. The two directors spend around 15-20 hours per week to organize and run the program, including office hours for coaching the founders. They both have other business responsibilities and do this part time.

The local directors are supported centrally by a team located in Palo Alto, California including a Regional Success Manager (RSM) and Marketing team.

All communication is done via internet and the inhouse proprietary system of Founders Institute.

- **Monitoring and evaluation system:**

Founders Institute has an online assignment evaluation system where all students work is checked by director and a RSM. Each week there office hours with Founders and Directors to check their progress. Each week RSM is also checking Directors work on the semester.

- **Obstacles and problems:**

THE CHALLENGE – GRADUATING FROM THE PROGRAM

Graduating from the Founder Institute is hard, and less than 30% of accepted Founders generally make it through the program to Graduation. Reasons for not graduating differ, but each Founder who leaves is invited to join the next semester for free, when they are ready and more prepared to launch a business.

However, it should be noted that dropping out from the program is by no means a failure. Many Founders that drop join the next program.

The biggest challenge that FI is facing is to achieve as much learning and progress as possible in a short period of time, which is the only way to select and prepare successful and sustainable businesses.

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OTHER

The program is totally dependant on sponsorships and barter deals and financially it is a challenge to sustain long term interest of the organizers – the directors. Therefore it requires recruiting directors that have other businesses and are motivated not only from making money.

- **Problem solving practices:**

For those that do graduate, they are required to complete all of the program assignments, develop their product, incorporate their company, build an advisory board, and outline or begin their go-to-market plan, all while receiving satisfactory ratings and validation from the program Mentors.

- **Innovative elements and novel approaches:**

The whole program is a different and novel. It simulates the real environment and looks like “navy-seal training” for entrepreneurs. For sure there’s no other like it. Rich and constantly improving curriculum, psychological approach of pushing, workshop formats, flexible hours, tough assignments are all designed to accelerate startup progress. Founders Institute was the first to discover this model of acceleration. One of the very interesting innovation is that in terms of timing the program is designed to be delivered outside working hours (evenings), so the participants can keep their day-job and still make some money from a salary while building their dream startup company. Another novelty is utilization of the contacts created within the program including such of mentors, directors, FI Silicon Valley ... which are indispensable for the success of the startup.

3. Transferability and lesson learnt

- **Evaluation results:**

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At the very least, each Graduate completes the program with the following:

- Well-Formed Corporation
- Advisory Board of Top Mentors
- Significant Product Progress
- Leads and Customers
- Validated Idea & Go-to-Market Strategy
- Investment-Worthy Pitch Deck
- Clear & Actionable Next Steps for Growth

Many Graduates are also able to secure funding and significant revenue by the end of the program (especially those that begin the program with some of the above milestones already complete).

KEW RESULTS ACHIEVED

In 2015 and 2016 alone, on a global scale Founder Institute Graduates raised over \$225 million from investors and 10 Graduate companies were acquired. A conservative estimate is that the companies employ over 20,000 people and have raised over \$550M.

Top global graduates

Udemy - Online platform to create and take courses raised \$170+m

Peerby - Web and mobile app to share products locally raised \$5+m

iCarsclub - Web and mobile app to rent your car in Asia raised \$100+m

As the program has started recently in Sofia, it's early to quote similar KPIs, but up-to-date it has incubated 22 startups in total as 4 of them has secured further funding. This is the most successful chapter in whole Eastern Europe so far, as the directors local team has won award for "Best New Directors in the Eastern Hemisphere" in Silicon Valley Global Directors meeting.

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BULGARIAN STARTUPS

Yatrus Analytics – Big data analysis SAAS platform raised EUR 250+ thousand from angel investor and German accelerator;

Trevor IA – IA mobile app for personal time scheduling considered among top graduates of FI global;

CO2cards – website and platform that helps CSR companies offset their carbon emissions

Medichome – a platform that helps you to see a doctor within 1 hour in a comfort of your home, office or hotel room via mobile app.

- **Lessons learnt:**

The youth entrepreneurship is among the most sustainable practices for each country that support practical skills among young people with clear vision and goals, which will return in benefit of the local community as products and services. Supporting the local entrepreneurship with global knowledge and local expertise is the main goal of Founders Institute. Focusing on hardship and real experience is the best approach to select and prepare quality entrepreneurs for global exposure.

- **Success factors:**

The project works as it has been tested many times in many locations. Everywhere it sets foot Founders Institute becomes a key player in the local startup ecosystem laying the foundations of the startup journey. It constantly feeds the scene with new good entrepreneurs, inspiring people to dare and try starting a business.

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It will be great if such program has the support of the local government/municipality supplying the best founders (those who manage to graduate) further with some financing and support.

- **Transferability:**

The program is totally transferable as it is designed to be. Founders Institute has managed to scale it globally to 170 cities and continues to grow. The closest model of expansion is may be a franchise format. Anyone can apply to become City Director and lead a chapter in their city. All details here: <https://fi.co/lead>

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6.4. GOOD PRACTICE 4: JUNIOR ACHIVEMENT BULGARIA

1. Background of the good practice example:

JA Bulgaria was founded in 1997 as a non-profit organization in public benefit. It is a member of Junior Achievement Worldwide and its Regional Operating Center Junior Achievement Europe. Junior Achievement Bulgaria is the leading organization in the country with the longest tradition in providing contemporary educational programs in entrepreneurship, financial literacy and work readiness for young people aged 6 to 25 years. Its mission is to educate and inspire young people to value free enterprise, business and economics in order to improve the quality of their lives. Thus, the organization works to develop entrepreneurial spirit and mindset through practical activities in economic and financial literacy, business skills, leadership, teamwork, career orientation, innovation and technologies, presentation skills.

• Problems before implementation:

The young entrepreneurs in Bulgaria are facing 2 common problems: the lack of basic administrative skills and clear business orientation.

The basic issue, which stand is not the lack of entrepreneurial spirit, but the clear vision and definition of business strategy and model that should be developed.

The lack of information, financial knowledge and financial capacity are among the obstacles for the young entrepreneurs.

A clear state communication with the youth should be established to emphasize the process of business development.

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- **Preparation:**

Based on interactive and hands-on experiences, JA educational model ensures the progression of education in entrepreneurship, financial literacy and work readiness from primary school to higher education. Working in partnership with businesses and educators, JA brings the real world to students, opening their minds to their potential.

Started with 10 pilot classes, today JA Bulgaria offers 24 educational programs. Young people benefit from project-based curricula and real-life exposure to the business community. Students develop entrepreneurial mindset and see entrepreneurship as a viable option. In addition, it develops custom-made training programs targeting specific groups within various projects.

Annually, JA Bulgaria's programs are delivered in about half of the schools in the country – over 1000 general and vocational schools with different profiles and vocational orientation – economics, agriculture, construction and architecture, foreign languages, STEM, arts, sports, etc., thus reaching more than 33,000 school and 500 university students in 450 towns and villages. Since 1997, more than 250,000 students, 1,300 student companies and 10,000 volunteer business consultants and mentors have participated in JAB's activities.

JAB's programs are delivered to students in both general schools and vocational schools. We work with schools all over the country. Apart from developing educational programs in entrepreneurship and teaching students in the classroom, JAB also organizes numerous competitions that give young people the opportunity to show their skills, carries out qualification courses for professional development of teachers, and works with business volunteers who get involved in and out of the classroom as mentors.

- **Project objectives and purposes:**

Started in 2010, the volunteers and business mentors program aims at bringing more business practitioners with diverse experience in the classroom to help students develop practical skills

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for the world of work. Currently, we work with over 80 volunteers from industries like finance, marketing, from industries like finance, marketing, advertising, finance etc.

JA Bulgaria is the official host of the Global Entrepreneurship Week for Bulgaria and organizes a number of events across the country within the Global Money Week. The organization participates in the UN Global Compact and promotes sustainable and inclusive global economy. JA Company Program is acknowledged by the Enterprise Directorate General of the European Commission as a 'Best Practice in Entrepreneurship Education'.

- **Project beneficiaries:**

JA Bulgaria organizes a number of competitions and events as an opportunity for young people to show and improve their skills like trade fairs, innovation and eco camps etc. The nationwide initiative Manager for a Day and the national student company competition Rising Stars are endorsed by the President of the Republic of Bulgaria.

As a strategic partner of the Ministry of Education and Science in introducing entrepreneurship education in Bulgaria, JA Bulgaria has been implementing since 2010 a nationwide program for professional development for teachers at all stages of school education. Educators are trained how to use innovative methods to enhance students' abilities in problem-solving, teaming, organization, communication and leadership and apply their knowledge to traditional subjects such as mathematics, natural sciences, arts, humanities and social sciences, etc. Since then, more than 4000 teachers at all stages of school education have been trained and started working on JAB's programs.

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Educating the target groups that education is the foundation of development of entrepreneurial skills, JA, continues to grow its network and sustain recognized practices for real business skills with practical orientation and results.

2. Implementation of the good practice example:

- **Project activities:**

Junior Achievement Bulgaria is a partner to or leader of a number of national and international projects and contractor in public procurement contracts. It has a team of 12 people with experience in providing entrepreneurship education through developing educational programs and teacher training, promoting and marketing of educational products, project development and management as well as organizing a number of events complementing the teaching and learning process.

- **Management:**

Ever since its establishment, Junior Achievement Bulgaria is managed by a Board of Directors, which consists of representatives from the field of business. They, in cooperation with the Executive Director of JAB, take strategic decisions concerning the long-term development of the organization. Today the Board of Directors includes the CEOs of NN, Citi, Nestle, Manpower, AmGen, Publicis Mark, HP Enterprises, General Electric and Microsoft Bulgaria, etc.

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- **Monitoring and evaluation system:**

JA Bulgaria evaluates its annual performance by: number of trained and graduated students; number of active teachers; number of schools and universities and number of the real startup companies, established after graduation from the entrepreneurship courses.

- **Obstacles and problems:**

The ongoing problem, that JA Bulgaria faces, is lack of understanding why entrepreneurship education is needed and why the government needs to invest in it – financial and political resources.

- **Problem solving practices:**

Though the three main pillars of Junior Achievement are financial literacy, entrepreneurship and work readiness, the organization puts as well a strong emphasis on the promotion of digital skills and wide use of new technologies in education. Through its educational programs and initiatives, JA Bulgaria aims to bring about a change in the students' way of thinking by arming them with knowledge and skills that will improve their employability either as young professionals on the labor market, or as entrepreneurs. Entrepreneurship education makes young people more 'intrapreneurial' and positively productive in their work within existing organizations, across the social, public and private sectors.

- **Innovative elements and novel approaches: Please write max 500 characters about innovative elements and approaches of your project**

JA Bulgaria is the pilot organization in Bulgaria that teaches entrepreneurship education through the approach "learning-by-doing". It includes mentoring and involvement of practitioners of different professions in the educational process.

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JA, in partnership with Samsung Bulgaria, introduced the blended learning 5 years ago by opening 5 Smart Classrooms in 4 cities round the country. Today we have more than 2130 trained teachers, using the blended-learning methodology in their educational process.

JA Bulgaria developed and implemented the first educational course for green entrepreneurship, targeting youngsters aged 15 – 18 y.o. The course was introduced to the JA Worldwide network and will become international program.

3. Transferability and lesson learnt

- **Evaluation results:**

The organization is evaluated through annual reporting. It includes the involvement of all parties and figures reached. Another method for evaluation is the number of the established and running startup companies for the current period.

- **Lessons learnt:**

The organization receives a lot of public attention mainly due to the involvement of the media and government work, and thus has great impact on entrepreneurship awareness building and promotion. Success factors: Please write max 350 characters about the organizational, technical, financial, political, methodological factors etc. that made the project successful. Also write a sentence about what would you change during the implementation

JA is relatively popular organization not only in Bulgaria, but also worldwide. In Bulgaria it works closely with the media, the policy makers and the government itself. JA closes the gap between the business and the education with its practical courses in entrepreneurship, financial literacy and career orientation.

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The annual initiative “Manager for a day” is one of the most recognized events for career orientation in the country, which additionally boost the popularity of the organization.

- **Transferability:**

JA Bulgaria transfers its best practices to other countries in the region through staff trainings, seminars and co-organization of similar events with the hosting country. It provides manuals and methodology for every best practice.

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7. CONCLUSION

SUGGESTIONS FOR IMPROVEMENT “YOUTH AND INNOVATION IN MUNICIPALITY OF SOFIA

Although Innovation can spring from anywhere it normally comes from enterpreneurship if we want to make it count in terms of market growth and social impact. Youth Innovation in particular can be fostered through academy in standard institutions and in Corporate Intrapreneurship projects (e.g. Open Idea Competitions, CSR projects, Corporate Accelerators). However, this is very rare in Sofia and not very efficient in terms of producing lasting results and building the foundation that brings to creating value. That's why our conclusion will focus on building Innovation Capacity in the Youth segment through Entrepreneurship and building a startup culture and ecosystem. The other disclaimer we want to make is that although there are differences between the capital and the rest of the country most of the factors that have an influence are valid for the whole of Bulgaria.

Sofia, of course, leads the scene in many ways. Available data is frequently missed such on a country level. Thus, our conclusion is covering Bulgaria and hence Sofia.

In 2016 Bulgaria is taking 38 place among 128 countries in the Global Innovation Index. The index is estimating the latest trends in the innovations development, using data from more than 30 sources.

According to Global Entrepreneurship Report the Total early-stage entrepreneurship (TEA) activity rate for Bulgaria is 3.46% (for 2015), comprised of 1.95% of the adult population engaged in nascent entrepreneurial endeavors and 1.51% who are new business owners. Which very low. Actually the lowest from the researched 62 countries. Interestingly, despite the very low rate of early-stage entrepreneurship in Bulgaria, a relatively high percentage of these entrepreneurs manage to survive long enough and become established businesses.

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The most entrepreneurially active group is the 35-44-year-olds. The group of 18-24-year-olds shows a participation rate almost as high as the 35-44-year-olds. Young entrepreneurs have some important strengths including the low opportunity cost of time and stimulating entrepreneurship among them might be particularly effective. Providing conditions for entrepreneurial opportunities for the youth has the potential to decrease the rate of youth emigration and even become one of the key factors to stimulate returnees.

Male TEA is one percentage point above the female TEA. The ratio of female to male TEA is somewhat higher for Bulgaria compared to the benchmark countries indicating more gender equality regarding early-stage entrepreneurial endeavors. The egalitarian participation of women in the early-stage entrepreneurial activities guarantees that the Bulgarian economy already reaps the benefits of high female labor force participation.

Sofia 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. Bulgarian young entrepreneurs like their parents exhibit very low levels of international orientation, and this result is consistent with the explanation of a two-tier distribution of the Bulgarian earlystage companies, a small number of which are internationally competitive.

There is a marked difference of 10 percentage points between residents in Sofia and those who reside elsewhere regarding their perception of entrepreneurship as a good career choice. Fear of failure is reported as a higher percentage of Sofia residents compared to the national
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average. This result can reflect the higher opportunity cost of failure in the capital city but also the absence of effective social safety nets that smaller cities have. According to the national experts, Bulgaria has a number of significant weaknesses. The most critical ones have to do with the entrepreneurship education at primary and secondary levels and the lack of explicit government support and initiatives that turn entrepreneurship into a government priority.

The most significant strength among the Entrepreneurship Framework Conditions in Sofia is the access to physical infrastructure and services, followed by access to commercial and professional infrastructure and supportive government policies related to taxes and bureaucracy. The experts gave strong negative ratings for the time required to get the necessary permits and licenses, as well as for the difficulty in dealing with government bureaucracy, regulation and licensing. Experts cannot identify a “one-stop shop” entity that supports small and medium businesses and think that the support offered by existing entities is deficient. They recognize the increased number of government programs for startups and entrepreneurial ventures, but they also criticize the ways in which these initiatives are implemented. Moreover, there are serious reserves about the capacity of government officials engaged in these activities to efficiently and competently carry out their tasks.

In Sofia like everywhere in Bulgaria, access to finance comes as the second most important obstacle for entrepreneurship endeavors mostly due to: low financial culture of early-stage entrepreneurs, lack of adequate funds, lack of competent fund managers and proficient investors, conservatism and risk-aversion of more traditional fund providers such as banks, and lack of a critical mass of angel investors. These are common to all immature entrepreneurial environments. On the other hand Sofia is doing much better than all its neighbours and has positioned its self as a SEE hub for funding opportunities following the creation by 4 EIF supported Project co-funded by European Union funds (ERDF, IPA)

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VC & Seed funds, the creation of larger angels investors groups. But it looks like that the access to information is not equal and the demand for startup and innovation capital is growing.

Education is inextricably linked to entrepreneurial intentions and growth as it influences entrepreneurs' confidence in whether they have the skills and knowledge to start a business. Practical entrepreneurship training may better prepare school graduates for the transition from school to the labor market. Entrepreneurship in Bulgaria is not taught widely nor effectively. A continuous failure to include the pursuit of entrepreneurial mindset and skillset into the secondary education curriculum will lead to an increasing pool of idle and unemployable young men and women who will grow increasingly disengaged from the productive roles in the society.

Experts believe that public institutions such as universities are not playing a central role in facilitating knowledge transfer and stimulating innovation. A common view is that universities have little to no role in supporting entrepreneurship. The most positive perception of the national experts is related to the availability of science and technology base that efficiently supports the creation of world-class new technologybased ventures in at least one industrial sector. The ICT enterprises are the most common case in mind.

Bulgaria's low levels of entrepreneurial activity are heavily influenced by a dominant culture of very low propensity to entrepreneurial risktaking. The experts share that currently, the dominant sentiment in Bulgaria is that little can be achieved through personal efforts and personal initiative.

Sofia Municipality supports local innovation activities through expertise groups to help develop more efficient policies for youth entrepreneurship and innovation.

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The entrepreneurship and innovation networks are the foundation and connecting elements for the national innovation system. They assure the business environment with adaptiveness and flexibility. The intensity and the tools for informational interaction, in the innovation ecosystem, are defining the capacity of innovation projects development and execution. The participants in the innovation system in Bulgaria, as well as local ones, are not able to coordinate their efforts and prioritize the measure execution of innovation practices. The result is limited innovation policy and unused innovation potential of the local and national economic players.

The interconnection between universities, science centers and the business is unstable and not regular, which troubles the practical realization of the acquired knowledge and qualitative results.

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