Danube Transnational Programme
ACCELERATOR

ACCELERATOR

Demand & supply

- Summary report -

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Contents

SUMMARY

The main goal of the supply and demand analysis is to provide an insight to common challenges as well as specifics of all involved regions, provide an opportunity for knowledge transfer based on successful acceleration programs from experienced partners and contribute to scope of acceleration services which will be developed and test in the pilot phase of the ACCELERATOR project. This report is based on eight regional assessments, Austria (Styria region), Bulgaria, Czech Republic (Liberec region), Hungary, Romania, Republic of Serbia, Slovenia and Republic of Srpska.

This report contains six chapters: (1) Overview of access to equity finance by region to evaluate the current stage of development; (2) Stakeholders identification and typology of their offer, to get a better insight into main stakeholders and their offer related to start-up ecosystem by region (i.e. presence of accelerator programmes, investors participation and development of initiatives); (3) Analysis of supply with challenges from investors' side; (4) Talent community and identification of frontrunners by region; (5) Analysis of service needs- evaluation of opportunities and challenges identified by SME entrepreneurs; (6) Conclusion with recommendation on joint acceleration model, with recommended programme or services regions would consider as most beneficial for a better investment attractiveness of innovation driven SMEs.

The research methodology in reports includes both, primary and secondary research. Primary research has been conducted in form of interviews with investors and online survey research among SME entrepreneurs.

Based on GEM report (2015-2016), more people are actively engaged in establishing enterprises. With the economical crisis in 2008, it has become increasingly important for policy makers, business and civil society leaders, to collaborate and ensure sustainable growth through encouragement and provision of innovations and creation of better job opportunities across all generations. This has encouraged governments and policy makers to collaborate in establishing activities to support innovative environment through establishing accelerators, incubators and policy changes. Groups of angels, venture capital investors (VC) and entrepreneurs are becoming more willing to support SMEs, including providing seed capital needed at the early stage of SME development. (GEM report 2015-2016).

Despite the progress in access to equity finance in the past years across the majority of regions, there is still need for improvements. Generally, there is enough financial resources available on the market, though these tend to be more available for SMEs in their growth

stage. Start-up enterprises, focused in innovation industries therefore often face challenges in ensuring adequate amount of financial resource at their early stage of development.

Although regions encounter challenges on their individual level, the following most common points emerged:

1. Start-up companies still heavily rely on debt financing and encounter difficulties in access to seed capital – particularly companies in innovative industries, while SMEs in their growth stage tend to receive more support
2. Lack of SMEs entrepreneurs' sales and managerial skills decrease confidence of investors, perceiving investment in these businesses as too risky
3. Lack of entrepreneurs' awareness and knowledge on availability and use of adequate financial resources
4. Lack of cooperation between Universities and business sector (young capable talent present, but not encouraged to pursue entrepreneurship career)
5. Political/ regulatory systems and other economic/business environment challenges (tax, bureaucracy, corruption)

Austria launched numerous initiatives for start-up companies and therefore emerged as a start-up hub, especially in fields of information technology, media and life sciences as well as creative industries. Forbes, American business magazine recognised Austria as one of seven start-up hotspots in Europe. In terms of access to finance, Austria currently offers a comprehensive system of public funding and private programmes in form of non repayable grants, guarantees or subsidised loans. However, Austrian start-up ecosystem depends more on debt financing and has been challenged by a small risk capital scene and low interest of international investors funds to Austrian companies. Lack of equity capital relates to unattractiveness of IPO, high fees for companies that are still listed in stock exchange. Austria is taking actionable approach to resolve this, however internationally competitive legal framework conditions for private equity and venture capital investments are still required.

Bulgarian start-up ecosystem has been growing significantly in the past years. Newly established accelerators and VC funds (mainly funded by EU) and a list of co-working spaces and events also contributed to the development of ecosystem. However, support is rather concentrated around the capital cities, and in ICT sector. Bulgarian SME ecosystem has been challenged by funds still largely dependent on EU, and a gap between different programmes (previously JEREMIE, now OPIC) mostly dedicated to support SME in their growth stage, and start-up companies in their early stage of development. Bulgaria sees solution in greater international cooperation to increase attractiveness of international VC investors and decrease dependency on EU funds.

Romanian entrepreneurial ecosystem is weakly developed. Despite recent improvements in financial policies and non financial support to encourage entrepreneurship, not many individuals will decide to pursue this career path. Very few entrepreneurs access public funding and people continue to be discouraged by corruption, political uncertainty and lack of transparency. Although Romanian start-up environment is not inspiring enough, there are many successful examples recognised on the European level. Collaboration between government, business and academic environment is a key for further success of SMEs development in this region. In addition, Romania is aware of its weakness in R&D and innovation sector development. Together with Bulgaria, it is placed at the bottom of the scale in the level of development of SME ecosystem compared to EU. Therefore, both countries are proactively implementing strategies on a national level to improve competitiveness. Romania suggests Clustering as a successful form of SME support development, with Centru region considered as a centre of clusters from Romania.

The development of start-up scene in Republic of Serbia is still in the beginning and promising stirrups are supported mainly by incubators, business centres and similar organisations. Currently there is no functioning accelerator in Republic of Serbia and only several business incubators have the capacity to offer training and technical assistance. Republic of Serbia has also been challenged by lack of necessary legislation to enable better access to equity financing. There have been several initiatives to establish equity financial instruments (VC, business angels and crowdfunding), however these have not yet been successful. Perhaps a better promotion of these programmes would increase its use, as current awareness among entrepreneurs is relatively low.

Czech republic has a well developed statup ecosystem, but centralised in Prague. Liberec region lacks supportive organisations for SMEs development and consequently remains under resourced. The main challenge is as investors and successful SMEs companies eventually reallocate to Prague, mainly to receive a better accessibility of financial and other support.

Access to equity is relatively easy in Hungary, with extensive support of resources and programmes. Main challenge is in its optimal use of the resources due to a lack of managerial skills of SMEs entrepreneurs and lack of support from experts to assist in this. Hungarian equity market and acceleration services have gained great importance in the past 5-7 years with the introduction of state finance equity programmes. The state has recognised the importance of financial instruments in economic development and equity financing, by establishing programmes to offer greater support. However, issues still remain around lack of University and business integration, missing management skills from young entrepreneurs and lack of knowledge in optimal use of available support. Hungary raised admin, tax regulative and management skills as main areas for improvement to further develop start-up ecosystem.

Slovenia has a rather young but extremely dynamic and rapidly developing start-up ecosystem. SMEs funding is still heavily debt dependent, although new equity finance models are rapidly evolving, such as crowdfunding. Business angels investments are awakening again, recognising start-up knowledge and idea maturity (PWC, 2016). A number of public and private programmes and organisations are available to support start-up companies and one of the key advantages of Slovenian ecosystem is a close collaboration between private and public investors and supportive organisations. Slovenian start-up ecosystem has been challenged by complicated bureaucracy and tax governmental policies as well as lack of business and university integration.

Republic of Srpska start-up ecosystem is still in the development, lacking accelerator programmes and other supportive organisations. Start-up companies are still primarily financed by commercial loans and grants, despite significantly increased collateral requirements. SMEs generally have access to finance, more difficulties in access to finance are seen in innovation driven start-up companies. Equity finance development in Republic of Srpska to ensure more support to innovative companies is therefore essential. The importance of establishing VC funds has also been recognised by the government, recognising this form of financial models as the main source of funding for innovative projects going forward, also stated in the Strategy for Development of SME of RS 2016-2020.

2 ACCESS TO (Equity) FINANCE

Access to finance is one of the main challenges in SMEs ecosystem development, lacking both, adequate supportive organisations and knowledge or awareness on funds availability among SMEs entrepreneurs. Start-up companies primarily rely on private capital (family, friends and business) as the most frequent financial resource (84.5%), followed by family and friends support (29.6%) and governmental funding (26.5%) (ESM, 2016)[1]. 'Credit guarantee schemes are increasingly portrayed as effective tools to facilitate SME access to credit across EU. More than two thirds of EU MS have dedicated funds to help entrepreneurs start a business.' (SBA Fact Sheet, 2016)[2]. While traditional models remain relevant, such as personal financing and venture capital investments, as well as business angles support, SME accelerators and microfinance, new models arose and became popular, especially crowdfunding (GEM, 2015-2016)[3]. Looking at the regions, Hungary appears on the top three EU countries predominantly funded by VC (28.9%), while Slovenia leads in incubator/accelerator investments (39.2%), followed by venture debt capital (7.8%) (ESM, 2016)[4].

Access to funds and finance is often challenging, especially at the early stage of SME development. **High level of investment risk in innovation** as well as **lack of sales and managerial skills** of SMEs entrepreneurs are often main barriers in access to financial resources, in addition to **lack of project investment readiness**, commonly raised by investors across all Danube regions.

[1] http://europeanstartupmonitor.com/fileadmin/esm_2016/report/ESM_2016_PPT_EN.pdf
[2] https://ec.europa.eu/jrc/sites/jrcsh/files/eu28_sba_fact_sheet.pdf
[3] file:///C:/Users/lmiklus/Downloads/gem-2015-2016-report-print-version-smaller-1481623410.pdf
[4] http://europeanstartupmonitor.com/fileadmin/esm_2016/report/ESM_2016_PPT_EN.pdf

Geographical position of the region also plays an important role in funds availability. Financial resources tend to be more accessible in cities, while other regions often lack adequate support usually due to **absence of supporting organisations and investors**. Furthermore, startup companies are preferably looking to base their premises or key services in better developed areas, leaving underdeveloped regions deprived from potential growth. This has been particularly notable in Liberec region (Czech Republic) and Centru region (Romania). Slovenia, Austria, Republic of Srpska and Republic of Serbia see more equal distribution of supportive service availability throughout the territory.

'Despite the great deal of efforts made by EU MS since 2008, the progress achieved has been rather mixed to moderate' (SBA Fact Sheet, 2016). There is still room for improvement to encourage private investment, promote alternative and innovative sources of finance and remove barriers for cross border investments.

2.1 Presentation of general context per region/country

Business angels investments present a relevant source of financing in Czech Republic (Prague), Hungary, Romania and are awakening again in Slovenia.

Crowdfunding, as relatively new equity finance model is also increasing in importance across regions. For example, many Slovenian entrepreneurs and start-up companies have already recognised their opportunity, raising almost €1.8m across three crowdfunding platforms in 2016. These new types of financing are relatively new in Republic of Serbia and Republic of Srpska, and not quite relevant to Austrian SME entrepreneurs, while this type of financing appeared to be less effective in Hungary, due to a lack of demand and insufficient money the crowd put on disposal for innovative projects.

Opportunities in access to finance identified across Danube regions:

- Alternative financial models; VC, business angels as well as crowdfunding are developing and growing in importance
- Individual governments are aware of barriers in access to finance and are already looking for solutions to close the gaps. Some promising initiatives and organisations has already been launched across regions.
- Collaborative climate between public and private supportive institutions in Slovenia is a good example of startup ecosystem

Barriers in access to finance identified across Danube regions:

- Lack of interest of investors, especially international (Austria)
- Missing link between start-ups and investors (Czech)
- Centralised funds availability, absence of investors and move of SME to the capital (Czech)
- Lack of skills to recognise finance availability (Hungary)
- Underdeveloped capital market (Republic of Srpska)
- Lack of integrated academic and business environment (Slovenia, Hungary)
- Excessive admin work & boreoarctic processes (Slovenia, Romania)
- Instability of tax policies (Slovenia)
- Unequal distribution of funds in the region (Romania)
- Romania – well developed system, debt financing expensive, seed capital - still opportunities to develop
- Bulgaria – quite supportive, however more focused on ICT sector, other companies lack financial support. Also, companies find it difficult to follow up on resources once VC has been invested
- Current legal framework prevents existing MFIs from lending directly to SMEs (Serbia)

Key challenges in **Austria** are in VC financing where most problems persist, despite comprehensive policy action in recent years. Equity finance present a small relevance for Austrian SME entrepreneurs due to relative unattractiveness of IPOs. Only 2% issuing an equity range, while 90% of SMEs find equity finance non-significant. The significance of equity capital remained low with a slight increase through years, predominantly among gazelles which depend more on external resources than other SMEs. One of the reasons for reduced demand for equity finance is due to SMEs reverting to other means of finance because of limited chances of success in the past. Lack of equity capital also relates to unattractiveness of IPOs and problems caused (e.g. high fees for companies that are still listed in stock exchange).

Private equity and VC financing are relatively young concepts in **Bulgaria**. The most important sources of financing for SMEs are credit lines, leasing and bank loans, while equity financing present relevance to a minority of SME entrepreneurs. Seed and early stage financing are available to a lesser extent compared to other EU countries. However, establishment of two VC funds in 2012; Launchub and Eleven gave a major boost to a start-up ecosystem. These were followed by other local and global VC funds, as well as by a growing number of business angel investors, who further promote investments in innovation and stimulate entrepreneurship. In addition, Bulgaria designed four investment instruments to improve access to finance in the new operational programme ‘Innovation and Competitiveness 2014-2020’, accounting €150m of funds in total.

Hungarian SMEs were historically financed by private investments via network of friends, family and founders but recognise increasing role of acceleration and equity financing. Hungary is leading in VC finance in EU (Hungary is on the top three EU countries receiving finance from VC, ESM 2016) nevertheless still in development. It has a long-standing VC Association established in 1900s, however active only in the past 5-6 years. VC and equity transactions appeared in 2000s, with central programmes of ERFA in 2007-2013 giving a boost to them. Services and support are mainly concentrated in Budapest, whereas other regions (Central Transdanubia and North Hungary) only started developing recently. The geographical closeness to Budapest has a positive effect on the development of both regions. The most important partners in Hungary are SZTA and CTRIA agencies. The majority of financial support is provided by state funds, private investors currently present a small proportion.

Liberec region in **Czech Republic** currently has unapproachable access to finance. Start-up ecosystem has technically not been well established, with the start-up community on its early stage of formation process and would need backing from either public administration or private investors to enable better access to finance for start-up companies. Liberec region is the second smallest region in its size and population, with absence of supporting organisations, investors and, consequently financial resources. Lack of such venues effects both, low demand for equity finance schemes and lack of supply due to unawareness of this situation from investors. In addition, investors, particularly business angels, often prefer to invest into ideas closer to the region they operate in. The absence of start-up ecosystem also lead companies to eventually move their premises to regions where the ecosystem is well developed. MITON, market leading e-commerce company is a typical example of a start-up company which eventually reallocated key departments to Prague and is now slowly losing connection with its primal region. Liberec region already expressed its interest in building Innovation Centre in the past, but was challenged to ensure sufficient financial support.

On the other hand, start-up environment is well developed in Prague, with the access to extensive support from organisations and investors. The majority of start-up companies as well as investors therefore concentrate in that area, leaving other regions underdeveloped.

Similarly, **Romania** has finances relatively accessible, but also rather concentrated in Bucharest (and partly in Culj Napoca region). Centru region on the other hand lags in the development. In addition, lack of competitiveness on the market present the main barriers in efficient use of the financial system in the region, along with a high estimated risk in SME financing- Romanian SMEs are perceived risky for banks due to their high share of non-performing loans (European Commission, 2016). Debt capital is expensive, once the value of colleterial requirements is high and 80% of loans require collaterals. Romania needs to address its service business angels/VC/private equity investment gap as there are significant capital resources for business development, growth and expansion. Although these mechanisms are present with the long list of initiatives, the impact on national and international level do not seem to be significant. The main issue is in individual management of start-up companies, lacking common concept to integrate created value. In addition, the availability of seed capital is increasing in Romania, nevertheless high risk business angel investment / VC is still at a very low level and could benefit from being more easily matched by funding, e.g. from accelerator/ investment fund for medium high and high tech ventures. Overall, access to finance is not the main issue, Romania rather struggles in finding customers, availability of skilled staff and costs of labour production and regulation. Entrepreneurs are well informed about the availability of public funded programmes but criticised its accessibility. The core issue is in bureaucratic process in access to funds, the barriers in over ambitious obligatory indicators which set high risk factors for SMEs (quantitative rather than qualitative), discontinuity of programmes, limited availability of activities (code restriction) and short time frame between programme announcement and application deadline. Regional stakeholders also have limited knowledge about private funding, equity financing and venture capital. Another challenge is unawareness of the community about the possibilities and absence of intermediaries with enough national coverage to facilitate the connection between equity investors and start-up companies. Romania envision potential in developing regional clusters, to possibly integrate all parties interested and establish supportive environment to stimulate the entrepreneurs to apply for public funds. Creating clusters based on a four pillar work principle could be an important negotiation partner of the regional and national policy makers.

High perceived risk from banks to invest in SME is a barrier identified also in **Republic of Serbia**. SMEs rely on public funds and bank loan schemes which do not show enough interest to support companies at their early stage. Financing costs are amongst the highest in the region, with high basic interest rates. Lack of legislative framework for VC is the main reason for small number of private investors and limited number of potentially good investment ideas. There was one official Business Angels Network but rebranded and is now rather focused on matching cooperation between expert mentors and company founders.

Slovenia is on the top EU countries that seek to raise capital from external resources (86.5%)[5] . The proportion of Slovenian entrepreneurs who finance their business with bank loans is lower than other GEM countries (20% in Slovenia, other countries 40%) (GEM Slovenia, 2016).

Slovenian companies are successfully breaking through to global markets with their products and strengthening the reputation of economic power[6]. Companies are supported by increasingly connected elements of Slovenian entrepreneurship ecosystem and are successfully breaking through to global markets with their products and strengths. However, challenges remain around lack of integrated academic environment, excessive volume of

[5] http://europeanstartupmonitor.com/fileadmin/esm_2016/report/ESM_2016_PPT_EN.pdf
[6] http://europeanstartupmonitor.com/fileadmin/esm_2016/report/ESM_2016_PPT_EN.pdf

administrative processes when funds participate with public institutions and lack of confidence in regulatory system and the instability of tax politics where Slovenia appears as a tax unfriendly country[7]. Overall, access to finance is not optimal in Slovenia, also due to lack of successful connections of SMEs with private investors (i.e. business angels, accelerators, VC and other strategic partners)[8].

SMEs in Slovenia are still primarily dependent on debt financing, indicating a need to diversify providers of financing for companies at all stages of their development and to strengthen offers of alternative sources of financing. PWC study (2016) identified an obvious gap in the market for alternative forms of financing on the microfinance and equity financing market, as demand for both is higher than current supply. Young start-up companies also have the possibility to receive seed capital. As a response to this need, Slovenian Entrepreneurship Fund implemented initiative 'Twin' which, together with seed capital financial investment, also offers consulting support (e.g. ensuring active participation of at least ten private investors, connection with mentors, three-month content programme, expert support of entrepreneurial consultants and the preparation of multimedia reports). In addition, business angles market is awakening again, investing €1,2m only in 2015. Other financing, such as crowdfunding is also strengthening in Slovenia, granting more than €1.6m to support 23 projects in 2015. A great milestone was reached in 2016 with the first Slovenian crowdfunding platform-Adrifund and first Slovenian crowd investing platform -Conda.

According to PWC (2016) investors and owners of venture capital companies (DTK) as well as business angels noticed advancement of knowledge and idea maturity of start-up companies. Slovenia made an important step forward by adopting a law of venture capital companies in 2007. In 2010 Slovenia prepared a tender where it acted as a co-investor and invested 49% together with newly founded venture capital companies. Four (from originally eight) are still operations. Another supportive body is Slovenian entrepreneurship fund (SPS), which offers several equity financial instruments for SMEs and companies in the development phase. The main aim is to continue its current investment activity and contribute to the development of the Slovenia start-up ecosystem by developing good practices in different level of equity financing.

Legal framework is well developed in **Republic of Srpska**, largely funded by credit lines of commercial banks, investment banks (IRBRS), credit and warranty lines of the Republic of Srpska Guarantee Fund, microcredit and leasing organisations, while few organisations also offer technical support for the development to access finance for SMEs. On the other hand, equity financing is not developed in Bosnia and Herzegovina as there are no VC funds and other alternative sources of financing innovation are undeveloped. Access to finance and access to new markets present two main barriers in Republic of Srpska. Financial investments

[7] PWC. 2016. Raziskava in analiza trga lastniških oblik financiranja MSP v Sloveniji

[8] file:///C:/gem-slovenia-2016-executive-summary-eng-1495007417%20(3).pdf

are predominantly assured from bank loans or other creditors which makes the assets of the borrower passive and does not correspond to the dynamic entrepreneurial environment.

One of the most important SME support organisations in Republic of Srpska is Republic Agency for Development (RARS), a governmental institution, established primarily to provide SMEs with support in the process of their formation, and to support and promote entrepreneurship in Republic of Srpska. Since its launch in 2004, RARS provided technical support for Statrups and SMEs through different programmes including trainings and consultancy. They have recognised the need to further develop ecosystem, especially in supporting SMEs through VC instruments and mentorship programmes for young entrepreneurs. RARS implemented Voucher Scheme model- an instrument designed to encourage companies to collaborate with consultants, enhance company ability to develop new product and services, provide inventors with resources for invention development etc. There have been many initiatives and projects to stimulate the development of VC market in the region, but unfortunately unsuccessfully. Other forms of financing – crowdfunding and business angel networks are relatively new in Republic of Srpska. Another barrier in access to finance is also financial literacy among entrepreneurs; lack of information, and awareness about equity financing. There is also a reluctance to cooperate with outsiders as owners or partners in a business.

2.2 Partners experience and knowledge

While some regions in Danube area have a well developed start-up ecosystem and a wide range of supportive private and public organisations, others lag behind. A couple of examples below are demonstrating the type of support individual regions currently offer:

Bulgarian TCS (The Technology Centre Sofia) focus on promoting and supporting the establishing of an innovation network aiming to help young entrepreneurs to develop and implement their business ideas in Bulgaria. In this sense, TCS is functioning as a business incubator.

The most important partners in Hungary are Széchenyi Venture Capital Management (SZTA) and Central Transdanubia Regional Innovation Agency (CTRIA).

- SZTA is a state owned VC management organisation established in 2010, with funds operated under state aid regulations. Its main focus is in VC investments and is currently responsible for one fund of €44m.
- CTRIA is a regional level agency and a member of a nationwide network. Its core focus is to establish and maintain a network of advisory services and general community through national and international partnerships. Their services primarily focus on supporting SMEs and build bridges between the regions and R&D organisations. CTRIA has an extensive experience and capacities in SMEs trainings and skills development (market research, idea management, products design management, BC evaluation,

rapid screening etc.), innovation support services (IPR, Innovation Management Audit, Business Planning etc.).

Slovenia:

- IRP (Venture Factory) is a private non-profit institution funded in 2001 and a carrier of the activities of business incubator of University of Maribor Venture Factory (UM). It is one of the key elements of innovation ecosystem of UM and responsible for the development of entrepreneurial pillar and transfer of innovations from research institutes into entrepreneurial environment. IRP is also a leading partner of local Start: up Maribor programme and an initiator of a national initiative Start: up Slovenia, managed together with a strategic partner Technology Park Ljubljana. Start: up Slovenia is also a co-creator of Start: up Alpe Adria initiative, which started developing Cross border EU Interreg programme with the objective to establish a recognisable start-up destination in worldwide context.
- Slovenian Entrepreneurship fund (SPS) is a joint member of the Accelerator project of the Ministry of Economic Development and Technology. It offers several equity financial instruments for companies in their development stage. The main objective of SPS is to continue its current investment activity as well as contribute to the development of the whole Slovenian start-up ecosystem by developing good practices in different level of equity financing.

Czech Republic and Romania have financial resources concentrated around their capital cities and therefore lack of supportive institutions as well as investors in other regions.

There is no accelerator service available in Republic of Srpska, while Republic of Serbia only started developing its first accelerator in capital city – Belgrade. However, existing incubators already provide extensive support to SMEs and therefore have a good potential to quickly develop into accelerators.

3 STAKEHOLDERS IDENTIFICATION & TYPOLOGY OF THEIR OFFER

3.1 Accelerators

Accelerators are main providers of support and an important link to SMEs development, having a positive impact on regional entrepreneurial financial ecosystem (Hataway, 2016). In addition, regions with well established accelerator systems have a greater presence of investors, thus better developed seed and early stage financial resources (Hataway, 2016).

The main objective of accelerator programmes is to offer support to statup companies at their early stage of development through financing, education and mentorship programmes (Hathaway, 2016).

Winston-Smith and Haningan (2015) found that 'graduates from top accelerators received their next round of financing more quickly and were more likely to be acquired than a comparable set of entrepreneurs financed by business angels' (GEM, 2015-2016).

The number of accelerators in recent years has risen, mainly due to changing economics of start-up landscape, reduced start-up costs and technology development. Seed-DB identified 225 accelerators worldwide with majority located in North America and 25% in Europe. (NESTA report, 2014).

Accelerator programmes differ in its structure and mission and can have a different focus or specialism. In terms of funding, the most common approach is a VC based fund system, taking equity in accelerated companies with a hope that this will eventually return the costs of the programmes (NESTA report, 2014).

Austria, Bulgaria, Hungary and Slovenia have well established accelerator programmes while these are relatively centralised in capital cities in Czech Republic and Romania. Republic of Serbia only started establishing its first accelerator recently, while Republic of Srpska, Liberec Region and Centru Region in Romania currently do not have accelerators.

- The presence of supportive programmes, incubators and accelerator programmes in Austria and Styria region is quite extensive. X-ON Accelerator, Styria Digital, Elevator Lab (newly established fin tech programme) etc.
- Bulgaria has well established accelerators, focused on support to early stage funding and other support you entrepreneurs. Eleven, LAUNCHub, Cleantech Climate KIC Accelerator, pre accelerator StartIt Smart and Technostart, focused to support young people with innovative ideas in industry and R&D.
- Accelerators are well established in Hungary, mainly located in the capital. There was a notable upheaval of available VC programmes in 2016 due to a provision of state resources and parallel the acceleration services began to develop. There are currently 16 accelerators, mainly located in Budapest, most prominent are Kitchen Budapest, Colabs, ICatapult etc.
- Similarly, accelerators are well established in Czech Republic, however centralised in Prague and Brno, while absent in Liberec region. The closest scheme to accelerator in Liberec region is a 'Student Business Club' at the Technical University of Liberec, focused more on coaching and mentoring of start-ups at their early stage which are not yet ready for the investment. Czech Republic identified three most prominent accelerators: StartupYard, xPORT and Stracube. Starcube is the only accelerator located out of Prague and could be a good inspiration for Liberec region. Its is a part of JIC (Jihomoravské Inovační Centrum- South Moravian Innovation Centre), offering a strong cooperation between the local municipality, region, companies and innovation centre.

- Romania also lacks accelerator programmes in Centru region, all accelerators are predominantly concentrated in Bucharest, as well as in Culj Napoca region which has recently been in progressive development. Risky Business, Innovations, SprintPoint, Privacy Accelerator Program, Seed for Tech, StepUP, Simplon Romania, Gemini Solutions Factory, Innovation labs, Spheriok Accelerator.
  One example of successful accelerator programmes has been established in Culj Napoca region - Risky Business is an early stage accelerator fund supported by more than 30 of the most prominent thinking business executives in Transylvania. It offers start-ups financial and acceleration support. The accelerator funds start-up companies with financial support up to €100K and other support, products and strategy developments, go-to market, pitching etc.
- Slovenia currently runs three acceleration programmes for start-up companies, two public (Slovenian entrepreneurship fund; Geek House - SK75fund and Go:Global Slvoenia-SK200 fund) and one private (ABC accelerator). The greatest advantage in Slovenian system is a high cooperation between private and public investors. ABC accelerator has a main purpose to connect innovative start-up companies with international markets, Geek House (SK75) is designed for innovative start-up companies with a growth potential and Go:Global Slovenia (SK200) for start-up companies, which already have product-market fit and are ready for a fast growth.
- Republic of Serbia established its first and only private accelerator programme, StartLab in 2013. It operates at regional level and invest in both, Serbian and regional start-ups. The founders believe they made the bridge between Silicon Valley and SEE, connecting regional start-ups with the valley's most prominent names[9]. Start-ups in Serbia are otherwise supported by Bulgarian well established accelerators (Eleven and LaunchHub), so far supporting an extensive list of companies.
- Republic of Srpska currently does not have an accelerator. The most important partners for financing SMEs venture projects in Republic of Srpska are commercial banks and microcredit organisations.

3.2 Investors (VC ecosystem)

VC is relatively well developed and present in Danube region and usually support SME with market ready products and services, ready for a fast growth.

Austria, Bulgaria, Hungary and Slovenia have a well established VC investment system, while regions with less developed start-up ecosystem- Liberec region, Serbia and Republic of Srpska lack this investment support.

[9] http://www.netocratic.com/startlabs-serbia-accelerator-1994

Bulgaria currently holds a strong presence of investors, from structural funds and national resources, to private and angel investments. The amount of financial resources varies between €25K to up to €10m.

VC in Hungary only gained its relevancy in the past five to six years, however existing for 25 years. This is due to centrally organised and partly ERFA funded programmes (JEREMIE, Széchenyi VC Fund and HiVentures). Prior to this, capital investments were sourced from buyouts and foreign investment. JEREMIE focus the investments in growth stage rather than seed financing, Széchenyi VC Fund has a special focus on traditional industries and spinoff companies, HiVentrues focus on innovation and SME development.

Investors in Czech Republic are concentrated in Prague, however with national importance. The most relevant venture companies in Czech Republic are Rockaway and Credo Ventures. Rockaway, a multistage investment firm focused on investing and building internet companies in emerging markets at their early stage of development. Their focus is in e-commerce companies and fin tech. Invia, the largest online travel agency in central and eastern Europe also heavily support startup companies. Their latest investment was €2m seed capital into Kosovo-Albanian in their search engine Gjirafa. Credo Ventures invest in information technology, software, internet, mobile and healthcare sectors. The firm primarily operates in Central and Eastern Europe and typically invests between €50K and €6m. Other relevant investors are JT bank and MITON.

Slovenia has a well-established support system for investors, with first Business Angels Association founded in 2007 and focused in connecting ambitious entrepreneurs in their early stages of company growth and the most successful businessman in Slovenia. Members are prepared to help fast growing start-ups at expanding and development. Another association, Silicon Gardens is an association that gathers successful Slovenian high-tech companies and individuals who share similar views on entrepreneurship. Silicon Gardens also opened angel fund of seed capital to further support Slovenian start-up companies. Business angles invested above €2m in the years between 2012-2015.

The majority of investors in Romania provide equity and risk capital in SME expansion phase; Romania Seedcamp, The Fundations, etc. Gecad Ventrues focus on software and high tech companies and invests in companies with high growth potential and with the ability to implement innovative products on the market.

Republic of Srpska provides financial resources for SMEs predominantly via commercial banks and microcredit organisations. It currently has 15 investment funds, managed by six asset companies. The government of Republic of Srpska attempted several times to change the way of functioning of funds and management companies, unfortunately with no significant results.

Public equity markets are not a common source of funding for SMEs in Republic of Serbia. Insurance companies and pension funds have sporadically engaged in lending to large corporates via buying their corporate bonds but this kind of financing was small in size and it is not available to SMEs since they are not listed at the stock exchange. The same reason coupled with a low level of development of Serbian capital market put also private investors' debt and equity placements out of reach of SMEs.

3.3 Private equity

Private equity investments have been generally declining in the past decade, also impacted by economic crisis. Small market size is one of the main factors, discouraging especially foreign investors to operate in these markets, and a challenge seen across the majority of the regions, raised particularly by Austria, Bulgaria and Hungary.

Bulgaria saw a deteriorating trend since the economic crisis. In 2015, private investments in Bulgaria were below average, only accounting 0.1% of GDP compared to 0.3% in the EU (Kirilov, 2013). One of the biggest obstacles to attract foreign investors is its country small market size. Bulgaria currently only has Advanced Equity holding, investing in start-up companies with a growth potential and Bulgarian Private Equity Fund AD, focused on healthcare, pharmaceutical real estate, banking and non banking financial sectors.

Similarly, Hungarian private equity investments have been declining since 2011, both, in number and volume of private equity transactions as well as a number of private equity investors based in Budapest. The past few years have only seen seven high value transactions. Challenges have been seen in: (1) only a small number of companies after the privatisation in 1990s were acquired by Hungarian private investors or financial investors, (2) a major portion of larger Hungarian private businesses are family owned and the idea to involve a financial investor has seldom occurred to founding families, (3) growth opportunities are limited due to small local market and many Hungarian business never reach the size that would make them attractive for financial investors. Consequently private equity industry has been less active in Hungary compared to other regions (e.g. Poland or Czech Republic).

3.4 Intermediary organisations

Intermediary organisations often present an integral part in technology transferring between business and research organisations and can be government or private owned, profit oriented or mission driven. The emergence of intermediaries has recently been increasing in the market. This type of organisation with the role of brokering relationships is located between the seeker of knowledge and resources needed for innovation in one side, and the resource on the other. Intermediary organisations can be public or private and are usually present in a form of technology parks, incubators, technology transfer offices and other agencies.

Extensive list of intermediary organisations is available in Austria, with most prominent organisations: Creative industries Styria, Eco World Styria, AC Styria, Wood Cluster Styria, Greentech Styria and Human Technology Styria.

Bulgaria emphasise the importance of knowledge transfer, SME competitiveness and collaboration. The most important intermediary institutions are Bulgarian SME promotion Agency (BSMEPA), Bulgarian Government, National Business Development Network (NBDN-association of 42 business centres and incubators) and newly opened Sofia Technology Park.

Czech Republic basically has three intermediary organisations; (1) Czech Private Equity & Venture Capital Association (CVCA), and a member of EVC, with the main objective to promote private equity and venture capital form of financing in Czech Republic by providing information, defend interests of its members during bilateral negotiations with the government and by educating members of other subjects. It is based in Prague, but represents members from all the regions, (2) CzechInvest, business and investment development agency, officially a part of Ministry of Industry and Trade, offering advise and support to the existing and new entrepreneurs and foreign investors. The agency contributes to attracting foreign investment and developing domestic companies through its services and development programmes. The most recent activity is the launch of 'Podpora startupu' (Start-up Support) campaign last year. It is designed for young and innovative Czech entrepreneurs, with activities focusing on four major categories; Czech Starter, Accelerator, Match and Demo. None of these four activities meets accelerator definition, however these will promote Czech startups internationally, (3) Czech Trade Promotion Agency, established by the Ministry of Industry and Trade in 1997, officially contact partner for those foreign companies looking for qualified Czech based suppliers of products, services or investors. Although this agency cannot be considered as a crucial part of accelerator ecosystem.

Hungarian innovative ecosystem also has a presence of private and public agencies: (1) Public agencies, such as National Research, Development and Innovation office, responsible for operative tasks of innovation strategy and funding (national and ERFA) and CTRIA, regional innovation agency operates locally to channel funding and development opportunities to the local firms. (2) Private advisory agencies work as tender advisor for challenging grants to the companies but there is a group that offer complex finance advisory services including transaction advisory in case of equity financing.

Slovenian support organisations are well developed, particularly subjects of innovative environment and established its first centre of excellence in 2011, along with other institutions; SPIRIT (Public agency for entrepreneurship support in Slovenia) and Initiative Start: up (leading partners are Venture Factory business incubator of University of Maribor and TP LJ) as an active facilitator and promoter of public and private stakeholders of Slovenian start-up ecosystem. Other members of initiative are: Primorska TP, Pomurje TP, Savinja region Incubator, SASA incubator, RCR Zasavje and RC IKT. Slovenia beside other supportive organisations also runs a variety of other initiatives, grants and accelerators. P2 grant and competition Start:up Slovenia offers companies a financial support (€54K) for product development for the two year span and is connected to Statr:up initiative. Start:up also has school Hekovnik which organise niche programmes for technological entrepreneurs and academics. Their programmes ensure successful development and fast market breakthrough. Corpohub creates and manages internal innovation/start-up programmes for big organisations, from ideation workshops and hectogons through innovation sprints to agile transformation of teams. DsgnFwd is an accelerator for entrepreneurs with global ambition, passion and a clearly designed business idea. It provides them with seed capital and help company design and launch communication identity, user experience and brand. Katapult is another example for accelerators, primarily focused on companies with a physical product. CEED Slovenia is a part of international network of CEED business centres across 14 countries. It organises various programmes for expanding companies, focusing on knowledge and skills entrepreneurs need at a certain stage of their growth.

Republic of Srpska has a relatively fragmented market and a couple of significant intermediary organisations, mainly on a national level. Republic of Srpska government is aware of the importance of knowledge transfer, with a presence of several institutions, mainly on a national level (Ministries, Chamber of Commerce and other centres). In addition, local agencies – essentially non profit present a link between local self -government units and public institutions supporting projects of interest for local and economic social development.

Ministry of Science and Technology of Republic of Srpska encourages the development of incubators, accelerators and other organisations, though with limited financial resource. Ministry of Industry, Energy and Mining or Republic of Srpska has a major role in implementation of 2016-2020 Strategy for SME development. Other important institutions in Republic of Srpska are Innovation Centre Banja Luka (ICBL), Banja Luka IT Cluster, Entrepreneurial University Centre (EUC), The Chamber of Commerce of RS, Qlab co-working space and other local development agencies.

In Republic of Serbia, main intermediary organisations are public bodies like Development agency of Serbia (RAS), Serbian innovation fund, regional development agencies, business incubators, Technology park Belgrade etc. The main role of the Innovation Fund is to contribute to the overall development of innovations through various financial aid instruments, particularly by fostering the establishment of new and strengthening the existing companies, by positioning them to access venture capital markets, and by attracting foreign direct investment in the high-tech research and development.

3.5 Corporate world

Along with governmental institutions and private investors, larger corporations increasingly see potential to invest in accelerator programmes, especially when they find innovations interesting and useful for their own business development. Commercialisation or provision of access to corporate infrastructure, business networks and customers are the main benefits corporations can provide to SMEs.

One of the examples of corporate involvement into supportive programmes - Czechs' *O2 company* created 'Bolt accelerator', supporting start-up companies with sophisticated infrastructure and more than seven million of customers and offers their offline network of more than 150 one stop shops for future use as well.

Another example, *Telenor Accelerate* is a first corporate accelerator in Hungary and becoming one the key corporate influencers, with the main goal to help start-up companies gain appropriate market traction. Hungarian Telecom – *Kitchen Budapest* is acceleration space founded with the help of Hungarian telecom in 2007, being a frontrunner of accelerators. It provides talent programmes for ideas and acceleration for start-ups.

Slovenian companies are also following successful lead examples from abroad, linking start-ups to their organisations. The list of Slovenian companies, interested in collaboration with start-up companies is increasing and can currently be demonstrated with several organisations from varied industries; *BTC, Kolektor, Iskratel, Zavarovalnica Triglav, Posta Slovenije, Telekom Slovenije, Nova KBM*. For example, *BTC,* together with its partners developed entrepreneurship centre ABC Hub and ABC accelerator where start-ups in exchange for equity get access to the infrastructure of BTC City and €15K in seed capital. In addition, BTC is preparing a programme to enable Slovenian companies to test different innovative solutions.

There are no large corporations to support entrepreneurs in Bulgaria, however lots of support is provided in free services. For example, the pre-accelerator *StartIt Smart* relies on a network of partner companies, which offers different products and services, such as free hosting and cloud infrastructure, up to a value €50K. Furthermore, international companies like *Microsoft* and national companies such as *Telerik* support events in the local ecosystem.

Participation of corporations in financing SMEs can also be highly dependent on governmental and political environment in specific regions. For instance, Romanian business environment is negatively affected by high level of corruption and the absence of a rescue culture in case of corporate insolvency. There is still high bankruptcy stigma and almost exclusive focus on liquidation instead of reorganisation and rescue. In addition, corruption at all levels of administration, together with uncertainty make Romanian economy less attractive for investors. However, new government has taken action and announced plans to improve the attractiveness of business environment.

Two big telecommunication companies that operate in Serbia, Telenor and MTS organized two acceleration programs, in the frame of promotion of inclusive and sustainable economic growth- MTS startup accelerator and Telenor Smart City Challenge Serbia 2016. Generator

Societe Generale bank and SBB Live your idea are initiatives that could advance into longer-lasting and promising solutions

3.6 Other initiatives and incentives (including private)

Eagerness to support entrepreneurship development across regions can be further recognised in implementation of additional programmes, events and space to encourage informal skill development, networking and collaboration.

The following examples across regions are cases of successful initiatives:

- Creating co-working spaces – Bulgaria(Sofia) offers numerous cowering spaces (e.g. Betahus, COSMOS, Soho, etc.), Republic of Srpska – Qlab coworking space
- Crowdfunding organisations: Romania – Multifintare, etc.
- Business support initiatives- Bulgaria (e.g. Start UP Foundation, Association of Bulgarian Leaders and Entrepreneurs etc.)
- Organising (niche) programmes- Slovenia -Start: up school Hekovnik for technological entrepreneurs, tech savvy individuals and academics, CorpoHub CEED Slovenia organising various programmes, Bulgaria – educational programmes organised by stakeholders, The Junior Achievement Bulgaria, The 9 Academy, The Business Institute
- Organising events and competitions- Hungary- Start-up pitch competition, BrainBar Budapest – annual meeting of innovative minds and a networking event, Slovenia – PODIM conference etc., Bulgaria- DigitalK, Startup Weekends etc.
- Establishing (online) platforms to communicate and network- Hungary (blogs, blogzines, Facebook)

4 ANALYSIS OF SUPPLY

4.1 Analysis of supply side challenges: perspective of investors

In general, the volume of financial and other assets for SMEs is not lacking across Danube regions. Many institutions or initiatives are offering support to SMEs by providing financial and non-financial services. Presence of supportive organisations (i.e. incubators and accelerators) are vital not only to support SMEs through business development and expansion, but also to attract public institutions and private investors (VC, business angels etc.).

Nevertheless, a gap between availability of financial resource and project readiness to receive these resources or awareness of adequate financing programmes is often seen among SMEs at their early stage of development, particularly companies focused in innovative industries. These innovative ideas usually lack transparency and clearness of business strategy, in addition to missing sales and managerial skills of SME entrepreneurs. This further decrease confidence of investors, finding it too risky to financially support innovative ideas, while SMEs at their growth stage appeared to have a greater availability of financial support.

Czech Republic ranks the highest in financial market development (rank 27). Followed by Austria (rank 34), Bulgaria (rank 59), Hungary (rank 70), Romania (rank 86), Serbia (rank 110) and Slovenia (rank 118)[10].

The overall supply analysis showed that Austria recognised low interest of international investor funds in Austrian companies, Bulgaria and Liberec region (Czech Republic) saw lack of business angels support, Hungary's heavy state participation discourage private investments, lack of investment readiness has been identified in Slovenia and Hungary. Hungary sees enough resources; the problem is in the accurate use of the financial resources.

Main opportunities in supply identified across Danube regions:

- Relatively high volume of financial resources and funds
- Developing equity finance models
- Awareness of barriers in regions and increasing implementation of supportive initiatives

Main barriers in supply identified across Danube regions:

- Lack of project investment readiness
- High perceived risk to support innovative ideas
- Low interest of (foreign) investors – small market
- Lack of entrepreneurial culture promotion (Hungary)
- Lack of support in geographically deprived regions
- Heavy state involvement

Austria and Styria region offer a comprehensive system of public funding and private programmes. The most important funding sources in Austria are Austrian Research Agency (FFG) and Austria Wirtshaftsservice GmbH (AWS), offering repayable grants, guarantees and subsidise loans, from pre-seed and seed funding to consultancy of business angels. Austria and Styria region established and investors service desk 'The investors Service Department' as a response to two main challenges in a supply;

- Small risk capital scene
- Low interest of international investors Funds to Austrian companies

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

The main objective of this programme is to bring headquarters and centres of competence (technology and R&D centres from international corporations) to Styria. SMEs are supported by a portfolio of services: investment project support and consulting, information support of the Styrian economy, cooperation partners and research facilities, analysis of potential sites, advice about support, fact finding missions and technology and business partner search.

Financial resources in Bulgaria still highly depend on EU funds and are limited. Private investors therefore hold an essential role in the entrepreneurial environment but are often hesitant, due to a small market size and sceptical attitude of entrepreneurs toward private investors. Albeit the situation is not that dramatic as Bulgarian entrepreneurial ecosystem (Sofia) ranks on the top 10 cities worldwide to launch a start-up on Forbes scale 2015 (Guttman, 2015).

According to private investors, limited interest in investment are attributed to several factors:

- VC funds are highly dependent on EU resources
- Sceptical attitude of investors towards SMEs entrepreneurs' use of resources
- Lack of awareness on funds and other support availability
- Small market and low interest of investors
- Political instability

The majority of investments are concentrated on the later stage of SMEs development in Hungary. Investors often neglect new ideas or find it too risky to invest in which consequently reduce provision of seed capital investments. This challenge has been tackled with an establishment of a new state financed equity programme in 2016, focused on seed and early stage investments (HiVentures) to bridge a lack of investment support. Another form of support is provided by JEREMIE funds, but more concentrated on the later stages of SMEs development.

The main challenges in supply in Hungary are:

- Seed capital availability due to a high perceived risk by the investors, often neglecting new ideas
- Investment readiness, where entrepreneurs find it difficult to meet transparency and reporting requirements for investors. This means that either the investor has to provide administrative support (accounting, legal etc.) or it has to nominate a person in the company to perform these tasks
- Lack of entrepreneurial culture promotion

- Lack of seed capital, hindered by heavy state participation in the equity market, causing counter effect where private resources are not encouraged enough to participate.

Czech Republic has a relatively good supply of financial support provided for start-up companies at their early development stage in Prague, while Liberec region lack its sufficiency. Business angels are usually linked to their home region and often prefer to invest in companies closer to their base. Similarly, seed funds are usually somehow associated to start-up incubators or accelerators to get better and faster access to most promising companies. As Liberec region currently lack this kind of organisation, the region faces two key challenges:

- Lack of investors in Liberec region, particularly business angels, and consequently
- shortage of supply of seed capital

On the other hand, Prague is well developed and provide an extensive support of seed funds. The greatest providers are Credo Ventures (private seed fund), StartupYard Accelerator, ESIF fund. In addition, presence of VC companies investing in SME at their later stage of development is quite high, possibly associated with lower funding risk at this stage. VC companies usually operate on the multinational level due to their strategic importance and a scale of the portfolio they manage. The most important VC providers are Credo venture, Rockaway capital, Inven Capital, 3TS Capital. Lastly, there is a surplus of private equity capital available on the market, however with fierce competition, forcing some companies to close their business as there was not enough investment opportunities.

Romania observed an increased interest in funds for start-up companies as a result of a growing number of local technology business that have entered acceleration programmes or have received international funding. In 2014, VC funding saw an increase due to growing number of opportunities. Daniel Dragomir, CEO of How to Web Conference and TechHub Bucharest also recognised rising attendance of the investors on the How to Web Conference and the MVP Academy pre-acceleration programme to identify potential technology start-up companies in the region to invest. In 2015 Vector Watch raised €5m, in 2016 showed a great start, financing €1.1m. Romania is a well-established business destination for global investors, with one of the strongest macroeconomic situation in EU in terms of GDP growth, fiscal deficit and public debt. Business confidence in Romania is at the highest level in the past four years due to robust economic growth prospects and investment and consumption recovery. According to World Bank Doing Business Report, Romania ranks on the 37th place worldwide on the aggregate ease of doing business index, climbing 13 places since 2014. The overall tax paying ranking has been improving and is the second best among the regional peer countries. However, Romania has been challenged by:

- High levels of corruption and bankruptcy stigma

New government has announced plans to improve business environment by promoting and diversifying exports and FDI, supporting entrepreneurship and SMEs, enable greater access to finance, stimulating the development of creative industries, tourism, agriculture and research and reconstructing mining and defence industries. Information and communication technology (ICT) is dynamic and competitive, with 6% of GDP in Romania, the top in EU. Tax system is relatively favourable to business and growth, with the standard corporate income tax rate 1t 16% being amongst the lowest in EU.

Slovenia has a relatively young but extremely dynamic and rapidly developing start-up ecosystem. The gap in equity financing is the largest at the early stage of investment – seed capital. Investors, owners of VC companies and business angels noticed and advancement of knowledge and idea maturity of start-up companies in Slovenia (PWC, 2106). The majority of interviewed experts believe the availability of financial resources is adequate, with challenges around:

- Investment ready projects – start-up entrepreneurs do not necessarily know how to prepare and present their ideas confidently to potential investors
- Awareness of investors' expectations
- Sales and management skills
- Awareness about the accessibility among SME entrepreneurs, increasing the gap in optimal use of financial resources.

Support in Republic of Srpska is mainly provided via Republic of Srpska budget and IRB RS credit and guarantee lines. These ensured around 332 million EUR of financial support between 2006-2015, mitigating the adverse effects of the global economic crisis and further maintaining economic development (2015-2020 – Strategy and Policy of Industrial Development in Republic of Srpska, Ministry of Industry, Energy and Mining of Republic of Srpska, pp. 41-42). IRB RS is the largest financial support provider, encouraging new investments and employment. The most significant supportive programmes are credit support for obtaining current and fixed assets, guarantees, seed capital SCV, WB EDIF together with other supportive programmes, offering mentoring, consultancy etc. (Establishment of mentorship, network of consultants, Horizon 2020, COSME programme).

Republic of Serbia raised issues in supply in insufficient use for risk capital and unsatisfying degree of internationalisation of SMEs. The virtual absence of a microfinance sector has left the supply of microloans low. Because the few equity funds active in the country target either technology start-ups or larger consumer oriented businesses, microenterprises and non-technology start-ups are essentially left without a source of funding. Serbia also currently doesn't have a legislative framework for VC system and no strategic documents. However there have been a couple of initiatives in the past years. BAN exists in Serbia, but the level of their activity and possibilities to invest here are questionable and more focused on matching and cooperation.

Based on regional research, there is a great need identified in to introduce or further develop supportive programmes that will give greater confidence to investors to provide capital, especially at the early stage of SMEs development. Individual regions already responded to identified challenges, by implementing programmes to improve provision of adequate support to SMEs and eliminate barriers for a faster growth and development of start-up ecosystem. More services would be needed to tackle one of the most prominent issue across all regions – lack of project investment readiness. Supportive services, with experts providing advisory as well as back office support, would be a sensible step to overall improvement, potentially increasing confidence of the investors to financially support also innovations at their early stage of development.

4.2 Best practice examples

Austria:

- U11 is a company builder, headquarter in Graz and co-funds and accelerates early stage businesses and start-up companies in the field of mobile development. The company builder leverages growth by offering their network of global players (i.e. investors, mobile operators), provides seed stage funding, operational and supports start-up companies with operational expertise (i.e. finance, legal, HR, administrative).
- Accelerator programmes Universitarian Spin off Centres (ZAT and science park) (SPG) is the incubator centre of the University of Graz and the Technical University of Graz and the Centre of applied techniques (ZAT) is the incubator of the University of Leoben. Both incubators offer services for founders, managers and investors. In terms of support to university graduates from all fields incubators are providing processional consultancy and coaching, infrastructure, networking and mentoring and financing during pre-start-up period. SPG and ZAT mentoring programme bundles the expertise incorporated by all Styrian university institutions as well as by successful entrepreneurs.

Bulgaria:

- ELEVEN VC Fund is one of the top 10 investing accelerators and VC funds in Europe (Fundacity, European Accelerator Report 2014) and invested 12 million EUR in 115 innovative start-up companies in various sectors between 2012-2015. During the six months acceleration phase, each start-up received up to 50K EUR with follow-up seed funding opportunities up to €200K. Besides investments, fund ELEVEN provide teams a mentoring programme. After investing in companies at very early stages, their focus now shifts to more mature companies that have already built a product and are looking for the right partners and needed resources to help them grow and scale.

- Other funds, operated under JEREMIE programme are LAUCHub programme focused on early stage and seed capital, NEVEQ II, Black Peak Capital & Empower Capital invests in SME at their later stage of development

Hungary:

- Euroventures is a state financed organisation with a flexible co-investment structure with a great emphasis on building networks of co-investors
- iEurope Capital is an early bird in VC with successful several start-up investments
- Day One Capital focus on early stage investment

Czech Republic

- MITON, an internet company, developed its first flagship projects Stahuj.cz as an alternative to international download servers available worldwide. MITON was primarily based close to Liberec region but eventually moved key operations to Prague. Company gained big success and eventually positioned itself as an investor, rather than software company. Company currently has stakes in more than 25 online projects. The key success of the company is their ability to predict trends in the industry, even before it becomes mainstream, which gives them unique opportunities to invest in unknown start-up companies.

Romania:

- Vola.ro, the largest travel agency in Romania, winning numerous awards
- Clever Taxi is the taxi app, supported by business angel investor. The company has the largest number of available taxi drivers and is available in more than 20 cities across Romania.

Republic of Srpska:

- IRB RS is the most important institution in RS, providing loans to start-up companies. Its strategic goals are to foster investments and support development in RS. In addition, IRB RS offers specialised credit lines to different categories of SMEs. This concept of specialisation has shown very useful as it allows enterprises from priority sectors to obtain funds under agreeable conditions on relation to commercial banks. Their good work model has been recognised by numerous financial institutions which implement their development programmes through this bank. It is important to note IRB RS also had a positive impact on other financial organisations to create programmes adjusted to the needs of SMEs in RS. Their approach has contributed to the fact that banks have reduced interest rates on SME loans.

- WB EDIF is the most important institution that finances SMEs on equity principles. It is funded by EU with the main aim to provide access to finance for SMEs in the West Balkan. Their focus is on increasing the participation of private sector stakeholders, addressing the need of Western Balkans SME market, building up the local venture capital market and widening the scope of SME financing and increasing available funding and financial instruments. In addition WB EDIF also aims to create a more favourable financing environment for SMEs and sustainable equity market in the long term. This includes the promotion of policy reforms to create the necessary political framework which supports SME financing. WB EDIF mentioned they have more success in cooperation with SMEs that were members or tenants of some incubators or accelerators and are therefore planning to focus on institutions which provide similar programmes future as well.

Slovenia is offering extensive support to start-up companies:

- ABC accelerator
- Private programmes (CEED Slovenia, Silicon Garden, business Angels of Slovenia)
- SK75, SK200 are programmes to provide financial support to start-up companies at their development as well as growth stage.

When talking about early stage financing of SMEs in Republic of Serbia, the best practise cases are ICT Hub Venture and Start Labs initiatives, which are still very young, and not so familiar to public. On the other hand, Serbian innovation fund supports the SMEs in their early stage of development through its support programs:

- **The Mini Grants Program** is aimed at private micro and small enterprises which are engaged in development of technological innovations with a clear market need and the potential to create new intellectual property;

- **The Matching Grants Program** has the goal of expanding the possibility of cooperation between innovative SMEs and strategic partners with the intention to increase private sector investment into projects of technology development and commercialization for new and improved products, services and technologies;

- **The Collaborative Grant Scheme Program** is designed to incentivize private-sector companies and public-sector R&D organizations to engage in joint scientific research and development projects.

5 INNOVATION DRIVEN SMEs AND TALENTS COMMUNITY

5.1 General context of the community

SMEs have an important role in EU economic development and form a significant source of economic growth, employment and innovation on a national and regional level. Encouraging development of innovativeness is a strategic goal of EU, also visible in regional strategic documents (South East Europe Strategy, EU Strategy fir the Danube Region and EU Strategy for the Adriatic and Ionian Region) and EIF (Enterprise Development Support) which envisage considerable funds for innovative and fast growing enterprises.

Main opportunities in talents community across Danube regions:

- High number of graduates
- Relatively high level of specific technical knowledge and expertise among young population

Main challenges in talents community identified across Danube regions:

- Small innovation ecosystem
- Weaker innovative industry focus
- Lack of integration between young talent, universities and business investors
- Brain drain
- Lack of managerial skills and entrepreneurship encouragement& promotion in schools
- Investment readiness
- Lack of seed capital availability to increase start-up companies
- Lack of SMEs knowledge or awareness on support availability

One of the main challenges across Danube regions is a relatively **small innovation ecosystem**. High tech SME are accounting only 10% of all new companies in Austria with a low proportion of new founded companies by graduate students. Similarly, majority of Hungarian companies still operate in traditional industries (i.e. machinery and supply industry) with domestic companies having more product innovation than process innovation or business model focus. Key players in Hungarian innovation ecosystem are Hungarian Venture Capital Association and the National Trade House who hold a significant role in organising the community. The entrepreneurial spirit in Hungary is amongst the lowest in EU, but has increased with the success and rise of start-ups (e.g. Prezi, Ustream and LogmeIn)[11]. Challenge remains in lack of integration of Universities in the ecosystem. These should play a greater role in the

[11] http://www.gemconsortium.org/country-profile/68

community, given the large research capacity and access to young creative and talented research community. Romania and Bulgaria have one of the lowest R&D intensities in EU, with low competitiveness and prevalence of small technology sectors and underdeveloped innovation culture. The number of innovation active enterprises in Republic of Srpska also saw a decline. Innovation active enterprises in Republic of Srpska are mainly engaged in acquisition of machinery, equipment, software and buildings, only one quarter of them used external R&D services. In the Republic of Srpska only one in seven enterprises implements innovative activities and only one in fourteen is making innovative cooperation with other business entities or institutions.

Another issue is a **young talent capacity**. Bulgaria and Romania highlighted a challenge of a brain drain from local regions to capital cities or internationally. Both countries are modest innovators and below EU average (European Innovation Scoreboard, 2017). High proportion of people from Bulgaria leaves particularly ICT sector lacking talents with technical, sales and marketing skills due to a brain drain or lack of ICT focus in educational system (Innovation Ship Bulgaria, 2016).

Romania faces relatively low levels of internationalisation and scientific production by university students. Despite a high proportion of PhD students, Romania suffers from extensive brain drain (15,000 researchers are currently working abroad) which has left the country with the researchers of high average age and limited career prospects. Romanian universities are underperforming in all major international rankings, with lower level of internationalisation of scientific production and staff composition. On the other hand and in terms of national scientific publications, Romania performs on the top ten percent of most cited publications worldwide.

Key challenge is in its low competitiveness and prevalence of low and medium technology sectors with a weak demand for knowledge and underdeveloped innovation culture. R&D system is primarily public based, with only 38.3% of research performed by business sector (well below EU average at 61.5%).

Similarly, Hungarian students are talented and creative, but the educational approach is still highly mathematical and engineering focused with young entrepreneurs often lacking sufficient sales, marketing and business development skills, crucial for success. Slovenia also stress the importance to better promote entrepreneurship in schools and encourage young people to choose entrepreneurial career.

Lack of integration between young talent, university and business investors. Hungary is not characterised by the presence of innovative companies but has talented and creative people with creative skills to elaborate novelties and contribute to the development of start-up scene. Universities should have greater importance in the community, but are not linked into ecosystem efficiently and are also tied by the academic hierarchy. In a response to this, Hungary launched state finance equity programmes JEREMIE a, SYTA and HiVentrues which contributed to a faster development of VC market in the past 7-8 years.

Romania sees solution in establishing hubs and spaces targeting students, mentorship schemes where professors and entrepreneurs would become partners of the young people could make a positive contribution to further talent development. Independent centres of creativity, knowledge and collaboration would serve as pre-accelerators for young human capital, as a method to attract talent community. Romania has scientific and technological strengths, particularly in automobile production, information and communication technologies, new production technologies, nanoscience, nanotechnology and security. In terms of financing, seed capital is beginning to become available, but high risk business angel investment and venture capital remains at a low level and could benefit from being more easily matched by funding. From accelerator/investment fund for medium or high tech ventures.

The number of new companies founded by university graduates is very low in Austria. Austria is tackling this challenge by launching a variety of special programmes available for innovation driven SMEs on a national and international level, offering support in access to VC, business angels and other types of finance as well as exit options to the market. Since access to finance has been identified as a key driver in the creation, survival and growth of innovative new ventures, this kind of support is particularly valuable for entrepreneurs. On a national level, The Austrian Research Promotion Agency (FFG) and The Austrian Business Service (AWS) are the most relevant funding institutions. Chamber of Commerce (WKO) is very important for general support and counselling. FFG runs several important programmes across the country, spin offs from Univeristies, AplusB-Centres, providing professional support for scientists in their start-up phase. In Styria, there are two such centres, Science Park in Graz and Zentrum fur Angewandte Technologie in Leoben. The Styrian business promotion agency (SFG) is important agency on a regional level.

Bulgarian educational system is outdated and does not support innovative companies. There is a relatively high proportion of graduates, however sees shortage of qualified work force. Bulgaria is also challenged with a demographic crisis with ageing and shrinking population. Young talents tend to immigrate to other countries or are concentrated in Sofia, leaving other regions further deprived in development.

In Republic of Serbia, one of major weaknesses in the field of development of innovation is poor connections between scientific-research institutions, including Universities and SMEs. SMEs do not perceive scientific-research institutions as contingent partners whereas researchers cannot recognize in SMEs their target group and they maintain that there is no significant demand for new technological solutions in industry.

Lack of sales managerial skills of young entrepreneurs, with lack of efficient integration of young talents into innovative environment is also often a challenge in SME environment and also identified across all regions.

The main issue in the demand side in Bulgaria is often a **lack of financial resources**. Especially when VC funds have invested their resources it is difficult for start-up companies to raise follow-up investments. There is also a tendency to invest in start-up companies from ICT sector, leaving other companies from other operating sectors deprived from needed financial support.

Czech Republic saw a significant shift in the economy from traditional, offline to digital focused industry with the majority of most successful Czech start-up companies based online. The most successful Czech companies are technology focused, fin tech, e-commerce and biotech and are also supported the most by investors (PPF group, Mr Petr Kellner). The best practice examples are Socialbakers, Apiary and Kiwi.com

Republic of Serbia has been improving its ecosystem in the last two years with the availability of both, public based financing schemes and extensive non financial services. The majority of SMEs generate the employment in non financial sector (64.8%). Total share of women in SMEs is 30%. There are around 45,000 enterprises registered annually with the survival rate of 2% in the first two years in the business. Companies can receive free support through registration process through regional development agencies and are only obliged to cover registration fees at around 10EUR.

Lack of investment readiness is an issue raised across all regions, and especially notable in Bosnia and Hercegovina, with the lowest scores in the financial readiness of SMEs compared to other SEE countries. Serbia's technology sector has no problem in finding sources of finances and it exhibits a healthy degree of innovation, with several start-ups working in enterprise software, e-commerce, and technology hardware.However, it is very difficult for SMEs from other sectors to find needed sources of financing.

Lack of **seed capital availability** is challenging for innovative start-up companies at their early stage of development. Slovenian start-up companies and entrepreneurs are successfully breaking onto global markets and strengthening Slovenian economic reputation. However, the biggest gap in equity financing is in seed capital availability. Slovenian Enterprise Fund is trying to decrease this gap by offering P2, SK75 and SK200 funds, jointly providing €329K of seed capital per company, including advisory, educational and mentor support. In addition, entrepreneurship infrastructure and consulting are successfully managed by Slovenian innovative environment subjects, university incubators, regional entrepreneurship incubators and technology parks, working under the auspices of Slovenian agency SPIRIT. Other Slovenian supportive organisations and programmes are ABC accelerator and programmes, such as CEED Slovenia, Silicon Gardens and Business Angels Slovenia club, all contributed to a fast growth of ecosystem and a growing number of globally successful Slovenian start-ups.

The number of innovation active enterprises in Republic of Srpska was by 6.3% lower compared to previous period 2010-2012. Innovation activity increases with the enterprise size increase. Therefore the majority of innovative enterprises (51.9%) were large (250 employees or more). The majority of enterprises are with non-technological innovation (17.1%), 14.7% were technological. The main task of governmental institutions in RS is to develop systematic approach for cooperation between start-up companies and financial institutions to provide funding for commercialising their projects.

The majority of funds available for SMEs in Republic of Srpska are provided via donations and foreign credit lines (however not sufficient in volume). Collaterals that banks demand are often a barrier. Alternative financing models are not well developed and legally recognised, nor there are sufficient efforts to develop these regulations. Therefore, Republic of Serbia needs to create legal basis for tax incentives for VC investments and to adopt regulations on VC funds.

5.2 Identification of frontrunners

In Styria (Austria) there are about 25,000 companies, 2,000 of them are innovative and are in the focus of most of activities SFG, FFG, AWS and WKO provide. There is a variety of special support programmes and counselling available. Given the many difficulties these companies face, all of these support activities are very important. The main problem remains to identify these companies and give them the right support. Austria is aware of the relevance to support companies in their establishment and growth, and therefore offers a variety of support programmes and networks.

In a response to challenges in lack of cooperation between universities and business environment, Bulgarian Ministry of Economy and Energy implemented a project 'TechnoStart' which promotes innovation ideas of students or young entrepreneurs in fields of industry, information services and R&D through grants. Bulgaria also opened Technology Park in Sofia in 2016 and has quite a few examples of successful stories, one of the most significant is Telerik, an app developer, bought by Progress Software and became a powerhouse of the local ecosystem, also establishing its own academy in Sofia. Other significant frontrunners are Jet Finance, FinAnalytica, 3dc, Flipps etc.

Hungary has an extensive pool of big international success stories, making their breakthrough internationally, mainly to the UK and US market (Prezi.com, Ustream, LogMeln, NNG, IND Group and BalaBit) as well as locally (Aimotive and Commsignia).

Czech Republic has seen a shift to the online based companies, with the most successful companies from a tech sector, and so are their major frontrunners; SocialBakers is a social media analytics company, founded by Mr Jan Rezab who made it to the Forbes 30 under 30 global list. The company provides most accurate social media analytics in the industry, with a wide pole of respectful clients (e.g. Microsoft, LVHM, Danone, Henkel). Company currently has more than 300 employees, located across eleven offices globally. In total, investors backed the company with more than $34m and the estimated value of the company is currently at around $25m. Apiary, software tool solution company for programmers to help them build applications much easier. The company was bought by Oracle and with is estimated, according to Mr Ondrej Bartos of Credo Ventures, to be worth tens of millions dollars. Kiwi.com (former Skypicker) is one of the world's most influential start-up company, a low-cost ticket search engine and one of the most dynamic online travel agencies (OTA) in the industry. It has been accelerated at the Starcube by JIC. The company currently employs 500 people.

Slovenia has a relatively young but extremely dynamic and rapidly developing start-up ecosystem. The greatest contributors to a fast development of Slovenian start-up ecosystem are national star up stars Outfit7, Celtra, Zemanta, Databox.

Republic of Srpska can expose two successful start-up companies: Wischt Ltd., originally a small wood processing workshop established in 1996, which eventually became one of the leading companies in the manufacture of vacuum progress in both, national and international market- due to innovative patents and Digital Media Consulting, a digital marketing agency implementing solutions in digital marketing and app industry. The agency is mainly operating locally, however planning its expansion to European markets.

Republic of Serbia can also present an extensive list of successful start-up companies; Belgrade based start-up Strawberry Energy, known for its public solar charger Strawberry Tree, has developed a new type of solar public charger for cell phones- the smaller and more efficient charger, with better power management, Euro Heat from Kragujevac is producing new and improved types of heat exchangers for industrial applications, Adecom Group specializes in the design and implementation of water-proofing solutions for the construction industry, Chromosome Group is focused on mechanical engineering and process automation. The company has developed an automated device for filling, sealing and packaging of plastic containers with liquid fertilizers

6 ANALYSIS OF NEEDS

6.1 Analysis of identified needs. Perspective of innovation driven SMEs (start-ups)

Needs evaluation, based on regional assessments as well as survey research conducted among entrepreneurs across regions, revealed the need to improve awareness on financial programmes, by providing supportive services to better inform and support SMEs entrepreneurs to select the right form of financial resources.

Main needs identified across Danube regions:

- **Improve financial funds availability.** The majority of interviewed SMEs entrepreneurs still predominantly rely on debt financing - friends, family and business loans or government grants and commercial loans when looking for financial resources, especially at their early business development stage. Funding programmes are not necessarily promoted enough; entrepreneurs are generally not aware of funding availability, given crowdfunding platforms, business angel networks are relatively new business models in Republic of Srpska, Republic of Serbia and Romania. On the other hand, high collaterals from banks encourage Bulgarian entrepreneurs to preferably look for support at VC, business angels and personal funds at their early stage of business development. Also, start-up companies operating in innovative industries generally have less chances to successfully access finance. For example, Bulgarian financial ecosystem is relatively well developed, but supported start-ups are operating mainly in the field of IT applications and services, very little support is given to tech innovative companies. Most interviewed SME entrepreneurs would expect relatively high financial support for their development and growth; above €100K from external sources.
- **Increase awareness and knowledge on programmes availability.** Nearly half of survey respondents from Austria, Bulgaria, Hungary and Slovenia are aware of availability of financial resources, while the level of awareness appeared much lower in Romania, Republic of Serbia and Republic of Srpska. However, knowledge about services does not appear optimal. On average, half of the interviewees express the need to be better informed on finance availability and characteristics of specific models (pros and cons). In addition, a need to improve communication channels have also emerged in Bulgaria.
- **Simplify or eliminate business operational and bureaucratic barriers.** Bureaucratic processes and other administrative tasks are often demanding for start-up companies, and present a barrier to access financial resources. High requirements for business plans, reports and strategy documents present a barrier to Bulgarian entrepreneurs. Greater support in this regard would therefore be needed. Bureaucratic processes associated with alternative financial models are unfavourable in Romania while Serbia also does not have well established legislative system in VC funding. In terms of operational support, entrepreneurs lack services that would provide them with adequate support needed to successfully start their services, particularly in Liberec region, where the absence of sufficient support is most notable.
- **Establish networking events and (joint) support services to improve awareness of support availability (info hubs as well as networking and meet up events).** Networking services, mentoring, workshops and consultancy services appeared as

most needed across the regions. The need to learn more about acceleration services, specific workshops and platforms emerged from the survey research. Key programmes respondents recognised to be beneficial to improve knowledge on support availability are: specific workshops, platforms, networking events, face to face consultancy and training and info about accelerators.
Services which include networking opportunities were recognised as the most effective way to improve innovative developments. Risk sharing, obtaining access to new market and technologies, speeding products to market, pooling complementary skills, safeguarding property rights when complete of contingent contracts are not possible and acting as a key vehicle for obtaining access to external knowledge are the main benefits recognised by Pittaway et al (2004) and should be used and promoted. In addition, the need to network beyond the borders to increase internationalisation and attract more investors has also been recognised among SME entrepreneurs.

- **Launch more supportive services organisations.** While some regions already have well developed supportive institutions, accelerator programmes, incubators and networks of investors, some regions see the absence of start-up ecosystem. The situation in Czech Republic- Liberec region is quite alerting according to feedback gathered from interviewees. Lack of supportive institutions consequently leads to absence of provision of supportive services and amenities necessary for a successful start-up (i.e. space for networking, co-working, mentoring and back office support with administrative support). Republic of Srpska also currently has underdeveloped start-up ecosystem. The majority of funds come through donations and foreign credit lines – there is a need for alternative financial models.
  However, only provision of services is not enough. Provided support should be offered concisely and accurately. For example, Romania currently has more than four online platforms enabling start-up companies and incubators to connect, but each site presents a different view, not necessarily offering joint and optimal offer of information. This has been also been raised by Slovenian entrepreneurs, wishing to get more information about specific people or organisation to whom they can turn to for investment, international networking inside sectors and the differences between form of investment.

6.2 Best practice examples

Individual regions are already aware of emerging needs of entrepreneurs, which can be seen in increasing volume of initiatives and support provided across regions.

Austria has a couple of successful examples of successful companies:

- SunnyBags, fashionable and environment friendly energy for mobile and electronic devices. The company focuses on ecological issues through the whole product chain

- Proaqua Diamond Electrode Production GmbH is a company producing diamond electrodes for cleaning water, drinking and swimming
- PTH products – company specialised in constructing roads while using existing materials at the same time

Bulgaria implemented several initiatives in the past years, where early stage companies can access not just funding, but trainings, coaching, networking events and learn more about different funding opportunities. Two best practice examples are:

- Endeavor provides mentoring and accelerating high-impact entrepreneurs, not investing, support in terms of resources such as access to markets, capital and talent.
- StartItSmart holds competitions, which are divided by 3 stages – Idea, Seed and Grow. The winners benefit from a 3-month mentorship and other free services like access to event spaces, accounting services, entrepreneurship courses etc.

Czech Republic currently has one of the best accelerators in Central Europe. StartpYard is a mentor driven accelerator in Prague, with international management team and so far they have accepted companies from 14 different countries.

Hungary implemented several new initiatives and programmes in the past years, where early stage companies can access funding as well as additional services, training, coaching and networking events, and can learn more about different opportunities. A couple of examples demonstrate best practice cases from that region:

- Brainbar Budapest, an annual three day start-up festival
- Drukka start-up studio, based on the start-up factory methodology
- Kitchen Budapest (KIBU) founded in 2007
- HiVentrues, public venture capital fund
- M27 Absolvo advisory firm, organising a highly popular monthly public meetup (Equity Thursday)

Republic of Srpska supports with predominantly public based organisations:

- Enterprise Europe Network
- RARS mentorship programmes of support for entrepreneurs
- RS Ministry of Science – competition for the best technological innovation
- Programme 'Challenge 2.0'

Serbia also provides support mainly through public bodies like Development Agency of Serbia (RAS), Serbian Innovation Fund, regional development agencies. Other private equity funding groups include:

- The Enterprise Innovation Fund (ENIF),
- Blue Sea Capital and SEAF

7 CONCLUSIONS -RECOMMENDATION ON JOINT ACCELERATION MODEL

The level of development of SMEs ecosystem vary across Danube regions. While some regions have good availability of financial resources and well established access to public and private investors support, other started adopting these alternative equity financial models only recently.

Overall, it looks that access to finance is limited, however adequate in volume. Limitations are rather conditioned by economic reasons (governmental bureaucracy, tax regulative; small market size, often less attractive for international investors), lack of interaction between SMEs entrepreneurs and investors and lower awareness of challenges by both, entrepreneurs and investors. Investors often miss project investment readiness, together with lack of managerial and sales skills of entrepreneurs. In this aspect, investments are perceived riskier, and investors less willing to allocate seed capital to support innovative ideas. On the other hand, SMEs entrepreneurs raised a need to receive more support; from back office (admin, legal and HR services), trainings and project investment readiness programmes, mentoring and face to face consultations, to networking events where they could meet with potential investors. In addition, communication would need to be improved, as it seems there is a need for investments as well as urge to invest financial resources (investors are often unaware of investment opportunities as well). The link between investors and entrepreneurs appeared as one of the key challenges across regions.

The overall assessment of Danube regional reports leads to the following recommendations:

1. Further **improve access** to equity finance. Republic of Srpska and Republic of Serbia have less developed equity financing, with the majority of financial resources available via bank credit lines and microcredit organisations. However, small innovative firms often have constrained access to bank finance, due to uncertain prospects of success, long time horizons, lack of tangible assets that can be used as collateral and a limited operating history. On the other hand, only a small proportion of Austrian SME is financed with equity funds. These regions could potentially learn from Hungary, Slovenia and Bulgaria, regions with a better developed private equity finance system.
2. **Connect** SMEs entrepreneurs and investors through networking events, mentorship schemes and investment forums. Republic of Srpska suggest the ‘Voucher Scheme’ model which has already been a proven instrument designed to encourage companies to collaborate with consultants, enhance start-up companies’ ability to develop new

product and services and provide with resources for invention development. Vouchers influence all these factors by providing indirect funding and stipulating cooperation.

3. Establish and **develop accelerator** programmes in regions currently lacking or missing these programmes. Centralisation of accelerators and investors in capital cities not only disable equal opportunities for the development in other regions, but also increase the probability of a brain drain or reallocation of key services to capital cities. Start-up companies in regions with less developed ecosystems also lack operational support needed to create project documentation ready for investment (e.g. administrative, legal, HR services). Accelerator in Brno could be a good example for SME ecosystem development in Liberec region.
4. **Improve collaboration** between universities and business environment. Lack of entrepreneurship encouragement in school system as well as still predominant technical focus of educational programmes leave some regions less developed in young talent development and ambitions to start their own businesses.
5. **Raise awareness** and knowledge on support availability. Lack of awareness leaves entrepreneurs more reluctant to cooperate with external investors – issue seen in Republic of Srpska, where SME entrepreneurs still rely on their own resources.
6. **Improve sales and managerial skills** of SME entrepreneurs and provide assistance in fundraising and sales channels through mentorship programmes, training and consultancy schemes. Most start-up businesses across the regions are not investment ready, which consequently increase perceived risk from the investors. Better collaboration between these two parties would improve investment project documents and increase confidence with the investors.
7. **Provide operational support** to improve investment readiness. Services, such as administration, HR and legal advices could be provided externally, via support programmes and do not necessarily need to be performed by entrepreneurs.
8. A need to **improve governmental system** also emerged from regional reports. Unfavourable tax regulations in Slovenia, bureaucratic processes in access to external funds availability in Slovenia, Romania, Bulgaria additionally present a challenge for a healthy ecosystem development. Romania suggests following a clustering model- connecting start-ups, SMEs, large companies, research facilities, mentors, financiers and government representatives. ASIMCOV, a facilitator of clustering in Romania and other countries established first cluster in Romania Transylvania, which positively contributed to a development of their start-up ecosystem.
9. Greater encouragement of **private investors to engage more** in supporting start-ups, provide seed stage funding for ventures to reach next phase and support start-up companies to enter international markets. High perceived risk from investors decrease investments of seed capital.

10. **Strengthen capacities** of entrepreneurs and SMEs to prepare them to cooperate with funds of this type. One of the suggested model for improving innovative capacities is European Entrepreneurship Network.
11. Establish and offer **access to global networks**. Considering high dependency on EU funds, Bulgaria see a solution in attracting more international investors – and expansion of SME internationally. Although there are successful stories in the region, most SME companies still focus on small local market.
12. Key players in Hungarian innovation ecosystem are Hungarian Venture Capital Association and the National Trade House who hold a significant role in the community. Hungary suggests to learn from different types of accelerators: private – with strong finances, competences and network, public - more local oriented, often do not ask for shares (equity) but just (repayment) of initial investment (as a loan), university – which is strong in expertise, provide options as royalty fees of sales.

Supply and demand analysis across Danube regions revealed a necessity to further develop and offer support to SMEs – to inform on availability of financial support and prepare them for investment. Lack of managerial skills appeared on the top of the list of challenges raised by investors.

In addition, a couple of regions recognised inflexible governmental/public environment (lack of support and integration). Stiff regulative system on one side and hierarchic arrangement of the universities on the other, further distract healthy development of supportive environment for start-up companies in optimal access and use of finances.

SMEs entrepreneurs on the other hand expressed the need to be better supported by relevant organisations. They feel there is not enough information on access to adequate or relevant financial resources. Approximately half of respondents in general agreed they are not aware of availability of supportive services which makes consideration about external financing less demanded. Entrepreneurs would like to be better informed about the programmes availability as well as specifics around different financial business models and expressed a need for greater availability of networking events, mentorship schemes, face to face consultations and workshops to connect with potential investors.

From a supply perspective, most regions have financial resources to support SME companies. A challenge, often raised by investors is rather in low project readiness, as a consequence of lacking business skills, especially among young talents and graduates. This has the most significant effect on start-up companies at their early stage of development. Seed capital is harder to ensure. In addition, small regional markets often appear less attractive for foreign investors.

It is therefore obvious that Danube regions need to establish or strengthen support specifically for innovative start-up companies at their early stage of development. It is necessary to launch services that would help entrepreneurs to create projects, further increase confidence of the investors.

Moreover, greater collaboration between Danube regions with knowledge and best practice transfer could benefit all regions to further develop services that would contribute to development of start-up ecosystem and establish supportive environment, for a faster growth of SMEs.

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9 APPENDICES

Appendix 1: Survey: Online questionnaire

Online questionnaire

Name of start-up / entrepreneur / company

Mail address

Country

1. What Stage of Start-up-life-cycle is your business currently at?
- Problem/Solution Fit
- Minimum Viable Product
- Product/Market Fit
- Scale
- Maturity

2. Where would you go for funding?

- government grants, guarantees, loans
- business loans
- business accelerator funding
- crowdfunding
- angel investment
- VC capital
- family & friends
- other (please specify) ______________________________

3. Have you ever raised or attempted to rise seed or early stage investment?
- Yes
- No

If yes, please specify (more than 1 answer is acceptable):

- government grants

- business accelerator funding
- crowdfunding
- angel investment
- VC capital
- other (please specify) ________________________________

4. According to your experience is there available sufficient funding for early stage investment?

- Sufficient funding is available
- no, there is lack of funding for early stage
- Other (please specify): _____________________________

5. According to your experience is there enough information and knowledge available related to advantages/disadvantages of external financing in your region?

- Yes
- No

If not, what kind of information do you miss? *(more than 1 answer is acceptable)*

- Acceleration services
- Pitching events & investment forums
- Specific workshops (i.e. investment readiness, …)
- Specific newsletter
- Specific platform
- Information campaign
- Other (please specify): _____________________________

6. According to your experience, what are the most effective services available in your country for improving the innovation driven SMEs (and start-ups)? *(more than 1 answer is acceptable)*

- Business training
- Tutoring
- Mentoring
- Workshops
- Business Incubation
- Exchanges among entrepreneurs at local and regional level

- Consultancy services (market analysis, marketing strategies, business models)
- Networking
- International networking
- Assistance with fundraising (VC, Business angels, …)
- Assistance with identifying specific skills
- Assistance with setting up a small enterprise (rules, procedures, ….)
- Assistance with sales channels
- Space in the working community
- Exchanges among entrepreneurs
- Other (please specify): ______________________________

7. Referring to the need of your company, witch of those services should be further developed in your county in order to improve their investment attractiveness? *(more than 1 answer is acceptable)*

- Business training
- Tutoring
- Mentoring
- Workshops
- Business Incubation
- Exchanges among entrepreneurs at local and international level
- Consultancy services (market analysis, marketing strategies, business models)
- Networking
- International networking
- Assistance with fundraising (VC, Business angels, …)
- Assistance with identifying specific skills
- Assistance with setting up a small enterprise (rules, procedures, ….)
- Assistance with sales channels
- Space in the working community
- Exchanges among entrepreneurs
- Other (please specify): ______________________________

8. Which of the following sources of funding are available in your country? *(more than 1 answer is acceptable)*

- Business Angels (Network)
- Accelerators

- Private Venture Capital
- Crowdfunding
- Public funding
- Corporate funds for start-ups
- Other (please specify): ____________________________

9. According to your experience, how could the relationship/connections between innovation driven SMEs and start-ups and investors be improved (more than 1 answer acceptable)?

- Through general training to start up and awareness building
- Through investment development actions
- Through specialized early stage trainings and face to face coaching
- Investment readiness and elevator pitch trainings
- Investment forums or/and matchmaking events
- Other (please specify): ____________________________

10. What would be the expected investment for your company?

- 10.000 EUR
- 25.000 EUR
- 50.000 EUR
- 100.000 EUR
- Other (please specify): ____________________________