

**Subject:** *Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica*

**Project name:** *„Newly established Start-up Enterprise Services“  
NESESER*

**Project reference number:** *02-23*

**STATUS: FINAL**

## **Table of content**

1. Introduction (general information, context and goals of the project, investor potential) .....	3
2. Market analysis.....	4
3. Financial analysis of the business incubators.....	7
4. Economic analysis of the business incubators.....	11
5. Risk analysis.....	16
6. Conclusion on the feasibility of the business incubators.....	18
7. Supplemental schedules.....	20

# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Introduction (general information, context and goals of the project, investor potential)

Both Bosnia and Herzegovina and the Republic of Serbia including micro locations the Brčko District BiH and the City of Loznica are facing common challenges such as youth unemployment, unfavorable geo-strategic position, underdeveloped business infrastructure. These common challenges for both micro locations also represent the main challenges in the development of these two local communities. For this reason, project partners from Development – Guarantee Fund of the Brčko District BiH (Unit for Implementation of International Projects), the City of Loznica and Institute for Development and Innovations (IRI) have designed project titled as: „**Newly established Start-up Enterprise Services**“ **abbreviation NESESER** – as a project designed and approved by Cross-border Program Serbia-Bosnia and Herzegovina 2014-2020 implemented under the framework of the Instrument of Pre-accession Assistance (IPA II) which is the result of joint planning efforts made by the governments and other stakeholders of the two countries. Ultimate goal of this project is to address common challenges through constitution of Business entrepreneurial centers and incubators (“BECI”) in the Brčko District BiH and the City of Loznica. The role of these business centers and incubators is to reduce unemployment and provide more opportunities for youth employment, embrace partnering of different stakeholders for the overall development of local communities and create a better living and working environment for the local population. Business centers and incubators play crucial roles in fostering entrepreneurship and supporting the growth of startups and small businesses. These centers provide physical spaces equipped with modern amenities and shared resources, creating an ideal environment for networking and collaboration among like-minded individuals. Incubators, in particular, offer additional benefits such as mentorship, business development support, access to funding opportunities, and specialized training programs. By nurturing innovative ideas and guiding entrepreneurs through their early stages, these centers and incubators contribute significantly to the overall economic development and job creation in the regions where they operate. They serve as catalysts for innovation, helping startups thrive and evolve into successful enterprises. They provide a supportive environment and resources to help entrepreneurs develop and launch their business ventures. Business incubators and centers provide the following prerequisites in development and launching of start-ups:

- Infrastructure and resources
- Education and training
- Mentorship and guidance
- Networking
- Partnerships
- Fundraising
- Recognition
- Business development

BECI advantages are as follows:

- Credibility
- Lower costs
- Focus on core product
- Access to network

## **Project NESESER**

- Access to expertise

# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Market analysis

#### *Brčko District BiH*

According to the document Strategy for the Development of Business Incubators in Bosnia and Herzegovina, Brčko District BiH has one business incubator managed by the Economic Affairs Department of the Brčko District BiH Government. This incubator is financed by the Government of the Brčko District BiH and offers leasing services for business facilities without providing advisory services or financing. This business incubator did not achieve its potential in terms of supporting local development and reducing the number of unemployed through business incubator programs. The establishment of a business incubator will assist in creating preconditions for improving the standard of living of the young population in Brčko District BiH and reducing the migration of the local population. Brčko District BiH is traditionally known for production, agriculture, and trade. Consequently, business incubators can contribute in connecting the local and business community through creating new jobs and connecting the labor market with the business community.

#### *City of Loznica*

According to the Program for Development of Business Incubators and Clusters prepared by the Ministry of Economy of the Republic of Serbia, City of Loznica is on the marked on this map as Cluster for small agricultural machinery. The City of Loznica and Mačva region have strong machinery, engineering, and production background. Main industries in Mačva region are production, agriculture, and trading. Based on the available information, the City of Loznica has no registered business incubator or center to support the development of the local community.

The above-mentioned facts together with youth unemployment and migration of population to European Union generates the necessity of organizing BECI to strengthen the prerequisites of the local population to stay in their communities and assist in overall economic growth through joined efforts with public and non-governmental organizations. Both locations can benefit from the positioning of BECI as a link between the local community, business sector, employment market and networking with different stakeholders. BECI can also contribute as training provider in connection between the business sector, employment market and academic community through training and mentorship programs.

# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Market analysis (continued)

Moreover, BECI will have capacities to assist business sector with specific knowledge and by covering scarce resources in terms of human potential, expertise, and related services. BECI can also contribute by integrating different sectors e.g., agriculture and tourism into Agri-tourism. At the moment, both sectors are facing a lack of human resources. The introduction of new technological solutions and training in adequate resources could improve the overall link between these two sectors and integrate them into one new business line.

Furthermore, the business community in these two locations faces a lack of access to knowledge about new technologies and marketing solutions. In this case, BECI can assist in the provision of these services through start-ups or training programs. Also, because of the migration of the local population, the aged population requires a higher level of care and assistance which potentially can offer room for the development of this line of services. Examples of profitable start-up business lines for further consideration is as follows:

<ul style="list-style-type: none"><li>○ Green beauty products</li><li>○ Gardening and landscape</li><li>○ Meal delivery service</li><li>○ Healthcare</li><li>○ Daily care</li><li>○ Graphic design</li><li>○ Web design</li><li>○ Digital marketing</li><li>○ Cleaning services</li><li>○ Outsourcing (finance, accounting, legal)</li></ul>	<ul style="list-style-type: none"><li>○ IT supported agri-business</li><li>○ Interior design</li><li>○ Clean energy</li><li>○ Fitness</li><li>○ Handcrafts</li><li>○ Waste management</li><li>○ Events and weddings</li><li>○ Real estate</li><li>○ Clean mobility</li><li>○ E-commerce</li></ul>
--	---

### *Good practices*

According to publicly available information Bosnia and Herzegovina has 12 business incubators. These incubators currently manage 21,440 square meters of business space. Since 1998, business incubators have generated more than 160 legal entities with almost 1,300 employees. 25% of the above-mentioned business incubators are registered and governed by the non-governmental organization while in 75% cases these incubators are governed by the Municipalities or Governments. Some of the legal entities from these incubators are involved in export. Moreover, the Republic of Serbia currently has 20 business incubators which is significantly higher compared to 12 business incubators in Bosnia and Herzegovina. Business centers and incubators in the Republic of Serbia supported more than 500 start-ups. Moreover, the Republic of Serbia has registered 14 regional development agencies and 5 technological parks engaged in support of startups. We have included several examples of **successful business incubators (good practice)** in Bosnia and Herzegovina and the Republic of Serbia for reference purposes:

- *BeeZone*

Business incubator from Travnik has 5 programs of support, supported 34 start-ups, investment of BAM 335 thousand into business proposals, 6 start-ups undergo through incubation, provider program support for 234 participants (“residents”), provided 86 educational programs and mentoring.

Reference: <https://beezone.ba/>

# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Market analysis (continued)

#### *Good practices (continued)*

- *HiPod*

Business incubator HiPod is governed by Canton Hercegovinačko-Neretvanski on the south of Bosnia and Herzegovina close to the Croatian border. Incubator is located 124 kilometers from Split which has an international airport and 17 kilometers from Port Ploče in Croatia. The closest airport in Bosnia and Herzegovina is Mostar which is distant around 60 kilometers. Business incubator offers lease of facilities for presentations and actively participates in development projects for the Municipalities Grude, Široki Brijeg and Ljubuški. All these Municipalities are located in Herzegovina.

Reference: <http://herag.ba/inkubator.html>

- *Incubator Lipnica*

Business incubator Lipnica is located near Tuzla. Services offered by this incubator refer to: infrastructure, business network, development, training. Business incubator offers the opportunity for construction of 29 business premises on land surface of 12.159 square meters.

Reference: <https://rpctuzla.ba/o-nama/>

- *Naučno-tehnološki park Beograd (NTP Beograd)*

NTP Belgrade provides support to startups and growing companies to accelerate their growth and development, conquer new markets and attract investments. They develop programs and services adapted to the specific needs of companies in different stages of development, through international partnerships and new initiatives that encourage the synergy of technology and business. This incubator provided support to over 180 companies with over 1,500 engaged workers.

Reference: <https://ntpark.rs/?script=lat>

- *Business incubator Kruševac*

The Business incubator in Kruševac has 55 residents and provides comprehensive services comprising of training, networking, and technological support. This business incubator is located in an area of over 1,630 square meters. Spaces ranging in size from 12 square meters to 102 square meters are available to users.

Reference: <https://www.bizniskubator.rs/about.html>

- *Business incubator YUMCO Vranje*

Business incubator Yumco (BIC Vranje) supports the opening and development of new companies through the incubation process and provides comprehensive support to entrepreneurship in the form of renting business premises, mentoring, and business support.

Reference: <https://startup.gov.rs/organizacije/biznis-inkubator-yumco/>

Good practices from the Republic of Croatia, a member of the European Union, which is a neighboring country that has 55 business-entrepreneurial centers and incubators according to data from 2021. Some examples of good practice are the business incubator ZIP, which launched more than 25 start-ups from 2012 to 2016. Another example of long-standing practice is the entrepreneurial incubator Osvit in Donji Miholjec in the Republic of Croatia, which is an entrepreneurial cooperative founded in 2003 to support entrepreneurial initiatives and ventures.

# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Financial analysis of the business incubators

Financial analysis is based on the technological, organizational, legal, and other prerequisites as presented below.

*Technological, organizational, legal, and other prerequisites*

In both cases minimal targeted surface of business incubators facilities is up to 500 square meters per each individual location comprising of the following:

- 200 square meters of common co-working space for 10 participants targeted as project output for common use of facilities on daily basis
- 150 square meters of multimedia space intended for training purposes
- 75 square meters of three separate conference rooms for meeting purposes
- 50 square meters of office space for the Project Management Team
- 25 square meters of space for the remaining

Project application assumes no construction work relating to the facilities for business centers and incubators. Project partners such as local communities (the District and Municipality) will provide required project facilities with minimum requirements for project implementation. Moreover, the project consortium should propose to local communities to settle utilities and maintenance.

Minimum requirements for assets referring to both locations may be as follows:

- 20 laptops / desk / chairs (for both locations)
- 2 printers / scanners (1 per individual location)
- 2 desks and 20 chairs for multimedia and conference (for both locations)
- 2 projectors and boards for multimedia and conference (for both locations)

Partners of the business incubators may be considered as follows:

- Local Government and / or local Municipalities
- Business community (legal entities and individuals)
- Non-governmental institutions
- Service providers (training, coaching, marketing, legal, utilities, vendors)

Project consortiums may consider partnership with the local communities (Government and/or Municipalities) and get contribution in business space and financial support to grow the initial efforts. Moreover, backward integration with the business community may result in contributions from their side. On the other hand, business incubators may offer outsourcing opportunities to the business community and assist them in overcoming shortcomings in labor, service providers and knowledge.

Legal registration and organization of business incubators as legal entities or non-governmental organizations / associations should be considered in due care of potential development.



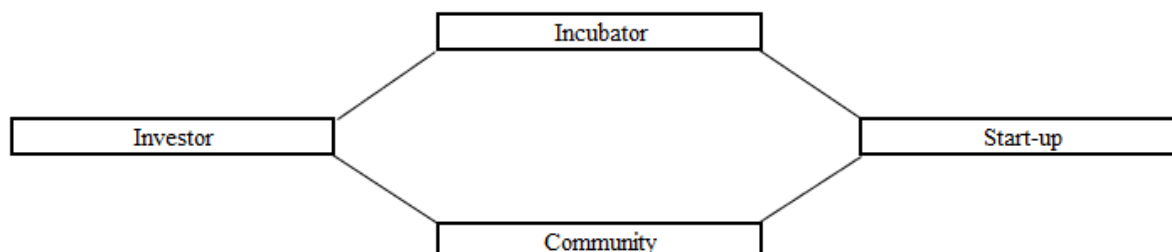
# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Financial analysis of the business incubators (continued)

*Organization and common activities*

*Key stakeholders*

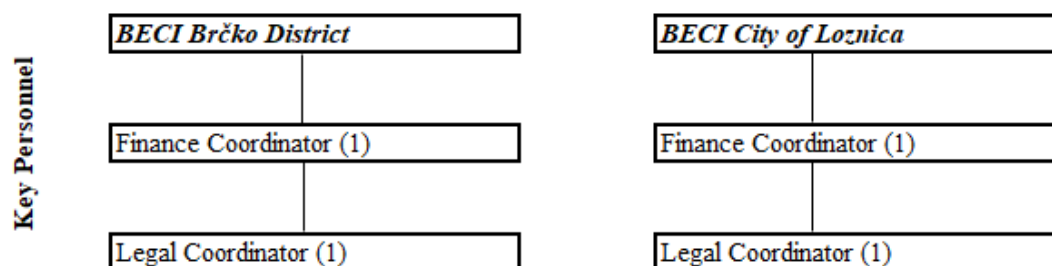


Business entrepreneurial centers and incubators will represent key stakeholder in this process of building a connection between start-ups, community and investors. Business centers and incubators assumes tight cooperation with partners of the business incubators such as:

- Local Government and Municipality – direct assistance (fundraising) and contribution for working space, payment of rent, utilities, and maintenance.
- Business Community – direct assistance (fundraising), training, mentoring, and coaching for legal entities, networking between the legal entities and start-ups, contributions and memberships, promotion.
- Start-ups - memberships and contributions (in the later stage).
- Wider network (corporate clients) – marketing, advertising, participation in business forum, networking between start-ups and investors.

Business centers and incubators aim to develop business forum as one of the project outcomes. On the back of developed start-ups and potential for the development of new start-ups the idea besides a business forum is to gather potential investors and multiply the economic effects of the current project and capitalize the existing and projects in the development phase.

*Key personnel*



*Finance and Legal Coordinator(s)*

The Finance and Legal Coordinator(s) will be in-charge for separate location primarily responsible for operational governance and handling the business organization activities. Key personnel from both locations will also be responsible for managing the expectations of various stakeholders involved.

# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Financial analysis of the business incubators (continued)

*BECI business model and cash flow for the Brčko District BiH*

<b>Assumptions:</b>					
Government (contribution)	90.000,00	94.500,00	99.225,00	104.186,25	109.395,56
Business (contribution and education)	20.000,00	22.000,00	24.200,00	26.620,00	29.282,00
Start-ups (membership)	5.000,00	10.000,00	15.000,00	20.000,00	25.000,00
Conferences (participation)	20.000,00	20.000,00	20.000,00	20.000,00	20.000,00
Investors (Platinum, Gold, Silver)	10.000,00	10.000,00	10.000,00	10.000,00	10.000,00
	<b>145.000,00</b>	<b>156.500,00</b>	<b>168.425,00</b>	<b>180.806,25</b>	<b>193.677,56</b>
<b>Income statement</b>					
Amounts are presented in EUR					
	Y1	Y2	Y3	Y4	Y5
<i>Income</i>					
Contribution from public institutions	90.000,00	94.500,00	99.225,00	104.186,25	109.395,56
Contribution from business community	20.000,00	22.000,00	24.200,00	26.620,00	29.282,00
Contribution from start-ups	5.000,00	10.000,00	15.000,00	20.000,00	25.000,00
Contribution from conferences	20.000,00	20.000,00	20.000,00	20.000,00	20.000,00
Contribution from investors	10.000,00	10.000,00	10.000,00	10.000,00	10.000,00
	<b>145.000,00</b>	<b>156.500,00</b>	<b>168.425,00</b>	<b>180.806,25</b>	<b>193.677,56</b>
<i>Expenses</i>					
Personnel costs	-36.000,00	-36.000,00	-36.000,00	-36.000,00	-36.000,00
Depreciation	-5.000,00	-5.000,00	-5.000,00	-5.000,00	-5.000,00
External shareholders costs	-65.000,00	-71.500,00	-71.500,00	-71.500,00	-71.500,00
Infrastructure costs	-12.000,00	-13.200,00	-14.520,00	-15.972,00	-17.569,20
Travel and accommodation costs	-5.000,00	-5.500,00	-6.050,00	-6.655,00	-7.320,50
Other costs	-20.000,00	-22.000,00	-24.200,00	-26.620,00	-29.282,00
	<b>-143.000,00</b>	<b>-153.200,00</b>	<b>-157.270,00</b>	<b>-161.747,00</b>	<b>-166.671,70</b>
<b>Net surplus</b>	<b>2.000,00</b>	<b>3.300,00</b>	<b>11.155,00</b>	<b>19.059,25</b>	<b>27.005,86</b>
Discount rate	20,49%				
Inflation	3,26%				
<b>BiH - Brčko District</b>	<b>2.000,00</b>	<b>3.300,00</b>	<b>11.155,00</b>	<b>19.059,25</b>	<b>161.830,75</b>
	1,00	2,00	3,00	4,00	5,00
	0,83	0,69	0,57	0,47	0,39
<b>Discounted cash flow</b>	<b>1.659,86</b>	<b>2.273,00</b>	<b>6.376,73</b>	<b>9.042,25</b>	<b>63.719,84</b>
<b>Cash flow</b>					
Amounts are presented in EUR					
	Y1	Y2	Y3	Y4	Y5
<i>Receipts</i>					
Contribution from public institutions	90.000,00	94.500,00	99.225,00	104.186,25	109.395,56
Contribution from business community	20.000,00	22.000,00	24.200,00	26.620,00	29.282,00
Contribution from start-ups	5.000,00	10.000,00	15.000,00	20.000,00	25.000,00
Contribution from conferences	20.000,00	20.000,00	20.000,00	20.000,00	20.000,00
Contribution from investors	10.000,00	10.000,00	10.000,00	10.000,00	10.000,00
	<b>145.000,00</b>	<b>156.500,00</b>	<b>168.425,00</b>	<b>180.806,25</b>	<b>193.677,56</b>
<i>Disbursements</i>					
Personnel costs	-36.000,00	-36.000,00	-36.000,00	-36.000,00	-36.000,00
External shareholders costs	-65.000,00	-71.500,00	-71.500,00	-71.500,00	-71.500,00
Infrastructure costs	-12.000,00	-13.200,00	-14.520,00	-15.972,00	-17.569,20
Travel and accommodation costs	-5.000,00	-5.500,00	-6.050,00	-6.655,00	-7.320,50
Other costs	-20.000,00	-22.000,00	-24.200,00	-26.620,00	-29.282,00
	<b>-138.000,00</b>	<b>-148.200,00</b>	<b>-152.270,00</b>	<b>-156.747,00</b>	<b>-161.671,70</b>
<b>Net cash</b>	<b>7.000,00</b>	<b>8.300,00</b>	<b>16.155,00</b>	<b>24.059,25</b>	<b>32.005,86</b>

- Revenue streams comprise of five main sources.
- Net cash position is positive.
- Assumptions used in calculation of discount rate are presented in **Supplemental Schedule** on **page 20**. Financial information is prepared for the five-year period.

# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Financial analysis of the business incubators (continued)

*BECI business model and cash flow for the City of Loznica*

<b>Assumptions:</b>					
Government (contribution)	90.000,00	94.500,00	99.225,00	104.186,25	109.395,56
Business (contribution and education)	20.000,00	22.000,00	24.200,00	26.620,00	29.282,00
Start-ups (membership)	5.000,00	10.000,00	15.000,00	20.000,00	25.000,00
Conferences (participation)	20.000,00	20.000,00	20.000,00	20.000,00	20.000,00
Investors (Platinum, Gold, Silver)	10.000,00	10.000,00	10.000,00	10.000,00	10.000,00
	<b>145.000,00</b>	<b>156.500,00</b>	<b>168.425,00</b>	<b>180.806,25</b>	<b>193.677,56</b>

#### Income statement

Amounts are presented in EUR

	Y1	Y2	Y3	Y4	Y5
<b>Income</b>					
Contribution from public institutions	90.000,00	94.500,00	99.225,00	104.186,25	109.395,56
Contribution from business community	20.000,00	22.000,00	24.200,00	26.620,00	29.282,00
Contribution from start-ups	5.000,00	10.000,00	15.000,00	20.000,00	25.000,00
Contribution from conferences	20.000,00	20.000,00	20.000,00	20.000,00	20.000,00
Contribution from investors	10.000,00	10.000,00	10.000,00	10.000,00	10.000,00
	<b>145.000,00</b>	<b>156.500,00</b>	<b>168.425,00</b>	<b>180.806,25</b>	<b>193.677,56</b>

#### Expenses

Personnel costs	-36.000,00	-36.000,00	-36.000,00	-36.000,00	-36.000,00
Depreciation	-5.000,00	-5.000,00	-5.000,00	-5.000,00	-5.000,00
External shareholders costs	-65.000,00	-71.500,00	-71.500,00	-71.500,00	-71.500,00
Infrastructure costs	-12.000,00	-13.200,00	-14.520,00	-15.972,00	-17.569,20
Travel and accomodation costs	-5.000,00	-5.500,00	-6.050,00	-6.655,00	-7.320,50
Other costs	-20.000,00	-22.000,00	-24.200,00	-26.620,00	-29.282,00
	<b>-143.000,00</b>	<b>-153.200,00</b>	<b>-157.270,00</b>	<b>-161.747,00</b>	<b>-166.671,70</b>

<b>Net surplus</b>	<b>2.000,00</b>	<b>3.300,00</b>	<b>11.155,00</b>	<b>19.059,25</b>	<b>27.005,86</b>
--------------------	-----------------	-----------------	------------------	------------------	------------------

Discount rate	14,35%
Inflation	5,44%

Serbia - City of Loznica	2.000,00	3.300,00	11.155,00	19.059,25	319.582,73
	1,00	2,00	3,00	4,00	5,00
	0,87	0,76	0,67	0,58	0,51

<b>Discounted cash flow</b>	<b>1.749,02</b>	<b>2.523,72</b>	<b>7.460,37</b>	<b>11.147,06</b>	<b>163.456,24</b>
-----------------------------	-----------------	-----------------	-----------------	------------------	-------------------

#### Cash flow

Amounts are presented in EUR

	Y1	Y2	Y3	Y4	Y5
<b>Receipts</b>					
Contribution from public institutions	90.000,00	94.500,00	99.225,00	104.186,25	109.395,56
Contribution from business community	20.000,00	22.000,00	24.200,00	26.620,00	29.282,00
Contribution from start-ups	5.000,00	10.000,00	15.000,00	20.000,00	25.000,00
Contribution from conferences	20.000,00	20.000,00	20.000,00	20.000,00	20.000,00
Contribution from investors	10.000,00	10.000,00	10.000,00	10.000,00	10.000,00
	<b>145.000,00</b>	<b>156.500,00</b>	<b>168.425,00</b>	<b>180.806,25</b>	<b>193.677,56</b>

#### Disbursements

Personnel costs	-36.000,00	-36.000,00	-36.000,00	-36.000,00	-36.000,00
External shareholders costs	-65.000,00	-71.500,00	-71.500,00	-71.500,00	-71.500,00
Infrastructure costs	-12.000,00	-13.200,00	-14.520,00	-15.972,00	-17.569,20
Travel and accomodation costs	-5.000,00	-5.500,00	-6.050,00	-6.655,00	-7.320,50
Other costs	-20.000,00	-22.000,00	-24.200,00	-26.620,00	-29.282,00
	<b>-138.000,00</b>	<b>-148.200,00</b>	<b>-152.270,00</b>	<b>-156.747,00</b>	<b>-161.671,70</b>

<b>Net cash</b>	<b>7.000,00</b>	<b>8.300,00</b>	<b>16.155,00</b>	<b>24.059,25</b>	<b>32.005,86</b>
-----------------	-----------------	-----------------	------------------	------------------	------------------

- Revenue streams comprise of five main sources.
- Net cash position is positive.
- Assumptions used in calculation of discount rate are presented in **Supplemental Schedule on page 20**. Financial information is prepared for the five-year period.

# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Economic analysis of the business incubators

#### *Brčko District BiH*

The seat of the District is the City of Brčko. The Brčko District BiH comprises 1% of the land area of Bosnia and Herzegovina and is home to nearly 2,37% of the country's population. The Brčko District BiH comprises of 47 settlements including the city Brčko and covers an area of nearly 493 kilometers with a population of nearly 84 thousand citizens according to the last population census report from 2013. According to the *Federal Statistic Report from 2022* key features at the end of 2021 can be summarized as follows:

**Data relates to: *Brčko District***

**Year 31.12.2021.**

**Amounts are stated in BAM**

GDP	976.257.000,00
Foreign investments	58.765.000,00
Population	81.910,00
GDP per capita	11.918,65
Average gross salary	1.489,00
Average net salary	961,00
Employed population	17.795,00
Unemployed population	6.689,00
Retired population	12.150,00
Unemployed men	2.784,00
Unemployed women	3.905,00

GDP in the Brčko District BiH was BAM 976 million in 2021. Foreign investments equaled BAM 59 million which is 6,02% from GDP. The population of the Brčko District BiH is around 82 thousand with an employed population of around 18 thousand (21,73% of the total population) and unemployed around 7 thousand (8,17% of the total population). Retired population equaled 12 thousand (14,83% of the total population). 58,38% of the unemployed population refers to women. One of the main goals of business centers and incubators is to employ women population through start-up programs, reduce youth unemployment and include women actively in local community. GDP per capita was around BAM 12 thousand per annum or BAM 1 thousand per month. The information presented above clearly indicates the necessity of enhancement of business environment aiming to include more women youth entrepreneurs and integrate them into business community to contribute overall improvement of economic outlook. The Brčko District BiH has a diversified economy, with sectors such as: manufacturing, agriculture, services, and trading. The manufacturing industry in the Brčko District BiH includes food processing, textile, metal processing and wood processing. The agricultural sector is also important, with farming activities including crop cultivation, livestock production and fruit growing. The Brčko District BiH has developed transportation infrastructure, mainly relating to road and river transport, which facilitates trade and commerce. Brčko Port on the Sava River is an important transportation hub for cargo and passenger traffic. The services sector includes retail, hospitality, and professional services, and contributes to the local economy. The Brčko District BiH benefits from its strategic location as a trade and logistics center, serving as a gateway between Bosnia and Herzegovina and neighboring countries.

# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Economic analysis of the business incubators (continued)

#### *Brčko District BiH (continued)*

The following are some significant economic sectors in Brčko District BiH:

- Trade and services are attracted to Brčko since it is a regional commercial hub. The neighborhood has a thriving retail industry, with many stores, malls, and markets that serve both locals and tourists.
- Manufacturing: The Brčko District BiH has a thriving manufacturing sector that includes businesses in the processing of food, textiles, furniture, and metals. These sectors support the local economy and offer employment opportunities.
- Due to the fertile soil and ideal climatic conditions for farming, agriculture has a big impact on the district's economy. Crops like corn, wheat, fruits, vegetables, and livestock farming are all examples of agricultural products.
- Transportation and Logistics: Because of its location along the Sava River and proximity to significant road and rail networks, Brčko serves as a significant transportation hub. The neighborhood features a port that makes river transit easier, and its logistics industry helps with trade and transportation operations.
- Energy is another push where the Brčko District BiH has the potential to grow in this area. It runs a hydroelectric facility on the Sava River that adds to the availability of electricity in the area.

To draw both domestic and foreign firms, the Brčko District BiH administration has been actively supporting investment and economic development. To promote entrepreneurship and foster an advantageous business environment, they provide incentives and support. Public institutions aid foreign investors to overcome entrance administrative barriers. Moreover, public institutions help in connection with employment institutions to assist in acquisition of qualified labor. Networking with relevant chambers assists in easier position of foreign investors on the local market and build solid perspective for networking internationally.

Foreign investments in Bosnia and Herzegovina in 2022 were equal to BAM 1,2 billion compared to BAM 971 million in 2021.

Information about the average salaries in Brčko District BiH from 2020 until 2022 are as follows:

<u>Average salary in Brčko (BAM)</u>	<u>2022.</u>	<u>2021.</u>	<u>2020.</u>
Gross	1.589	1.489	1.477
Net	1.040	961	948

# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Economic analysis of the business incubators (continued)

#### *City of Loznica*

The City of Loznica is located in Mačva District of Western Serbia. The City of Loznica is located on the right shore of the Drina River. The distance between the City of Loznica and the Brčko District BiH is 76 kilometers. District Mačva has 52 settlements including the City of Loznica. The City of Loznica received the status of the city in 2008 according to the legal practice in force in the Republic of Serbia. Also, one of the largest lithium depots in Serbia with total reserves of 125.3 million tons is located in Loznica. Mačva District covers 0,7% of land surface of the Republic of Serbia while population from the same district represents 1,05% of the population in the Republic of Serbia.

Foreign investments in the Republic of Serbia in 2022 were equal to EUR 4,4 billion compared to EUR 3,1 billion in 2021.

The number of unemployed persons decreased in 2022 in Mačva District to 4,8% comparing to 7,2% in 2021. Around 53% of the population in Mačva District is employed. The population in the City of Loznica is comparable to Brčko District BiH. Retired population in City of Loznica is around 23% while in the Brčko District BiH was around 15% in 2021.

<b>Data relates to: <i>Loznica or Mačva</i></b>	<b>31.12.2022.</b>	<b>31.12.2021.</b>
<b><i>Mačva</i></b>		
Population	266.384,00	270.844,00
Unemployed	12.822,00	19.533,00
Employed	143.581,00	143.276,00
<b><i>Loznica</i></b>		
Population	72.319,00	73.089,00
Retired population	16.700,00	16.556,00

The economy of Loznica is divided into different sectors. Since the area is recognized for its fertile land and agricultural production, which includes products like corn, wheat, fruits, and vegetables, agriculture is important. Additionally, there are industrial operations in the city, mainly in the metal, automotive, textile, and wood processing industries. Road connections between City of Loznica and other Serbian regions are good. On the main thoroughfare that runs between Belgrade and the Bosnian city of Bijeljina, it is situated. Belgrade Nikola Tesla Airport, which is 136 kilometers distant, is the closest international airport. The agricultural, manufacturing, and service sectors combine to make up Loznica's economy in Serbia.



# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Economic analysis of the business incubators (continued)

#### *City of Loznica (continued)*

These are a few significant facets of the city's economy:

- Fertile Mačva region, where Loznica is located, is well-known for its agricultural output. Most of the nearby countryside is used for agriculture, with crops like corn, wheat, sunflowers, and different fruits and vegetables being grown. The local agricultural economy also depends on raising livestock, such as cattle and poultry.
- The industrial sector in Loznica is well developed and important to the local economy. Industries in the city include those that process metal, auto parts, textiles, wood, and construction supplies. In and around Loznica, several businesses in several industries are active, creating employment possibilities and boosting the industrial production of the city.
- For the outlying rural areas, Loznica functions as a commercial hub. It has a variety of retail establishments that serve the needs of the local population, including stores, marketplaces, and supermarkets. Additionally, the service industry encompasses professions like banking, finance, transportation, and hospitality.
- Renewable energy sources, particularly hydropower, have potential in the area surrounding Loznica. Small-scale hydropower projects can benefit the city's energy production and the wider energy sector by taking advantage of the adjacent Drina River, which flows past it.
- Visitors may be drawn to Loznica by its natural beauty, which includes the Drina River and the neighboring Gučevo Mountain. Outdoor pursuits like fishing, boating, hiking, and natural exploration are possible in the city.

Information about the average salaries in City of Loznica from 2021 until 2023 are as follows:

<b>Average salary in Loznica (RSD)</b>	<b>2023.</b>	<b>2022.</b>	<b>2021.</b>
<b>Gross</b>	92.013	82.639	72.156
<b>Net</b>	66.491	59.762	52.252

Average salaries gross recalculated to EUR at mid rates are in range of EUR 614 to EUR 785 while net salaries are in range of EUR 445 to EUR 567 which is slightly higher than in the Brčko District BiH.

# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Economic analysis of the business incubators (continued)

#### *Brčko District BiH*

The concentration of power and financial resources lies in capital cities in both countries. Moreover, both locations are on the borderline between the Bosnia and Herzegovina and the Republic of Serbia. Mačva District has a larger territorial coverage of 612 kilometers compared to Brčko District BiH covering 493 kilometers. Both the Brčko District BiH and the Mačva District are engaged in production, manufacturing, and agriculture. Also, there are some hydro potentials in both districts used for production purposes and transportation. As indicated earlier, according to the information obtained from the Federal Bureau of Statistics at the end of 2021, the Brčko District BiH employed close to 22% of the total population while almost 8% is unemployed. Under this unemployment of 8% almost 58% refers to women. This indicates need for improvement of business environment to increase employment with particular attention to inclusion and increase of women population in contribution to overall economic outlook of this community. Recent information obtained from the *Employment Bureau in the Brčko District BiH* revealed the following:

<b>Data relates to: <i>Brčko District</i></b>	<b>06-2023</b>	<b>31.12.2022.</b>	<b>31.12.2021.</b>
Unemployed	11.495,00	4.870,00	6.100,00
Women	6.864,00	2.932,00	3.595,00
Men	4.631,00	1.938,00	2.505,00
<i>% of unemployed</i>			
High education	8,66%	14,66%	14,00%
Secondary school	24,04%	33,61%	33,21%
Low qualification	67,31%	51,72%	52,79%

The number of unemployed people increased in 2023. Also, during the three years period, average number of unemployed women is 60% comparing to men 40%. Almost 4% or 5% of the total population in the Brčko District BiH is employed in public institutions.

#### *City of Loznica*

<b>Data relates to: <i>Municipality Loznica</i></b>	<b>31.12.2022.</b>	<b>31.12.2021.</b>
Unemployed	5.043,00	8.700,00
Women	2.821,00	4.951,00
Men	2.222,00	3.749,00
<i>% of unemployed</i>		
High education	13,09%	10,43%
Secondary school	60,70%	63,16%
Low qualification	26,21%	26,41%

The number of unemployed people in Loznica decreased in 2022. Also, during the two years period, number of unemployed women at the end of 2022 was 2.821 compared to the end of 2021 when this was equal to 4.951.



# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Risk analysis

Risks for further assessment and mitigation applicable for both **BECI in Brčko District BiH and the City of Loznica** can be summarized as follows:

<b>Political</b> <ul style="list-style-type: none"><li>○ Changes in governing policies</li><li>○ Political instability</li><li>○ Regulatory constraints</li><li>○ Geopolitical risks</li><li>○ Local community and stakeholder relations</li><li>○ Lack of cooperation between governing bodies and non-governmental organization</li></ul>	<b>Economical</b> <ul style="list-style-type: none"><li>○ Funding availability</li><li>○ Inflation</li><li>○ Recession</li><li>○ Cost control</li><li>○ Budget control</li><li>○ Cash flow management</li></ul>
<b>Social</b> <ul style="list-style-type: none"><li>○ Alignment with local community</li><li>○ Stakeholder interest management</li><li>○ Social impact and dimension</li><li>○ Availability of headcount</li><li>○ Ethical and responsible practices</li></ul>	<b>Technology</b> <ul style="list-style-type: none"><li>○ Technological availability (supply chain issue)</li><li>○ Vendor reliability and support services</li><li>○ System failures and downtime</li><li>○ Cyber security</li><li>○ Data privacy and control (GDPR)</li><li>○ Knowledge gap</li></ul>
<b>Environmental</b> <ul style="list-style-type: none"><li>○ Pollution</li><li>○ Climate change</li><li>○ Soil degradation</li><li>○ Biodiversity deterioration</li></ul>	<b>Legal</b> <ul style="list-style-type: none"><li>○ Regulatory</li><li>○ Compliance</li><li>○ Contractual obligations</li><li>○ Intellectual property rights</li><li>○ Ownership disputes</li><li>○ Health and safety</li></ul>

Project consortium may reconsider the number of 20 start-ups with 20 different business lines. This number of business lines is wide and could require a significant number of different experts and various resources which might be challenging to gather. Instead, maybe pairing will be one of the solutions to have 10 pairs of business lines on cross-border principle. Both incubators and start-ups could be organized more specialized on generation principle. This approach may generate accumulated effects in terms of learning curve, share of experience, transfer of knowledge between the start-ups on cross-border basis.

# **Project NESESER**

## **Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)**

### **Risk analysis (continued)**

Adequate management of market risks can help overcome current challenges for the future development of Brčko District BiH and the City of Loznica, which are as follows: strengthening the market position of export companies through innovation and the adoption of new technologies/approaches; implementation of smart technologies to contribute to the overall wealth; strengthening of youth and female entrepreneurship and further development of small and medium enterprises; further introduction of foreign investments from the European Union and domestic investors from Bosnia and Herzegovina and the Republic of Serbia located abroad; acceptance of digital technologies, green technologies and social footprint; networking with investors from the European Union and local investors; integration of agricultural production with tourism and trade; further development of catering and tourism based on new technologies and integration with youth entrepreneurs.

Market difficulties must be overcome with a proactive and planned strategy. Here are some key tactics to consider: conduct in-depth market research to understand market trends, the competitive environment and potential barriers; perform differentiation in relation to competitors; create adequate marketing campaigns; monitor consumer habits, development and market trends; form strategic alliances with complementary market participants; streamline internal processes to increase productivity and reduce costs; create long-term quality relationships with customers through quality service, discounts, loyalty programs; introduce continuous learning and education programs; effective financial management with the aim of adequate business decision-making.

Keep in mind that market challenges may differ depending on your industry, competitive environment, and specific circumstances. Overcoming these challenges of future development and growth will provide some of the solutions to prevent labor migration from Bosnia and Herzegovina and the Republic of Serbia.

Some of the prerequisites for this topic are as follows:

- Improved working conditions and wages to prevent further labor migration from Bosnia and Herzegovina and the Republic of Serbia to the European Union.
- A comprehensive approach between local communities, public institutions, the business community, and the non-governmental sector to create a better and safer working environment.
- Better connection between the education system and the labor market.
- Reduction of unemployment, encouragement of the youth population to entrepreneurship and strengthening of capacities for wider inclusion of unemployed women through mentoring, leadership programs, business incubators and centers.

# **Project NESESER**

## **Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)**

### **Conclusion on the feasibility of the business incubators**

#### *Potential effects*

Once these business incubators and centers reach their full operational capacities and also increase their customer base, both locations might launch up to 40 start-ups on an annual basis.

Under the assumption this potential will increase to possible launch of 20 start-ups per location on an annual basis this will provide employment potential for about 50 to 100 new employees on annual basis.

Presumably, these start-ups will be able to generate up to EUR 25 thousand in turnover on an annual basis, additional value chain will be equal to EUR 1 million on annual basis. Under the assumption of payment for the local taxes, contributions, and VAT of 37% from EUR 1 million on annual basis it seems contribution potential generated from the start-ups into different budgets is estimated to EUR 370 thousand. This information constitutes leverage for negotiation of partnership with local communities and highlights the role of incubators and business centers in development of new opportunities. More benefits are available through strategic partnerships, networking, business conference and the attraction of new investments. Academic community should be considered to align education and labor market requirements.

Business incubators have a variety of multiplicative impacts that go beyond the firms they sponsor. Through new job creation, growth nurturing, advancing in technology and innovation, using know how from local hubs, nurturing entrepreneurial climate, networking, and collaborating and increased social impact.

It is important to highlight that the multiplier effects of business incubators might differ based on the unique incubator program, the local context, and the support ecosystem. Nonetheless, business incubators serve an important role in promoting economic growth, stimulating innovation, and having a good impact on the local community and society by developing and supporting entrepreneurs.

# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Conclusion on the feasibility of the business incubators (continued)

*Roadmap (SFS requirements and relevant sections)*

Currently, both locations are faced with youth unemployment, especially women, and migration of youth population to the European Union. Social, economic and market prospects are unfavorable. The implementation and establishment of BECI in the Brčko District BiH and the City of Loznica aims to reduce unemployment, create new jobs through start-ups and contribute to the public budget through taxes and contributions. Furthermore, the inclusion of women in the community and their contribution is an important determinant as well as increasing the connection between the education sector and the labor market as stated in the **chapters Introduction, Economic analysis of the business incubators and Conclusion on the feasibility of the business incubators.**

As previously described, the implementation of BECI will contribute to the overall common good, the reduction of unemployment and the inclusion of unemployed women in the community with the aim of improving living conditions and economic conditions in general with the aim of reducing the migration of the younger population as stated in the **chapter Conclusion on the feasibility of the business incubators.**

When it comes to already successful examples of BECI implementation in the region and the EU, several successful examples are listed in the **Market analysis chapter**. In addition, Bosnia and Herzegovina has 12, while the Republic of Serbia has 20 business incubators, as stated in the **Market analysis chapter**. The Republic of Croatia has 55 business-entrepreneurial centers and incubators in the neighborhood according to data from 2021.

In order to start BECI, it is necessary to meet certain technical and technological conditions such as space, technical equipment, infrastructure. These requirements are presented in the **Market analysis chapter**. The potential impact on the development of micro locations is presented in the **chapter Risk analysis and Conclusion on the feasibility of the business incubators.**

In addition to the technical and technological conditions mentioned above, for the purposes of establishing and implementing BECI, it is necessary to establish an adequate organization and define the activities and procedures necessary for effective functioning. The organizational proposal and joint activities of both micro locations are presented in the **chapter Financial analysis of business incubators.**

Following on from the previous one, as well as any process of implementation of a specific activity with the establishment of business centers and incubators, there are certain risks that should be considered on the way to successful implementation, and which are addressed in the **Risk analysis chapter**. Successfully mitigating and monitoring these risks can affect the overall process as outlined in the **Risk analysis chapter.**

Certain financial resources are necessary for the implementation of BECI establishment activities if the activities were to be implemented. BECI's financial data for both locations is presented in the **Financial analysis of business incubators** chapter with accompanying discount rate information presented under the heading **Supplemental schedules.**

# Project NESESER

## Cross-Border Sustainability - Feasibility Study (SFS) for Brčko District BiH and Loznica (continued)

### Supplemental schedules

	BiH	Serbia			
Risk free rate German Bonds	2,48%	2,48%			
Equity Risk Premium	14,86%	9,57%			
Beta	1,29	1,29			
	22,37%	15,64%			
Inflation rate - 2023 - 2028	3,26%	5,44%			
E (D+E)	90,00%	90,00%			
D (D+E)	10,00%	10,00%			
Commercial interest rate	4,00%	4,00%			
Tax rate	10,00%	10,00%			
Interest rate	3,60%	3,60%			
WACC	20,13%	13,99%			
	0,36%	0,36%			
Discount rate	20,49%		Discount rate	14,35%	
Inflation	3,26%		Inflation	5,44%	
BiH	2.000,00	3.300,00	11.155,00	19.059,25	161.830,75
	1	2	3	4	5
	0,83	0,69	0,57	0,47	0,39
	1.659,86	2.273,00	6.376,73	9.042,25	63.719,84
Serbia	2.000,00	3.300,00	11.155,00	19.059,25	319.582,73
	1	2	3	4	5
	0,87	0,76	0,67	0,58	0,51
	1.749,02	2.523,72	7.460,37	11.1147,06	163.456,24

BECI projections are prepared under the Discounted Cash Flow method (DCF).

Risk free rate for 10 years German bonds is 2,48%

Equity risk premium rates for Bosnia and Herzegovina and the Republic of Serbia are used from **Damodaran**.

**Beta** used for other excluding financial institutions referred from **Damodaran**.

Inflation rates for Bosnia and Herzegovina and the Republic of Serbia for period from 2023 to 2028.

Debt / equity ratio calculated in 90 : 10. BECI will not be primarily financed via debt. Majority source of finance will be from project partners and other contributions. External finance has not been extensively considered.

Commercial interest rates on loans are considered at 4%. Income tax rate is 10%.

Weighted average cost of capital (WACC) for Bosnia and Herzegovina is higher comparing to the Republic of Serbia predominantly because of the higher equity risk premium.

#### *Business model*

BECI financed by public institutions and non-governmental sector. BECI are financed on fee basis. Sponsorships, donations, common service fees, fees from start-ups conference, contributions from the Government and municipal level.

BECI are working on a open ended time frame.

BECI advantages:

- Credibility
- Lower costs
- Focus on core product
- Access to network
- Access to expertise