

BUSINESS PLAN FOR VIRTUAL LAB



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

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Business plan for virtual lab

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Project „Eco-innovatively connected Danube Region (Ecolnn Danube)“

General objective of the project Ecolnn Danube is to increase the cooperation of innovation actors in the field of eco-innovations with special emphasis on development and application of ecotechnologies in the Danube Region.

Programme: Danube Transnational Programme Priority: Innovative and socially responsible Danube Region

Specific objective: Improve framework conditions for innovation

Duration of the project: 01/12/2016 – 31/05/2019

Budget: Overall: 2 126 924,97 €

ERDF Contribution: 1 587 447,2 €

IPA Contribution: 220 439 €

www.interreg-danube.eu/ecoinn-danube

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EXECUTIVE SUMMARY

The business plan outlined below describes how the virtual lab, output of Ecolnn Danube project will be run/implemented, including strategies to contact both sides of the eco-innovations market.

The Virtual lab's main role is to connect demand of production sector for new solutions enabling to perform a greener production and on the other side the supply of ecotechnologies and ecosolutions focused on field of renewable energy and energy saving coming from the research sector.

The lab builds upon persons, available webs, databases (including map developed in WP3 Strategy for eco knowledge) and platforms of the project partners to make available the services and tools, existing databases of project partners and their stakeholders in order to enable the cooperation among different parts of the ecoinnovation system

The virtual lab fully reflects the Danube region needs. It helps to bring solutions to environmental problems. It strongly contributes to improve the ecoinnovation performance in the Region. The lab contributes to introduction of new environmental technologies focused on the energy saving solutions. Contributes to reinforce the capacity of research infrastructure in order to improve ecoinnovation conditions, to foster and support development of a more widespread ecoinnovation culture.

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1. INTRODUCTION TO THE VIRTUAL LAB PLATFORM AND PROJECT PARTNERS

Virtual lab is a platform developed for project Ecolnn Danube set to increase cooperation of innovation actors in the field of ecoinnovations, special emphasis is put on development and application of ecotechnologies in Danube Region.

1. 1 VISION OF THE PLATFORM

Vision of the Virtual lab platform is to bring together representatives of the ecoinnovation environment: innovative SMEs, start-ups, spinoffs, R&D institutions generating remarkable and innovative ecotechnologies; producers and companies as representatives of industrial sector which is forced to search for ecosolutions to decrease the environmental pollution. Public institutions and third sector (NGO, etc.) as important stakeholders will be involved in this kind of matchmaking activities as well.

1. 2 MISSION OF THE PLATFORM

The objective of the Common virtual lab for ecoinnovators is to enable and enhance the cooperation and finding matches between demand and supply by process done in virtual laboratory as well as interconnect the ecoinnovations demand and supply actors. Virtual laboratory composed of persons, available webs, databases and platforms of the project partner to make the services and tools available to as wide recipients as possible in Danube Region.

1. 3 THE CONSORTIUM: RESPONSIBLE ORGANIZATIONS

The consortium who is responsible for common development of the ecoinnovative.eu platform consists of 16 project partners (11 regular, 2 IPA, 3 associated partners) from 12 countries of the Danube Region (Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Montenegro, Romania, Slovakia, Slovenia, Serbia).

Role	Official name in English	Country
Lead partner	Slovak Centre of Scientific and Technical Information	SLOVAKIA
ERDF PP1	Chamber of Commerce and Industry Vratsa	BULGARIA
ERDF PP2	Energy Agency of Savinjska, Šaleška and Koroška Region	SLOVENIA
ERDF PP3	Digitalis Jolet Nonprofit Kft.	HUNGARY
ERDF PP4	Bwcon GmbH	GERMANY

ERDF PP6	BIC Brno spol. s.r.o.	CZECH REPUBLIC
ERDF PP7	Regional Development Agency Medimurje REDEA Ltd.	CROATIA
ERDF PP9	Comenius University in Bratislava, Science Park	SLOVAKIA
ERDF P10	Brno University of Technology	CZECH REPUBLIC
ERDF P11	Entrepreneurs' Centre of Somogy County Foundation	HUNGARY
ERDF P12	Economica Institute for Economic Research	AUSTRIA
IPA PP1	Chamber of Commerce and Industry of Banja Luka Region	BOSNIA AND HERZEGOVINA
IPA PP2	Regional Agency for Socio - Economic Development Banat Ltd	SERBIA
ASSOCIATED PARTNERS		
	University of Pécs	HUNGARY
	Romanian Association for Technology Transfer and Innovation	ROMANIA
	Chamber of Economy of Montenegro	MONTENEGRO

2. ANALYSING THE ENVIRONMENT FOR SUSTAINABILITY

External Environment Analysis (PESTEL)

- **Political**

The political environment in most of the countries may be considered stable, the project partners' home countries are except of Bosnia and Herzegovina, Serbia and Montenegro members of the European Union. Overall, environment and its protection as well as support of innovation is important for every member country due to their position in EÚ economic system¹. Environment responsibility may not be the main priority for all of the partner countries as Serbia, Bosnia and Herzegovina or Montenegro, due to the other problems as a potential member of European Union. Assigned budget to environmental protection support may show the difference of support from countries, we have to also take into account different sizes of countries' economics, measured by GDP.

- **Economic**

The economic situation in EÚ is considered stable. Some of the countries are still recovering from the economic crisis, which followed banking crisis that occurred before. The newest crisis

¹ E.g. in documents The Danube Transnational Programme, Interreg

that still lasts, and began in 2015 is refugee or migrant crisis. Crisis is represented by high unemployment rate, by slower increase of GDP per capita and low inflation rate, which causes slower creation of new jobs.

- **Social**

The project partner countries in Danube region has 161 060 701 inhabitants, which is more than a quarter of all inhabitants in EÚ 28 and therefore makes these countries a big market for both sides of the eco-technologies market. Before social transfers is income distribution measured by Gini coefficient between 0,3 and 0,6. Unemployment rate is lowest in Czech Republic and highest in former Yugoslavian countries, where innovations and R&D may help to increase employment and hiring. The expenditures on R&D are lowest in Montenegro and Bosnia and Herzegovina.

- **Technical**

The technical environment of partner countries consists of at least 24 science and technology parks and many technology centres.² For technical environment situation overview can be used also innovator benchmark. Partner countries can be categorized into three types of benchmarks in matter of innovation that are strong innovator benchmark for Germany, Austria and Slovenia, moderate innovator benchmark for Croatia, Hungary, Slovakia, Serbia and Czech Republic and modest innovator benchmark for Bulgaria and Romania.

- **Environmental**

Platform by itself has no negative impact on the environment, since it is available online. The purpose of the platform can increase environmental awareness and help to make production more environmental effective.

- **Legal**

The platform must be provided in compliance with legal conditions set in particular states and the European Union.

² <https://npc.cvtisr.sk/vedeckeparky>

<http://www.unesco.org/new/en/natural-sciences/science-technology/university-industry-partnerships/science-parks-around-the-world/science-parks-in-europe/#c99655>

CHART OF SELECTED ECONOMIC AND SOCIAL INDICATORS

Country/ indicator	Inflation rate in November 2017 ³	GDP/capi ta in PPP (2016) ⁴	GDP per capita in EUR (2016) ⁵	No of inhabitants (2016) ⁶	GINI coefficient (2016)/ GINI before social transfers ⁷	Unemploy ment rate in September 2017 ⁸	% of GDP on R&D (2015) ⁹
Serbia	2,8 %	37	4 400	7 076 372	38,6 / 62,8	12,9 %	0,89 %
Hungary	2,6 %	67	11 300	9 830 485	28,2 / 51,3	4,1 %	1,36 %
Romania	2,6 %	58	7 700	19 760 314	34,7 / 53,3	4,9 %	0,49 %
Czechia	2,5 %	88	16 500	10 553 843	25,1 / 44,9	2,7 %	1,93 %
Austria	2,4 %	128	36 300	8 690 076	27,2 / 47,3	5,4 %	3,05 %
Montenegro ¹⁰	2,4 %	45	6 257	622 218	33,2	14,8 %	0,38 %
Slovakia	2,1 %	77	14 600	5 426 252	24,3 / 41,2	7,8 %	1,18 %
Bulgaria	1,9 %	49	6 000	7 153 784	38,3 / 52,8	6,2 %	0,96 %
Germany	1,8 %	123	34 600	82 175 684	29,5 / 55,5	3,7 %	2,92 %
Croatia	1,6 %	60	11 000	4 190 669	29,8 / 48,5	10,7 %	0,84 %
Slovenia	1,4 %	83	18 500	2 064 188	24,4 / 43,6	6,7 %	2,20 %
Bosnia and Herzegovina	1,2 %	32	3 859	3 516 816	33	38,81 %	0,22 %

Source of the chart: Eurostat

³ Austria, Germany, Slovenia and Slovakia are members of EUROZONE, Montenegro is unilaterally adopted into EUROZONE but is not a member of European Union and Bosnia and Herzegovina and Serbia are not members of EU
http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_manr&lang=en

⁴ EU 28 = 100. If the number is less than 100 than the GDP per capita is less than the average in EU 28 and vice versa.
<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tec00114>

⁵ <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&pcode=tsdec100&language=en>

⁶ Population: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjan&lang=en

⁷ http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_di12&lang=en&%20%20

⁸ Unemployment rate 9/2017

<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&language=en&pcode=teilm020&tableSelection=1&plugin=1>

⁹ <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsc00001>

¹⁰ Information for Montenegro: <http://monstat.org/eng/index.php>

3. FINANCIAL PLANNING

The platform - virtual lab is developed in partnership, however it can be maintained by single partners as well. Platform is located on free blogging tool WordPress. Platform is built to be low on maintenance.

Web hosting costs and license agreements

The platform, which is an important output of the partners within the project Ecolnn Danube, might need only small investments in the future. As was said before, platform is set on free blogging tool, where are selected free plugins, that could be however later changed and could require license.

On platform are stakeholders' maps, which are maintained by KSEENA and are currently provided for free from platform Kumu.

Platform therefore may require further updates of software/hardware, office tools.

The advantage of free services:

- No fee is paid by users of the platform, fees will be paid only upon an agreement between both sides of market after finding match for eco-solution.
- Since the platform would be completely free more users could afford to use the platform. The virtual lab will be available to wide audience.

Disadvantage of free services:

- dependency on uncertain resource of funding in case of update needs
- finding and persuading the sponsors

4. SUSTAINABILITY OF PLATFORM

Most of the partners do not intend to adapt the Virtual Lab, they plan to continue using it as it is, without altering its main features and functions. The virtual lab was developed in scope of Ecolnn Danube project in cooperation with all partners, so there is no need to adapt it additionally. Partners will continue to promote the Virtual lab after the end of the project so sustainability will be achieved.

Some partners (BWCON, CCI Vratsa, CCI BL) would eventually integrate some of the aspect of the Virtual lab within own platform dedicated to start-ups support and venture development. In this case, especially the matchmaking feature would be relevant.

Significant cooperation will be required to keep the Virtual lab running; maintenance of virtual lab and matching demand and supply; publish the demand and supply, provide assistance for the innovators and investors, SMEs to partner finding.

Bwcon will evaluate how to possibly integrate some of the services of the virtual lab in its regional platform - the Venture Development - dedicated to support the business process development of start-ups from Baden-Württemberg.

A long-term suggestion proposed is to establish an international fund for supporting eco-innovative research and commercialization, to be supported by public research organizations and academia through annual membership for having access to the Virtual lab. Additional funds could be obtained by actively offering the service to the companies (for e.g. a company is looking for a specific environmentally oriented innovation - a problem to solve - and pays a small fee for the administrators of the Virtual lab to be able to look for and locate the desired innovation). However, the Virtual lab would have to be further expanded with new users and additional content in order to truly serve that purpose.

4.1 ESTABLISHING ECOINNOVATORS NETWORK

The Network itself is being established in the ecoinnovative.eu webpage and newcomers can join the network via filling in a form under section **Join us**.

The creation of ecoinnovators network is coordinated by the Slovak Center of Scientific and Technical Information, Lamačská cesta 8/A, 811 04 Bratislava.

Project partners of the Ecolnn Danube project are member of the network

The **aim** of the **ecoinnovators network**, formed in virtual laboratory is to exchange knowledge in the region and beyond it in the area of ecologically friendly solutions demanded or developed.

The network in its initiation will provide to its new member possibility to:

- ✓ Include institution to contact – stakeholders map
- ✓ Include experts and expertise into expert database
- ✓ Advertise events, workshops and other stakeholders meetings
- ✓ Add their success story to the webpage
- ✓ Receive regular information from partners on events, workshops, and other cooperation opportunities

The network plans to provide in order to support the demand and supply of ecotechnologies and ecosolutions:

- ✓ Awareness building events
- ✓ Information sharing, Knowledge exchange and contact for stakeholder and institutions in the field of interest
- ✓ Support services offered by Ecolnn Danube partners is form of their own service portfolio (including opportunity to pitch ecoinnovative idea, receive information on business opportunities in DR, receive information of regional support systems, counselling in area of intellectual property, creative lab in Slovakia)
- ✓ Space to advertise ecoinnovative products and ideas
- ✓ Space to call for solutions for companies that need to improve own production process, save energy or reuse materials

4.2 PLATFORM AVAILABLE TO BUILD AWARENESS

Country	Platform
Austria	Economica company website: www.economica.at technology transfer office: https://www.boku.ac.at/fos/technologietransfer/ecn-entrepreneurship-center-network/
Slovakia	National portal for technology transfer: http://nptt.cvtisr.sk/national-portal-for-technology-transfer.html?page_id=224 Science park web page: http://www.cvtisr.sk/en.html?page_id=58 EEN: https://www.een.sk/en Institution website: http://www.cusp.uniba.sk Slovak academy of Sciences website: http://www.sav.sk/ Czechoslovak society for microbiology: http://www.cssm.info/en Company web page: http://www.cvtisr.sk/en.html?page_id=58
Bulgaria	CCI-Vratsa official website: http://www.cci-vratsa.org/ Enterprise Europe Network - Vratsa: http://een.cci-vratsa.org/ Europe Direct Vratsa: http://cci-vratsa.org/europe_direct/index.php
Croatia	Internet portal oriented to energy topics: http://www.energetika-net.com/ Centre for Research, Development and Technology Transfer: http://cirtt.unizg.hr/en/ Croatian Agency for SMEs, Innovations and Investments (HAMAG-BICRO): http://www.hamagbicro.hr/ EEN Croatia: http://www.een.hr/
Czech republic	BUT official website: https://www.vutbr.cz/ TTO BUT web for cooperation: http://www.vutt.cz/en/ EEN Czech Republic: https://www.enterprise-europe-network.cz/en/ company website: http://www.bicbrno.cz web about news from science, research and innovation: http://ceskavedadosveta.cz Science Technological Park and Business Incubator TITC: http://www.titc-vtp.cz/cz

	<p>South Moravian Regional Chamber of Commerce: http://www.khkjm.cz Association of Research Organisations: http://www.avo.cz</p> <p><i>fairs:</i> SCIENCE RESEARCH INNOVATION FAIR (15. - 17. 5. 2018 Brno): http://www.vvvi.cz/index_en.html International Engineering Fair (1. - 5. 10. 2018 Brno): http://www.bvv.cz/en/msv/msv-2018</p>
Serbia	<p>RDA Banat official website: https://www.banat.rs/ Regional Educational Center Banat: http://recbanat.rs/ EEN Serbia: http://een.rs/ European Regions Network for Application of Communications Technology: https://ernact.eu/</p>
Hungary	<p>Digitális Jólét organisation website (TBC) www.djnkft.hu Association of Environmental Enterprises website (TBC) https://www.kszgysz.hu/en/ company website: http://www.vallalkozoi-kozpont.hu/ PTE Technology Transfer Office website: http://innovacio.pte.hu/en?language=en</p>
Germany	<p>Bwcon company website www.bwcon.de Venture Development plattform venture-dev.com Umwelttechnik BW www.umwelttechnik-bw.de Startup Region Stuttgart http://www.startup-region-stuttgart.de/</p>
Slovenia	<p>Company website: http://www.kssena.si SPIRIT Slovenia - Public Agency for Entrepreneurship, Internationalization, Foreign Investments and Technology: http://www.spiritslovenia.si/ SAŠA Inkubator - Regional business incubator: https://www.sasainkubator.si/ Events at Start:up Velenje: http://www.startupvelenje.si/ PODIM conference 2018: http://www.podim.org/en-us/</p>