Interreg
Danube Transnational Programme
RI2integrate

# DTP1-184-1.1 „RI2integrate"

# Embeddedness of high quality research infrastructures in the Danube Region

## JOINT ACTION PLAN

***19.09.2019.***

***RAS, Belgrade***

Project co-funded by European Union funds (ERDF, IPA, ENI).
www.interreg-danube.eu/RI2Integrate

# Contents

# 1. BASIC INFO

The main objective of the RI2Integrate project was to exploit the economic development potential and to better integrate the operation of the EU's excellent R&D infrastructure (RI) investment projects through devising and implementing innovative tools for policy learning on macro regional embeddedness in the Danube Region.

The Danube Region has changed dramatically. The world's most international river basin is now largely a European Union (EU) space. There are new opportunities to address its challenges and potential, especially to reinforce its efforts to overcome the economic crisis in a sustainable manner. In the Region, there is a need to connect people, their ideas and needs. Transport interconnections must be modernized and access to information improved. Energy can be cheaper and more secure, thanks to better links and alternative sources. By building on considerable research and innovation perspectives, the Region can be at the forefront of EU trade and enterprise. Disparities in education and employment can be overcome. It can be made a safe and secure area, where conflict, marginalization and crime are properly addressed.

RI2integrate brings together 4 types of organizations dedicated to sustainable improvement of their services for the sake of RI embeddedness support. Sustainability of the project's achievements, practices, networks and policy implementation was ensured by involving policy-makers and representatives of existing innovation networks in Ri2integrate project management structures as well as by events and active collaboration with these actors in knowledge transfer activities.

The main novelty of RI2integrate is two-fold. Its methodology foresees the combination of the Smart Specialization approach (from the expert side) and the Quadruple Helix model (from the stakeholder perspective). Additionally, as a policy driven novelty, the project creates synergies between different EU and territorial funding instruments.

In relation to the programme specific objectives, RI2Integrate will improve strategic frameworks and cooperation in order to build up excellent research infrastructure in the Danube region. To do so, firstly it will develop a new networking platform (with durability after the project ends) with the involvement of R&D institutions, public authorities, SMEs and NGOs. Secondly, RI2integrate will develop new tools for improving cooperation of regions at different development levels. Thirdly, it will develop national level and joint action plans to strengthen the strategic basis for RI utilization. Finally, as a cross-cutting issue, all involved RIs will concentrate on activities directly related to eco-innovation.

The common challenge for RI2integrate project was to accelerate macro-regional embeddedness of RIs in the Danube Region (on the basis of the ELI network) with involving all interest groups along Quadruple Helix (QH) to develop framework conditions of RI utilization.

All mentioned challenges have been integrated and the main objective has been finalized as: to exploit the economic development potential and to better the integration of the operation of the EU's excellent R&D Infrastructure investment projects through devising and implementing innovative tools for policy learning on macro-regional embeddedness in the Danube Region.

The specific objectives of the project have been defined by the systematization of the needs and challenges as follows:

- Direct R&D utilization in industry and local business involvement related challenges have been addressed by Programme Specific Objective (PSO) 1 /Support enterprises by using a systematic approach to their relation to RIs covering supplier opportunities and R&D networking/;
- Direct utilization of R&D results in public (governmental) investments and developments have been addressed by PSO2 /Supporting government involvement through the utilization of Public Procurement on Innovation (PPI) tool that ensures high level support from public authorities/;
- Raising awareness of the wider community to get better knowledge on their individual and territorial development potential have been addressed by PSO3 /As the high quality research infrastructures are not only accelerators of macro-regional economic competitiveness, but a basis for raising awareness of innovation, a supporting tool for knowledge sharing with the general public is crucial/.

**The roles of project partner institutions presented in relation to project activities**

RI2integrate PPs from HU, CZ, AT, RO, SRB, SLO, HR represent regional and national research institutions, universities, governmental bodies, decision makers, and intermediaries. Each partner stands for a particular type of organization involved in the utilization of excellent research infrastructures. All partners have had extensive experience in transnational projects.

**The List of RI2Integrate Project Partners**

| Role | Official Name in English | Acronym | Country |
|---|---|---|---|
| *LP* | ELI-HU Nonprofit Ltd. | ELI-ALPS | HUNGARY |
| *ERDF PP1* | Central Transdanubian Regional Innovation Agency Nonprofit Ltd. | CTRIA | HUNGARY |
| *ERDF PP2* | Horia Hulubei National Institute of R&D for Physics and Nuclear Engineering | IFIN-HH | ROMANIA |
| *ERDF PP3* | Institute of Physics, Academy of Sciences of the Czech Republic | IOP | CZECH REPUBLIC |
| *ERDF PP4* | FH JOANNEUM GESELLSCHAFT M.B.H.T | FHJ | AUSTRIA |
| *ERDF PP5* | Institution for development of competence, innovation and specialization of Zadar County | INOVAcija | CROATIA |
| *ERDF PP6* | University of Maribor | UM | SLOVENIA |
| *ERDF PP7* | Magurele High Tech Cluster | MHTC | ROMANIA |
| *ERDF PP8* | Central Bohemia Innovation Centre | SIC | CZECH REPUBLIC |
| *IPA PP1* | Development Agency of Serbia | DAS | SERBIA |
| *ASP1* | Ministry for National Economy | MNE | HUNGARY |
| *ASP2* | Ilfov County Council | ICC | ROMANIA |
| *ASP3* | Central Bohemia Region | CBR | CZECH REPUBLIC |

| | | | |
|---|---|---|---|
| *ASP4* | Steirische Wirtschaftsförderungsgesellschaft mbH | SFG | AUSTRIA |
| *ASP5* | Zadar County | Zadar County | CROATIA |
| *ASP6* | Technical University of Kosice | TUKE | SLOVAKIA |
| *ASP7* | Municipality of Ruse | OR | SLOVENIA |

**The roles of project partner institutions presented in relation to project partners**

**Austrian partners**

**FH JOANNEUM GmbH**

The FH JOANNEUM GmbH is already a player in the technology transfer landscape in Styria. With this project, the FH JOANNEUM GmbH role was to be strengthened and especially the University also got in the role of being a consultant for the government of Styria in R&D and technology transfer topics. The role of JOANNEUM GmbH is also to get collaboration in the fields of mobile applications, internet security and industry 4.0 within this project.

**Steirische Wirtschaftsförderungsgesellschaft mbH**

The role of Steirische Wirtschaftsförderungsgesellschaft mbH was to get involved in all content related WPs of RI2integrate and to actively support all Outputs and Deliverables of WP3, WP4, WP5, WP6. The main thematic scope of ASP4's involvement is economic ecosystem development and it would strengthen the business related pillar of the project through its strong SME network. SFG is to be involved in all content related WPs of RI2integrate. By doing so, it has actively supported all Outputs and Deliverables of WP3, WP4, WP5, WP6.

**Croatian partners**

**INOVAcija**

The role of Croatian partner INOVAcija was to co-operate with new partners and exchange new ideas and know – how on a topic that is very important and interesting for Zadar County. INOVAcija have contributed in creating the base for development of Zadar County as a smart region suitable for research and innovation and increase public awareness about sustainable grow in Zadar County. Within this project INOVAcija has represented Territory of Zadar County.

**Zadar County**

Zadar County role was to get involved in all content related WPs of RI2integrate. By doing so, it has actively supported all Outputs and Deliverables of WP3, WP4, WP5, WP6. The main thematic scope of ASP5's involvement is governmental involvement and policy development.

Through this project Zadar County has contributed to the development of the base for research infrastructures at the Territory of Zadar County. Zadar County has contributed to the following goals or processes through participation in this project:

- Being a key stakeholder in the development and planning of new macro-regional research infrastructures
- Increased promotion for Zadar and the County through the projects activities
- Strengthening the image of Zadar region as a smart region
- Strengthening capacity for implementation of EU funded transnational cooperation projects

**Czech partners**

**IOP**

IOP via its department of CITT has had a role in a number of opportunities to (i) prepare conditions for a deeper SME involvement into the laser research infrastructures (e.g. creation of a technology park in proximity to research infrastructures) and (ii) access commercial opportunities across the Danube Initiative countries and subsequently provide larger outreach activities towards application sphere. Cooperation with the project partners has brought mutual know-how sharing, the execution of joint technology transfer and commercialization events, and general support for the SME community across the Danube Initiative countries. Close cooperation with SMEs (e.g. final users) has also facilitated access to the-state-of-the-art technical facilities and introduced modern research infrastructure access schemes.

**Central Bohemia Innovation Centre**

The role of Central Bohemia Innovation Centre was to identify the major needs of RI and companies to develop cooperation with secondary schools and work with young talent in the region (especially in support of science and technology) and to modify educational programs to satisfy those needs that would have an impact on the regional economic development. The awareness-raising pillar of RI2integrate program and the visitor center guidelines has helped focusing strategies and resources to informing the younger generation on R&D and innovation and complement SIC intervention in supporting young talent in science and engineering fields.

**Central Bohemian Region**

The role of Central Bohemian Region was to get involved in all content related WPs of RI2integrate. By doing so, it has actively supported all Outputs and Deliverables of WP3, WP4, WP5, WP6. The main thematic scope of ASP3's involvement is governmental involvement and policy development.

**Hungary partners**

**CTRIA**

CTRIA role was to use the project results for creating an S3 based innovative network with members and institutions with special professional knowledge. By doing so, CTRIA's supporting role has increased as follows:

- entrepreneur mindset development through the technology transfer network
- as the management body of an industrial (Automotive) cluster, the related services might be developed
- support of innovative youths,

- creativity development,
- networking,
- creation of new innovation models

**ELI-ALPS**

With this project ELI-ALPS has integrated to the Quadruple Helix model, which is the harmonized operation of the government and its institutions, the business sector, scientific communities (universities, RIs) and the interests of the local population and the agreed responses to new challenges. Also it has learned how the other project partners can integrate this model into their operation and effectively touch the issue of integration of the research infrastructure into the economy on all levels therefore to support the long-term sustainability of the ELI-ALPS, too. Transnational cooperation is an effective tool to tackle this topic as the cooperation via the partnership would bring further knowledge and know-how transfer furthermore it would help the integration of the results into transnational level, too. Also since ELI-ALPS is strongly connected to the national policy level therefore it has helped to transmit project results directly into the national/regional strategy formulation.

**Hungarian Ministry for National Economy**

The role of Ministry for National Economy was to strengthen research, technological development and innovation and to improve the national participation in the major research equipment infrastructure projects of the ESFRI. The ELI-ALPS major project was the most important national research infrastructure project, which has had an approximately available fund of EUR 129 million.

**Romania partners**

**IFIN-HH**

The European Commission's initiative to fund the ELI-NP at Magurele has had a major impact not only on the Romanian research ecosystem, but also on the Bucharest - Ilfov area as a whole. From this perspective, the Laser Valley – Land of Lights regional development concept, a government launched initiative which aims at transforming Magurele area – from Bucharest to the Danube river - in a pole of attraction for European and international research and business communities is an attractive and most adequate opportunity and environment to implement the objectives of the project. It is estimated that ELI-NP will act as a catalyst for Laser Valley and will bring together over one thousand researchers from all over the world and will generate significant employment and carrier opportunities.

The ELI-NP facility will contribute to the foundation of a new community, hotspot for science, innovation and development and it will be the core of Laser Valley initiative.

**MHTC**

MHTC decided to join the partnership as a natural reaction to be part of the same scientific and business based on science family: ELI. We have shared with our colleagues the following activities and results:

1. To be part of an effective network around the Danube to take advantage of ELI Large Scale Scientific Infrastructures.

2. To have a direct contribution to the process of generating a framework dedicated to facilitate the merger between the advanced scientific research, innovative business and local administration.
3. To develop the Magurele Science Park compatible with similar evolutions in the Danube Region and in EU.
4. To promote a code of ethics respected by the main three actors involved in the developments of the scientific parks.
5. To increase the communication process between advanced scientific research, innovative business, local administration and the citizens – the final beneficiary of our efforts.

**Ilfov County Council**

The role of ASP2 was to get involved in all content related WPs of RI2integrate. By doing so, it has actively supported all Outputs and Deliverables of WP3, WP4, WP5, WP6. The main thematic scope of ASP2's involvement was governmental involvement and policy development.

Ilfov County Council has supported partners of the IFIN-HH. The added value consisted of its expertise in public administration sector as to analyze the local and regional needs and opportunities, to address solutions and to establish public policies and strategic development mechanisms and instruments.

**Slovakian partners**

**Technical University of Kosice**

The role of Technical University of Kosice was to enable knowledge transfer, not just within the project consortium through discussions about the best practices of networking quadruple helix stakeholders, but thanks to networking platform also with subjects from all over Danube region creating potential for improvement of cooperation level and innovation potential what can be reflected by increasing of quality and quantity of research outputs ad support competitiveness of whole region and country leading to new job opportunities and mitigation of regional disparities. Thanks to new experience TUKE, as the regular partner of Slovak government, on the local, regional and national level, has been able also to improve ideas for action plans and strategies which at this time strongly supported activities to leading just like proposed outputs what was proved by documents like RIS3SK – Strategy for Research and Innovation for smart specialization or Regional Innovation Strategy of Košice Region.

**Slovenian partners**

**University of Maribor**

The role of University of Maribor was to strengthen its position as leading regional institution and it has been able to use new knowledge and results in academic and study purpose.

Whole country has benefited with economic development through new approaches and tools that has been developed and implemented within project lifetime, through knowledge, findings and results share among project partners.

With participation in the project and implementation of its activities universities innovation ecosystem will benefit and has been able to contribute to economic development in the country.

**Municipality of Ruse**

The role of Municipality of Ruse was to:

- enhance cooperation with research ecosystem in the region
- gain state of the art knowledge and approaches in order to transferring them to local environment
- get better business results of companies
- get lower unemployment

**Serbian partner**

**Development Agency of Serbia**

The role of Development Agency of Serbia was to support regional development in the Danube region trough supporting better integration of RI and R&D organizations into SMEs sector and establishing a stronger and sustainable network along Danube. Also, Development Agency of Serbia was directly linked to the sustainability of the Region, improving business environment and applying research and innovation connecting environment, tourism and sustainable mobility.

# 2. FRAMEWORK FOR RI EMBEDDEDNESS IN DANUBE REGION

**Short overview of starting point characteristics of RI embeddedness in partner countries**

**AUSTRIA**

When the project started in 2017, it was clear that in the seven participating countries the R&D infrastructure that was sometimes very valuable and highly funded was not really integrated into the region so as to fully use their economic value to the full benefit of the communities/municipalities and SMEs of the region. Instead, it was mostly or even solely used by researchers.

The report about Austria is a very comprehensive overview and detailed description of organizations in Austria. The report opens the path for possible new business models according to the different target groups and maybe also according to the different views in the different countries that might be targeted in the future

Apart from that, the dissemination activities like the project presentation on the Web, on Social Media Platforms, in regional newspapers, on scientific events like presentation of papers play all a very important part to get the R&D infrastructure as well as the research results widely known and by that contribute to their economical exploitation.

**CROATIA**

In general, Croatia needs to invest a great deal more into research and innovation in order to remain competitive and innovate. Currently, the government spends only 0.84% of GDP on R&D activities, which is well below both the national target of 1.4% as set out in the 2013 Economic Programme for Croatia as well as the 2.03% GDP EU average. The Croatian innovation system also lags in other benchmarks against other Member States, excelling only in two areas: percentage of young persons with secondary education and non-R&D innovation expenditure as a percentage of total turnover of companies. Although much of this underperformance can be attributed to a lack of public funds caused by slow economic growth following the 2008 global financial crisis, there are other significant challenges as well: mediocre private R&D expenditure (0.43% of GDP), small scientific community (11,089 researchers in 2015), as well as a multi-year gap in tax relief for R&D activities.

Croatia's EU accession was not without its problems as adoption of new laws and procedures led to several re-organizations of ministries and agencies in a short span of time. For example, the Croatian Agency for Investment and Competitiveness existed between 30.12.2014 and 31.12.2018., was partially integrated into the RI system and was shut down earlier this year. These changes make it more difficult for end users to access RI funding and support systems as there usually isn't enough time to accumulate experience to become proficient at cooperating within PPIs. This particular problem is less present on local government levels and therefore promotes a more 'grassroots' approach to development and best practice sharing.

**CZECHIA**

The total research sector (public and private together) consists of more than 3 000 workplaces. Public research sector consists of 53 institutes under the Czech Academy of Sciences, 28 public universities, 36 sectoral research units under sectoral ministries, 10 faculty hospitals, others (museums, medical institutes, etc.

The R&D sector is highly regionally centralized to Prague and other universities regions (Southern Moravia region, Central Bohemia). Prague region itself has more than one-third of total R&D expenditures. So this is in line with RI2integrate goal to foster the regional development by the big research infrastructures and by this help to decentralize the positive impact of these infrastructures.

There is an assumption of the next increase due to the good situation of the Czech national economics and increase spending of EU funds in programming period 2014+. Totally there were ca 14 800 tenders specified in 2018 in the Czech Republic. There are more than 50 science, technology and/or science and technology parks. Their establishment was strongly supported by EU funding, together with cluster initiative, accelerators, and business incubators. Now they are located in surrounding most of regional centres, mostly related to research infrastructure or university, industrial cluster or bigger enterprises.

**HUNGARY**

Similarly to the other countries of the Visegrád Group, Hungary continues to be included in the rankings as one of the EU's fourteen "moderate innovators". Progress requires more research and more Hungarian patents and inventions that could strengthen the Hungarian economy. The research capacities of research institutes and higher education institutions are fragmented and not sufficiently concentrated, and research results are not being utilized effectively. Increasing the innovation capacity and efficiency of Hungarian SMEs is one of the greatest economic policy challenges.

The modernization of innovation policy is vital: new kinds of measures are required that can address the weaknesses of the Hungarian RDI system. Hungarian enterprises must be provided with support to enable them to perform high added value, knowledge-based activities; the opportunity must be created for research institutes and higher education institutions to not operate in an isolated manner, but to develop mutually advantageous cooperation with the most varied participants of business and social life. As the first step in this process of renewal, and as a catalyst of the process, the Ministry for Innovation and Technology was created.

Hungarian innovation policy must resolve three main challenges in the upcoming period: it must achieve an increase in the practical application of the research results of state-financed research centers, an improvement in the low innovation performance of Hungarian enterprises and primarily SMEs, and an increase in cooperation between the participants of the RDI system. In the interests of furthering Hungary's economic growth, the Ministry for Innovation and Technology will continue to strive to develop an innovation ecosystem that improves openness to innovation and its value-creation capability, targets the more efficient use of resources, and furthers technological development.

**ROMANIA**

Traditionally, Romania had a good education in science, technology, engineering and mathematics. Today, public education cannot meet the market demand for IT engineering and other vocational training skills. Private education initiatives were launched to fill the gap and meet the growing demand for practical knowledge, useful in setting up own businesses.

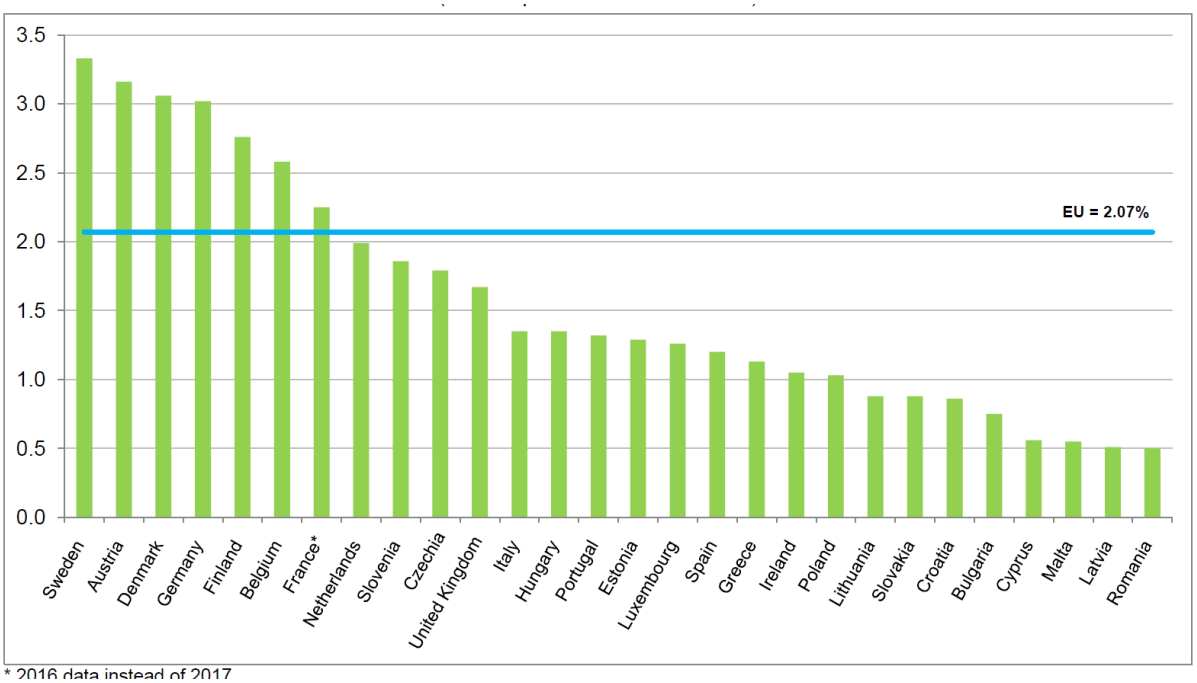
The Danube Region has 14 countries, of which 9 are EU Member States. Research intensity and the innovation performance of the 9 EU Member States in the Danube Region illustrates the whole range of diversity from top downwards: AT, DE and SI are investing in research over 2% of the GDP (the EU target), CZ, HU and SK between 1,65% and 1,18% and HR, BG and RO between 0,84% and 0,48%.

Investment in research and development (R&D) remains critically low. The R&D expenditure as a percentage of GDP has been flat since 2000, at 0.5 % in 2017 vs. 2.7 % in the EU as a whole. Public R&D intensity fell from 0.32 % in 2011 to 0.21 % in 2017. Despite an increase in recent years, business R&D intensity remains well below the EU average (0.29 % vs.1.36 % in 2017). This under-investment in business R&D results in a number of researchers per capita in the private sector over six times lower than the EU average and in a very low number of patent applications. In early 2017, Government Emergency Ordinance 3/2017 introduced a 10-year tax exemption for R&D firms, but procedural norms are still in preparation.

R&D intensity in 2017 was 0.5 % of GDP, the lowest in the EU and representing only a quarter of the national target. Romanian R&D intensity fell annually by 1.1 % between 2007 and 2017. To reach its 2020 target, R&D intensity in Romania will need to grow by an average of 58.4 % per year until 2020. In 2017, public R&D intensity increased by 4.8 %, while business R&D intensity increased by 7.4 % compared to 2016. Thus, business R&D intensity reached 0.29 % of GDP in 2017 while public R&D intensity amounted to 0.22 % of GDP.

**SERBIA**

Serbia needs to expand it expenditure on R&D. Statistical Office of the Republic of Serbia has published a report that expenditure on R&D in Serbia for year 2017 was 0.4% (R&D (GERD) in the percentage of GDP). Compared to table below, Serbia ranks at the bottom of the table and it needs to take steps to improve the expenditures into R&D and innovation.




* 2016 data instead of 2017

Gross domestic expenditures on R&D (GERD) in the percentage of GDP (source: https://ec.europa.eu/eurostat/documents/2995521/9483597/9-10012019-AP-EN.pdf)

The development of science parks in the Republic of Serbia is aimed at creating a favorable environment for connecting businesses and R&D and educational organizations, knowledge transfer, development of new technologies, commercialization of innovation, networking and stimulating the growth of knowledge-based economy.

The existing business ecosystem is based on regional university centers and it is developing around the University of Belgrade, the University of Novi Sad, the University of Niš and the University of Kragujevac. Science and Technology Park Belgrade, which was developed using the positive experiences of the Business Technology Incubator of Technical Faculties, is the basis for further work on the establishment of a system for commercialization of innovation and research results of researchers at the University of Belgrade.

**SLOVENIA**

According to the Innovation Union Scoreboard performance indicators for monitoring innovation trends in Member States, Slovenia is currently an innovation follower. When it comes to investment in RDI, Slovenia places above the EU average and is part of the group of seven countries with the largest share of GDP invested in RDI. The investments of the Slovenian business sector in RDI are among the highest and Slovenia achieves excellent results in human resources (HR) development.

Research infrastructure development Research infrastructures are facilities, resources or services that encompass larger sets of research equipment or instruments, and they complement knowledge resources such as collections, archives and database. They are engines of innovation and the basic condition for research work. At the same time, in particularly larger and medium-sized infrastructures, are essential for excellence of this work and for conducting the most sophisticated research.

State of affairs In Slovenia, research infrastructure is wide spread (there is no adequate overview of duplications of equipment within institutions), partly obsolete, and in most cases does not attain the critical mass neither the excellence, comparable with large European and global research infrastructures. The main instrument for development of research infrastructures are various forms of cofinancing by Slovenian Research Agency, which by means of calls of proposals and direct allocation of funds subsidizes purchases of equipment to organizations, the activity of which is an infrastructural condition for carrying out the national research programme.

**Short overview of starting point characteristics of RI embeddedness in Danube Region**

The Danube Region has 14 countries, of which 9 are EU Member States. Research intensity and the innovation performance of the 9 EU Member States in the Danube Region illustrates the whole range of diversity from top downwards: AT, DE and SI are investing in research over 2% of the GDP (the EU target), CZ, HU and SK between 1,65% and 1,18% and HR, BG and RO between 0,84% and 0,48%.

The EU Innovation Scoreboard 2019 proved that since 2011, the innovation performance in EU has been, in average, of 8.8%. The innovation performance has increased in 25 countries. Major decreases were registered in Romania (10.7%) and Slovenia (10.6%).

The published data showed that in the Danube Region the situation is as follows:

- no innovation leader from the Danube Region from among the actual 4; in 2017, Germany was an innovation leader;
- two strong innovators, Germany and Austria, out of 8; in 2017 Slovenia was among the strong innovators;
- 5 moderate innovators, Slovenia, Czechia, Hungary, Slovakia and Croatia out of 14 and
- 2 modest innovators, Bulgaria and Romania.

In 2019, the Regional Innovation Scoreboard was also published, which assessed the innovation performance of the 238 regions in EU, Serbia, Norway and Switzerland. The innovation performance increased in 159 regions and decreased in 79 regions. In Romania and Slovenia all regions decreased and the majority of the regions in Bulgaria, Denmark and Germany have also decreased.

**Short overview of starting point characteristics of NEG activities with focus on Danube region**

In every country a National Expert Groups (NEG) have been established and chosen by expertise and long-term experience in fields of innovation and research, as well as involvement in national and EU R&D projects. Members of the groups gave their best to fulfil needs of the projects and developed high quality recommendations on outputs and deliverables within the project. As result of the NEG meetings, groups gave not just recommendations but also fresh ideas, suggested new paths for Project development and presented quite a few plans for topics that have been discussed.

# 3. DEVELOPMENT TOOLS FOR PILOT TESTING

The 3 tools which have been developed and tested for boosting macro-regional embeddedness of Research Infrastructures:

1. A guide for public procurement of innovation;
2. A guide for aiding research infrastructures related business ecosystem (Science and Technology Parks) and
3. A roadmap for community awareness raising

- **Public procurement of innovation** is a new concept in the Interreg Danube region. European directives for public procurement were implemented but the following methodological documentation is missing – the manual for procurers, raising awareness about the possibilities of PPI and some monitoring indicators for new national procurement laws and PPI implementation.
  RI2integrate and other EU projects could help to implement PPI concept more effectively by: i) raising awareness among public procurers about possibilities of procuring the innovative solutions; ii) close the gap between the innovative and public authorities sector to know about each other and their needs and iii) to increase utilizing of innovative solution at the market and so support the hi-tech and the most innovative actors and increase the competitiveness.
  This methodology is mainly focused on public authorities and other state agencies which are responsible for distributing public funding and/or the providing public services. Mainly in the public services, the innovative solutions would bring the real added value for end users – citizens. This PPI concept is there in strong synergy with smart city trend, which combine classical public services (waste water management, security, health system) and the most innovative technologies (IT, nanotechnologies, satellite data,…).
  The final outcome of these trends should be more effective and available public services using these innovative technologies and more available and expanded innovative technologies itself at the market.

- **Roadmap for forming Science Parks** around excellent RIs was elaborated on the basis of the international trends and worldwide experience and contacts with decision makers in all the fields of interest for a science and technology parks from the first steps in a STP implementation to the needs of startups founders, banks and venture capitalists. A special attention was payed to the features of the business Eco environment development in the Danube Region and the contribution of the project partner countries described in their national reports.
  The roadmap was developed based on the day to day experience of people responsible for launching and managing science and technology parks in a Danube Region country but also on the recognized authority of the International Association of Science Parks with a good knowledge of the success or failure factors in whole world.
  The roadmap provides a guideline for setting up science and technology parks taking into account the best practices developed in the Region as well as useful information on the different approaches and results including their support programs to improve their capacity to provide useful knowledge, services and instruments.
  Science and Technology Parks are usually not technology transfer actors them self as probably are most of their tenants. As technology transfer and Intellectual Property Rights protection may become essential for tenants business training and consultancy services on these issues have to be organized and provided (see Macro regional guideline for RI embeddedness).

- **Youth awareness guidebook** intended to provide an overview of public awareness raising campaigns. It aimed to support the activities related to the world of awareness rising and overviewed possible ways of planning a campaign, presented some different approaches, applicable tools for campaigners and briefly discussed how to communicate with the youth in a awareness raising campaign. It also summarized some key factors which need to be met or considered while initiators of public awareness raising campaigns plan the process. Later an example of a science centre has been presented to show how awareness raising could be translated to the aim of this project, which intends to start awareness rising in relation to research and development infrastructures. The main goal of this pillar was to present few ideas related to public awareness raising campaigns, and did not intend to become a guideline for how to do certain awareness raising projects, it rather aimed to become a toolkit to generate discussion on the topic and stimulate new ideas for initiators.

# 4. PILOT TESTING – OVERVIEW, CONCLUSIONS AND RECOMENDATIONS ON THE LEVEL OF DANUBE REGION

**Short overview of the pilots (steps and conclusions) implemented by each partner**

**AUSTRIA**

The pilot testing was very successful. In the events, there were numerous participants, so that the knowledge about the R&D infrastructure in Styria is far better known than before.

The NEG is also a very successful event that is regularly visited not only by researchers and SME but also by medium and big enterprises. It is very clear that this format will be kept and maybe even extended in the future.

The cooperation with the Knowledge Transfer Centre South (Wissenstransferzentrum Süd - WTZ Süd) was also an important step than will be continued to be used and probably be expanded in the future.

The Knowledge Transfer Centre South (WTZ Süd) sees itself also as a mediator of know-how and knowledge between university research, science, business and society. The competences and know-how of the cooperation partners from various fields are bundled, optimized, expanded and made more accessible for the economy and society through new, innovative, creative and trans-disciplinary paths.

**CROATIA**

The timeline for the Centre calls for completion in Q3 2020 with several preparatory steps scheduled and implemented since Q1 2019. Given that full Centre resources were not available for this pilot phase, INOVAcija was unable to test the pilot tool in the state in which it will be operational. Instead, INOVAcija organized workshops and stakeholder meetings to further refine its planned activities for the Centre and to begin communicating Centre activities and goals to a wider audience in order to obtain initial feedback from as many entrepreneurs and stakeholders as possible.

Within the scope of the RI2Integrate project, INOVAcija:

- Organized a “Creative Zadar” workshop to present RI2 project activities, present the developed pilot tool and obtain feedback from entrepreneurs
- Organized 37 meetings and focus groups with national government representatives, entrepreneurs, university representatives, students and several NGOs

**CZECHIA**

Title of a pilot: Spreading a high-speed internet into small municipalities with hard-access terrain

The aim of a tender (PPI):

The aim of the tender is to test in chosen pilot municipalities the technical infrastructure for the high-speed internet connection. SIC cooperates with Czech Telecommunication Office on the new frequency broadband newly available for that type of application. Also, in cooperation with Czech Technical University, the Central Bohemia region will prepare the technical specification for the tender. The high-speed internet would help the local communities to be more in touch with daily news, smart technologies (mobile apps), etc.

The need/challenge/problem to be solved by the tender:

Target customer: Small municipality in the Central Bohemia Region –700 – 2000 inhabitants

Currently, work is underway to map hard-to-reach locations, depending on afforestation, mountain areas where it is impossible to build optical networks, various limitations, such as military broadcasting signals, which cannot meet other types of signals or other eg legal and legislative reasons, such as the impossibility of further construction of optical networks. Another obstacle may be, for example, protected landscape areas under UNESCO protection. After the mapping of the terrain (landscape) of the Central Bohemia Region will be finalized, a suitable small village with a population of 700 - 2000 will be selected, where the ICT infrastructure is not sufficiently developed.

Technical background of PPI:

The frequency band 60 GHz was opened for this technology in 2019. The tender would contain HW and system, which will enable all citizens to use high-speed internet.

Tender launch: technical specification (first half of 2020); the tender date will be specified.

**HUNGARY**

The two Hungarian partners have implemented pilot actions in all three pillars of the project. Namely, ELI-ALPS have implemented youth awareness raising pilot, while CTRIA implemented PPI, Science Park and youth awareness raising pilots as well.

PPI pilot overview and lessons learned

The aim of the pilot testing was to use the infrastructure of the public lighting system for various purposes to better the local governance, and increase the quality of life of the citizens. In this scope smart devices could be installed on the infrastructure of the public lighting system which on the one hand collect data about the traffic on the other hand offer services for the citizens and tourists (e.g. phone charger, charger for e-cars, WiFi hotspot).

The tender and the procured technology could solve several challenges and answer many needs. On the first place in the two most important streets of Martonvásár the public lighting system could be renewed. With renovating the infrastructure, changing the cables and installing new bulbs the town could save energy. Furthermore, with the new lighting system the two main roads of the town could be illuminated better which makes the traffic safer and increase the sense of security.

The main goal of the Hungarian science park pilot was to present the already implemented and planned activities for their future Science Park development (activities developed in house, activities with which its collaborators become familiar after training in a running STP or which are well understood do to its training opportunities.

The aim of the pilot was to capitalize the opportunities of the MTA ATK with creating a business ecosystem which builds on the agriinnovation, while the long term goals and objectives are: Martonvásár and the surrounding area will be leader in Hungary of agriinnovation with a vibrant economic ecosystem that capitalizes the innovation capacities of the MTA ATK. The primary goal is that the flow of knowledge and technology between the research centre and the innovative companies is facilitated.

For the recognition of science park's services and results quality: public and private entities use to help science park's activities by providing it assistance to connect easier with other actors in the academia or business environment, by delegating the management of some national programs or activities, organizing certain competitions or simply by recognizing the quality of work or the high level of some of its services.

The Science Park and the created business ecosystem will aim to capitalize the business opportunities that lie in the Centre for Agricultural Research, Hungarian Academy of Sciences. The integration of the research facilities of the MTA ATK in Martonvásár offers the opportunities to implement economic development actions. The whole business ecosystem development will focus on strengthening the connections between academia, business as well as the public sector.

As it was mentioned above the pilot action serves two long-term goals. On the one hand, it addresses the education of the youth: with non-formal education methods the science interest of students could be increased, due to this more students are expected to choose natural sciences as field of their higher education. This would have positive impact on the region and on ELI-ALPS as well. On the other hand, ELI-ALPS would become part of the mind of the local people and this way its integration to the local society would be increased.

**ROMANIA**

Science and Technology Parks (STPs) are developments of real estate (tangible) and human resources (intangible) assets in which land and buildings are used to house public and private R&D facilities, high-tech and science-based companies, support services, intellectual property and venture capital financing, planning and implementing.

An STP gives the opportunity to SMEs (RDI related, suppliers, developers, etc.) for permanent or temporary settlement within its premises. A wide range of stakeholders could be interested in supporting the development and functioning of this tool (roadmap for creating a STP) by additional information useful for better defining STP's activities.

An Implementation Concept for Research Infrastructures related Business Ecosystem was drafted and distributed to RI2Integrate project partners and to the science and technology parks pilots in order to facilitate the organization of their activities to set up and develop their STPs.

Organization of as much as possible training sessions ( beneficiaries pay around 1000 euro/each); 12 competitions yearly decide the calendar of events (an average of 4-5 workshops, weekly, with 5 to 8 participants each)

For the P2 Program (Slovenia Enterprise) the distributed support grants are of 25,000 euro; 300,000 euro funds are available for the management of in kind projects. The candidate projects have to meet some criteria such as how big is the company capital and if the owner has a minimum of 25% of the capital and if he is full time employee of the company

Participation of the University professors with innovative ideas has no restrictions but it is not so often as hoped by Venture Factory. The professors can have own businesses but they have to conclude a special memorandum with the University for own businesses or patent valorization.

The KBM Bank plays the role of venture capitalist or business angel. After the crisis many beneficiaries have been looked for foreign business angels.

Training Seminar on Science and Technology Parks: operation, financing, best practices and contribution to the development of Regional Competitiveness" was aimed at delivering theoretical and practical knowledge of European and international experience in the operation, financing, best practices and contribution to the development of the Regional Competitiveness of science and technology parks.

**SERBIA**

Starting from the situation in public procurement of innovation in the Republic of Serbia, where the imposed conclusion is that there is only the existence of awareness about the importance of research, development and innovation, as well as confirmation of that in the national strategic document, without undertaking activities and measures to encourage the development and use of public procurement of innovation, both foreseen and unforeseen, we emphasize the following as an opportunity to encourage and further implement public procurement of innovation. It is very important that all the places around Solo Banja use innovative technology that can make it easier for tourists to stay in Soko Banja. Using this technology, one of the main problems that this spa has was solved, the lack of an information panel on Soko Banja and the lack of sources for charging mobile phones and similar devices that tourists often use when visiting such places.

Conclusion is that pilot was implemented in 2019 and the effect of this new technology still need be evaluated concerning the benefit to public and estimated costs for their development. However, this was a great first step towards wider acceptance of public procurement of innovation procedures in Serbia.

**SLOVENIA**

After analyzing of Venture factory's services and cooperation process with University of Maribor for bringing idea/invention etc. to the market, the Slovenian partner looked at what could it be improved in order to offer even better support to university start-up ecosystem.

It was found out that:

- Venture factory's services are excellent, and they don't need improvements at the moment. They review their services on regular basis and update them when needed;

- Venture factory has excellent cooperation with local stakeholders and business supporting institutions as well as good cooperation with other key stakeholders and business supporting institutions on national level;
- There should be done additional promotion to university employees and their students, to even more motivate them to begin with development and commercialization of their ideas through Venture factory's guidance and program that results in establishment of start-ups;
- Entrepreneurship ecosystem, especially start-ups, would need some additional systematic financial support on national level – financial instruments and models that could be used by start-up companies;
- If there will be more established start-up companies through help and programs of Venture factory, then Venture factory would need additional infrastructure for new start-ups (offices, meeting and seminar rooms, co-working space etc.),
- Venture factory would need yearly update of new research infrastructure that is available at University of Maribor, which would help them to link their start-up companies and individuals from University of Maribor that are in process of idea development, with staff at the university that is responsible for this research infrastructure;
- University of Maribor is in the process of acquiring new research equipment in value of 30 million EUR and will inform Venture factory staff when it will be installed and provide them with list of new acquired research equipment;
- University of Maribor is in conversation with government for supporting and financing of new research infrastructure facilities with state-of-the-art research equipment that could be also at available for start-up companies within Venture factory;
- University's entrepreneurial ecosystem could need some additional national and international strategic partners,

**Regional level recommendations**

The developed and tested tools implemented and enhanced by RI2integrate are the key instruments for establishing sustainable transnational structures. They will promote the macro-regional integration of research infrastructures.

The main result of the development of tools for pilot testing is the improved transfer of scientific results into the economy of the Danube Region, taking into consideration the variety of needs in the participating countries, through the improvement of cross linkages among R&D&I, SMEs, community and government.

The public procurement policy that promotes innovation must not remain only on paper, in the form of a strategic document or the announcement of certain platforms, but it must be realized, primarily by adopting appropriate regulations, and later by their proper implementation.

There should be done additional promotion to university employees and their students, to even more motivate them to begin with development and commercialization of their ideas through entire factory's guidance and program that results in establishment of start-ups.

# 5. GENERAL OBJECTIVE OF FORTCOMING ACTIVITIES ON THE LEVEL OF DANUBE AND JOINT ACTION PLAN

General objectives of forthcoming activities at level of Danube region are:

- to establish sustainable transnational structure,
- to improve framework conditions of RI embeddedness and
- to make effective use of their utilization within the Danube region.

The developed and tested tools implemented and enhanced by RI2integrate are the key instruments. The RI2Integrate partnership has developed three main tools on RI embeddedness.

Joint Action Plan help to implement tools and proceedings to improve framework conditions of RI embeddedness and help to make effective use of their utilization opportunities within the Danube Region. Joint action plan is developed in order to increase the integration of RIs' activity to the economic ecosystem and durable the project results. The Joint Action Plan is covering all 3 developed tools and aimed at preparing the utilization of the RI embeddedness tools covering all Danube countries.

| | ACTIVITIES | TIMELINE | INSTITUTIONS INVOLVED |
|---|---|---|---|
| 1 | Operation of International Committee (IC) grounded by the Memorandum of Understanding | Continuous after project end | Members of the IC with the leadership of ELI-ALPS |
| 2 | Promotion of results to enable the utilization of newly developed solutions | Continuous after project end | Project partnership and networking partners |
| 3 | Promotion and utilization of RI2Integrate tools | Continuous after project end | Project partnership and networking partners |
| 4 | PPI tool utilization | Continuous after project end | PPs – regulatory bodies |
| 5 | Science Park tool utilization | Continuous after project end | PPs + IC members |
| 6 | Awareness raising tool utilization | Continuous after project end | Project partners and cooperating partners. |
| 7 | Knowledge transfer training upon individual requests | Continuous after project end | Project partnership. |

| | | | |
|---|---|---|---|
| 8 | Continuous cooperation with policy responsible bodies at national/regional level | Continuous after project end | PPs internally and policy responsible bodies at national/regional level |
| 9 | Continuous cooperation with related EU initiatives. | Continuous after project end | PPs + other IC members |
| 10 | Cooperation with PPI-related organizations | 6 monthly meetings after project end | PPs, Central European Innovation Procurement Network |
| 11 | Participation on relevant events/knowledge sharing | 2 events per year from 2020 | PPs + IC members |
| 12 | Cooperation with related initiatives | Continuous after project end | PPs + IC members |
| 13 | Transfer of best practices, knowledge and solutions between Danube countries | Continuous after project end | Project partners and cooperating partners. |
| 14 | Promoting policy recommendations to policy decision-makers | Continuous after project end | PPs internally and policy responsible bodies at national/regional level |
| 15 | Preparing proposals for common future policy and project initiatives | Continuous after project end | PPs + IC members |

ALL NATIONAL PLANS SHOULD COVER PERIOD OF TWO YEARS FROM 2020 TO 2021.

List of National action plans:

**AUSTRIA**

| No | Action | Short description | Due date | Institutions involved |
|---|---|---|---|---|
| 1. | Training course/ workshops for schools | Michael Ulm: Module Practical Work with Facebook, 1 hour<br><br>Klaus Gebeshuber/Martin Fruhmann: Modul IT Security, 1 hour<br><br>Sabine Prossnegg: Privacy policy, 2 hours | Several workshops over the whole year | FH Joanneum |
| 2 | Business plan Competition | Business plan Competition for students and also non-FH person. The aim of this event is to present founders-ideas in eth field of IT | June 2020 | FH Joanneum |
| 3 | Fun Tech | In 3 days youngsters learn to work on simple it-projects in order to raise the interest for IT. | February 2020 | FH Joanneum |
| 4 | Workshop for Companies | 5 workshops on selected IT-topics will be organized in 2020. | Over the whole year | FH Joanneum |
| 5 | Open House | Research projects of the whole FH Joanneum are presented to the public | April 2020 | FH Joanneum |

**CROATIA**

| Ser no | Action | Short description | Due date | Action lead |
|---|---|---|---|---|
| 1 | Ensure CCI operations | INOVAcija will complete all procedural steps necessary to operate the CCI | Q3 2020 | INOVAcija |
| 2 | Organise an opening conference for the CCI | INOVACija will organise a large conference which will include all stakeholders and start the discussion on supporting creative and cultural industries' research and innovation potential. The conference will include a focus group of all government stakeholders to coordinate initial activities in preparation for structured cooperation on a national level. | Q3 2020 | INOVAcija |
| 3 | Organise a national stakeholder group for creative and cultural industries | Following the conference and the focus group, governmental stakeholders will designate a ministry to lead the coordination. Most likely ministries are: Ministry of Science and Education, Ministry of Economy, Entrepreneurship and Crafts or the Ministry of Regional Development and EU Funds.<br><br>At least one stakeholder group meeting is expected during 2020. | Q4 2020 | Designated Ministry |

**CZECHIA**

| No | Action | Short description | Due date | Institutions involved |
|---|---|---|---|---|
| 1. | PPI workshop for municipalities and cities – technology trends in connections to highspeed internet | Share of experience from the first PPI pilot – high-speed internet for municipalities | the second half of 2020 | SIC, municipalities, technology experts |
| 2. | Organize school excursions (ca 5) | Get the feedback from youth, students and other visitors on an actualized programme of the center | till the end of 2020 | ELI Beamlines, visitors – students |
| 3. | Organize popularization event for students with interest in science (at least one). | We would like to increase the attractiveness of science and ELI Beamlines as an infrastructure. It is the part of PR and also HR activities – internships for the student. | till the end of 2020 | students with interest in science |
| 4. | Event for the local community, the general public (at least one). | Increase the positive impact of the infrastructure into the community. | till the end of 2020 | the local community, general public |
| 5. | SIC – PPI Competence Centre | Consultations for public sphere – PPI tenders | 1.9.2019 – starting date | SIC, DEX, TC AoS CR, |

**HUNGARY**

| No | Action | Short description | Due date | Institutions involved |
|---|---|---|---|---|
| 1. | Establishment of an action group that works together on the business ecosystem development. | The goal is to have a stakeholder group which overviews the business ecosystem development, shares opinion about the ongoing process and monitor the development. | Establishment until the end of 2019, continuous operation after that | CTRIA, HAS, Chamber of Commerce and Industry |
| 2. | Training and workshops to facilitate the cooperation of different actors. | The goal is to increase knowledge of different stakeholders on R&D utilization. | End of 2020 | Managed by CTRIA National Researc, Development Innovation Office |
| 3. | Establishment of science and technology part and the business incubator in Martonvásár. | The aim is to create welcoming infrastructure and services for highly innovative companies and to create business revenue from the knowledge created by MTA ATK. | End of 2020 | Hungarian Academy of Sciences |
| 4. | Establishment of venture capital fund which supports spin-offs and start-ups. | Acceleration of financial support for innovative SMEs. | End of 2020 | Hungarian Academy of Sciences, CTRIA |
| 5. | Accelerating cooperation on PPI | Support procurers and SMEs on using PPI as an effective tool. | Mid 2020 | Central European PPI Network, managed by CTRIA |

| | | | | |
|---|---|---|---|---|
| 6. | PPI training for procurers and SMEs | Develop a training methodology and implementing regional trainings | End of 2020 | National Public Procurement Council, CTRIA |
| 7. | Develop and implement a visitor centre at ELI-ALPS | To assure the promotion and awareness for youth along a long-term strategy it ELI-ALPS | End of 2020 | ELI-ALPS |
| 8. | Integrate STEM awareness issues into national curricula | Developing and integrating training modules to primary and secondary school curricula at national level. | Mid 2021 | CTRIA, Innoschool INTEREG Danube project partnership |

**ROMANIA**

| No | Action | Short description | Due date | Institutions involved |
|---|---|---|---|---|
| **I. Magurele Science Park** | | | | |
| | **A. Finding and declaring common interest and possible intervention (continuation of the implementation plan)** | | | |
| 1 | Discuss and agree upon a Collaboration Agreement for setting up Magurele Science Park as a Joint Venture | The execution of the Joint Venture Agreement and organization of the management bodies of MSP Consortium | 19/12/18 | Ilfov County Council, IFIN-HH, Magurele City Council (MSP Consortium) |
| 2 | Appoint the Manager for the administration of the Ilfov Business Hub incubator | Manage the business incubator and provide specific services for start-ups | 27/03/19 | Ilfov County Council |
| 3 | Set up the MSP management company | Adopt measures for the authorization of MSP as a science park. Build a motivated skilled team to manage the science park | 24/04/19 | Ilfov County Council / MSP Consortium |
| 4 | Initiate the measures in order to authorize the Magurele Science Park Consortium as science and technology park | Prepare the necessary documents | 31/08/19 | Magurele Science Park SRL (the management company) |
| 5 | Organize the Workshop on MSP current status, vision and future plans | The participants will review the current status and discuss vision, future plans, collaboration with stakeholders, time scheduling and financing, Digital Innovation Hub, potential space requirements | 03/09/19 | Ilfov County Council / MSP Association |
| 6 | Organize the Workshop on MSP current status, vision and future plans | The participants will review the current status and discuss vision, future plans, collaboration with | 03/09/19 | Ilfov County Council / MSP Association |

| | | | | |
|---|---|---|---|---|
| | | stakeholders, time scheduling and financing, Digital Innovation Hub, potential space requirements | | |
| 7 | Initiate measures order to authorize the Magurele Science Park Association as an infrastructure entity (Centre for Technological Transfer) | Prepare the necessary documents | 31/01/20 | Magurele Science Park Association |
| **B. Funding opportunities and solutions** | | | | |
| 1 | Conclude the Technical Advisory Agreement between Ilfov County Council and EIB (through the Advisory Hub) in order to develop the public procurement procedures necessary to contract the services for the development of Magurele Science Park and develop the business plan | Documentation, drafting, consultations | 20/02/19 | Ilfov County Council |
| 2 | Prepare the business plan and the documentation concerning the public procurement procedures for the technical project and the execution details for the Advisory Hub (EIB); | Documentation, drafting, consultations | 01/07/19 | Ilfov County Council |
| 3 | Start the procedures for the development of the technical project; | Documentation, drafting, consultations | 01/07/19 | Ilfov County Council |
| 4 | Finalize the negotiations with EIB in order to obtain a reimbursable financial support of Euro 15 million to finance the construction of Măgurele Science Park | Documentation, drafting, consultations | 31/10/19 | Ilfov County Council |

| | | | | |
|---|---|---|---|---|
| 5 | Start the procurement process for the technical project | Preparation of the public procurement procedures | 31/01/20 | Ilfov County Council |
| 6 | Procure the execution details | Preparation of the public procurement<br>procedures | 31/10/20 | Ilfov County Council |
| 7 | Start the execution works of Magurele Science Park buildings | | 31/03/21 | Ilfov County Council |
| **C. Networking, facility sharing** | | | | |
| 1 | Prepare a mapping of the existing local and regional interests in the activity fields of the science park | Organize meetings, discuss different issues of interest for SMEs and individual people, ask for needs and collaboration requirements, build trust and search for future common interest and activities | To be decided (tbd) | Ilfov County Council /MSP |
| 2 | Consider membership in the already existing networks connected with your science park's main activities | Consider future partners for common interest and activities on clear collaboration criteria | tbd | Ilfov County Council /MSP |
| 3 | Become attractive for other networks by offering recognition and quality services | Choose services for which there are already available adequate human resources and needed skills and organize training sessions for their improvement | tbd | Ilfov County Council /MSP |
| 4 | Ensure a strong connection with the academic and business environment and participate in joint projects | Develop and train a strong team with clear ideas, expertise and motivation; support takeover of the available best practice | tbd | Ilfov County Council /MSP |
| 5 | Establish a regional entrepreneurial ecosystem network | Build the necessary links with potential partners based on mutual support and collaboration | tbd | Ilfov County Council /MSP |

| | | | | |
|---|---|---|---|---|
| **D. Consultations with RIs and companies, including SMEs, about science park activities** | | | | |
| 1 | Consider the conclusions of the mapping for pilot Science Park concept delivered last year | Draft a brief action plan with clear terms and responsibilities | tbd | Ilfov County Council /MSP |
| 2 | Set up the start-up program (structure, content, possible partners for offering knowledge and experience on different business fields – entrepreneurial skills, mentoring, consultations, workshops, etc.) | Draft an ambitious action plan with clear terms and people responsibilities | tbd | Ilfov County Council /MSP |
| 3 | Establish a "pool of mentors" for providing quality services for incubates | Find adequate experts and attract them in future activities | tbd | Ilfov County Council /MSP |
| **E. Training for SMEs and RIs on how to cooperate in the pilot Science Park (implemented or planned training actions)** | | | | |
| 1 | Train the trainers on how to pass on the knowledge and experience to start-ups | This has to be a basic activity in the first months and years | tbd | Ilfov County Council /MSP |
| 2 | Organize promotion events to motivate stakeholders (mentors, potential start-ups, and SME) for cooperation / use of supporting programs and facilities | Draft an ambitious action plan with clear targets, terms and people responsibilities | tbd | Ilfov County Council /MSP |
| **II. Proposals for actions to improve RI related eco-environment at national level and in the Danube Region** | | | | |
| 1 | Support the creation of the Danube Region Science and Technology Parks and Start-ups Network | Spread best practice and exchange specialized human resources | tbd | tbd |
| 2 | Facilitate national and European networking organisations and activities of science and technology | | tbd | tbd |

| | | | | |
|---|---|---|---|---|
| | parks, business incubators, start-ups and spin-offs aimed at spreading best practices; | | | |
| 3 | Promote measures for training of human resources specific for science and technology parks, business incubators, start-ups and spin-offs, including entrepreneurial skills and management issues; | | tbd | tbd |
| 4 | Support science and technology parks, business incubators, accelerators, start-ups, spin-offs through the organization of competitions and national awards, promoting and recognizing the best quality achievements and results based on clear European international selection criteria; | | tbd | tbd |

**SERBIA**

| No | Action | Short description | Due date | Institutions involved |
|---|---|---|---|---|
| 1 | PPI Workshops with municipalities | Share developed PPI tool with persons responsible for R&D and team responsible for PP | 2020-2021 | RAS, Municipalities |
| 2 | PPI Workshops with Regional Development Agencies | Share developed tool with regional development agencies. | Q2-Q4 2020 | RAS, Serbian Regional Development Agencies |
| 3 | PPI Workshops with major public enterprises | Share developed tool with major public enterprises (public utilities, sanitation etc.) | 2020-2021 | RAS, public enterprises |
| 4 | PPI conference for all RI2integrate project stakeholders | Share and discuss implementation of developed tool with stakeholders (RI institutions, government institutions, educational institutions, Chambers of Commerce, Business comunity etc.) | Q4 2020 | RAS, RI2integrate stakeholders |
| 5 | Open house in Science Parks in Belgrade, Novi Sad and Kragujevac | Organise and implement open house event for students in science parks (high schools and universities) to attract young people to study and engage in scientific work | Q3 2021 | RAS, Science Parks in Belgrade, Novi Sad and Kragujevac |
| 6 | Technology Transfer Workshops with business community | Organise end implement technology transfer workshops with target companies that are working with RI and interested in innovation and technology transfer (Belgrade, Novi Sad, Nis, Kragujevac, Kraljevo, Cacak, Uzice) | 2020-2021 | RAS, R2Integrate target companies in Serbia |

**SLOVENIA**

| No | Action | Short description | Due date | Institutions involved |
|---|---|---|---|---|
| 1. | VC-UM work group | Establishment of workgroup that would meet once a year to review current state of cooperation and try to find solution to improve it. | 31.12.2020 | Venture factory,<br>University of Maribor |
| 2. | Promotion of Venture factory (VC) at University of Maribor | Implementation of workshops for presentation of VC and its activities and services they offer for students, professors and researchers. | 31.12.2020 | Venture factory,<br>University of Maribor |
| 3. | Presentation of new research infrastructure to VC staff | Presentation of new research infrastructure to VC staff | 31.12.2021 | University of Maribor |

# 7. JOINT ACTION PLAN - CONCLUSIONS AND RECCOMENDATIONS

The main conclusion is that each of the RI2Integrate project partners has committed itself to implement all of the proposed activities in national action plans. These action plans are good foundation for successful embedment of high quality research infrastructure in the Danube region.

RI2integrate brought together 4 types of organizations dedicated to sustainable improvement of their services for the sake of RI embeddedness support. Sustainability of the project's achievements, practices, networks and policy implementation have been ensured by involving policymakers and representatives of existing innovation networks in Ri2integrate project management structures as well as by events and active collaboration with these actors in knowledge transfer activities.

The main result of the project is successful exploitation of the economic development potential of excellent research infrastructures at Danube Region level. This will result in improved transfer of scientific results into the economy in the Danube Region, in line with the different needs of the participating countries.

The common challenge for RI2integrate project was to accelerate macro-regional embeddedness of RIs in the Danube Region (on the basis of the ELI network) with involving all interest groups or all RI2Integrate project stakeholders. Successfully communicated activities have resulted in the preparation of instruments, which have been validated and improved through realized pilot projects. The acquired knowledge would be further promoted and disseminated in the Danube Region through a joint action plan and a project sustainability plan.

The implementation of the defined durability actions in the Durability Plan (DTP1-184-1.1 „RI2integrate") would be continuously monitored. By the results of the monitoring, further improvement and changes will be done. The responsible body for the improvement is RI2Integrate International Committee (IC), led by ELI-ALPS.

These improvements were defined in the Memorandum of Understanding:

- Promotion of RI2Integrate Project results
- Open networking for RI utilization issues
- Encouraging use of common tools in order to establish unified RI embeddedness mechanisms in Danube Region
- Enabling transfer of best practices, knowledge and solutions between Danube countries
- Promoting policy recommendations to policy decision-makers
- Preparing proposals for common future policy and project initiatives
- Cooperation in connection with knowledge sharing on RI embeddedness

That means that through these activities, not only is the R&D infrastructure widely known in the region but also the exploitation of the infrastructure as well through the use of other researchers or companies has increased as well as the exploitation of R&D results of the infrastructure itself.

RI2Integrate has improved strategic frameworks and cooperation in order to build up excellent research infrastructure in the Danube region. This infrastructure has been realized through developing a new networking platform and tools along QH with the involvement of R&D institutions, public authorities.

Sustainability of the project's achievements, practices, networks and policy implementation have been ensured by involving policymakers and representatives of existing innovation networks in Ri2integrate project management structures as well as by events and active collaboration with these actors in knowledge transfer activities. The developed and tested tools implemented and enhanced by RI2integrate are the key instruments for establishing sustainable transnational structures.

Following the given framework conditions, RI2Integrate project partners have implemented all planned activities and successfully supported RI embeddedness. As the partnership is committed to sustain the results achieved and accelerate further collaboration in the related topics, the current durability is given to define and support the follow-up activities.

**Recommendations**

- The main recommendation is to implement national action plans. Each of the RI2Integrate project partners has invested considerable time and effort to create National action plans. These action plans are sound and reasonable, based on real data, so their implementation should not encounter any serious problems or obstacles.
- Creating new collaborative projects between RI2Integrate partners to enable further improvement of cross-linkages among the R&D, SMEs, community and government.
- New cooperation between partners could be accomplished by further development of existing National action plans, according to new opportunities arising from rapid digitalization.
- Utilizing existing partnerships for other currently available or forthcoming EU projects.