

Sharing Strategies for European Research
and Innovation Infrastructure
(INNO INFRA SHARE)

**Action Plan
(South Moravian Region)**

Brno University of Technology

July 4, 2019

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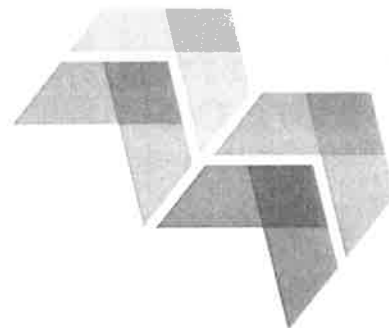
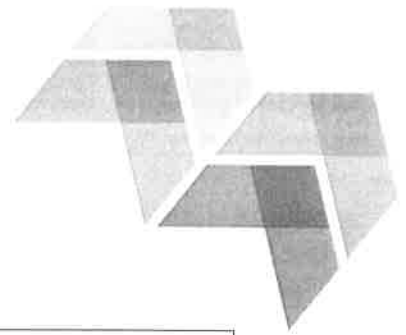


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1. General information

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2. Introduction

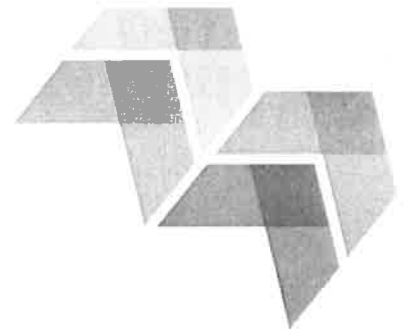
The goal of INNO INFRA SHARE (Sharing Strategies for European Research and Innovation Infrastructures) project is to improve the accessibility and the exploitation of local Research and Innovation Infrastructure (RII) assets by Small and Medium Enterprises (SMEs).

RIIs have got the potential to serve as enablers of competitiveness and growth for local SMEs and foreign users, especially in the areas of Key Enabling Technologies (KETs). To unleash this potential, project partners have jointly worked towards adding a market-driven dimension to the research and technological one, by networking and promoting collaboration opportunities at the regional and international level and by addressing national and regional RIIs relevant policy instruments.

The project partnership covers 8 European regions from Italy to the Netherlands, Belgium, Germany, Latvia, Estonia, the Czech Republic and Sweden, all of them with common RIS3 smart specialization priorities. The project partners are the Aster Consortium (Italy), the Brainport Development (Netherlands), the Vidzeme Planning Region (Latvia), the Tartu City Government (Estonia), the Research Center Flanders Make (Belgium), the Skåne Region (Sweden), Brno University of Technology (Czech Republic) and Technical University Chemnitz (Germany).

The project has got 2 phases. During the first phase in 2017 and 2018 the project partners have undertaken the joint learning and collaboration process, involving regional and national stakeholders, who contributed to the design and implementation of 8 Action plans in the respective project partners' territories to improve the selected policy instruments and positively affect RIIs and improve their accessibility by SMEs. The learning and collaboration process has also included activities such as interregional study visits, interregional peer reviews, regional policy learning workshops, regional stakeholder group meetings, mapping of RIIs, analysing the regional context and defining regional good practices.

The second phase in 2019 – 2020 will cover the implementation and monitoring of the Action plans submitted in the first phase.



3. Policy context

For the South Moravian Region and the Brno University of Technology as the project partner and one of the partners of the Central European Institute of Technology (CEITEC) consortium (which is one of the European Centers of Excellence established in the Czech Republic), the selected policy instrument is the Operational Program Research, Development and Education.

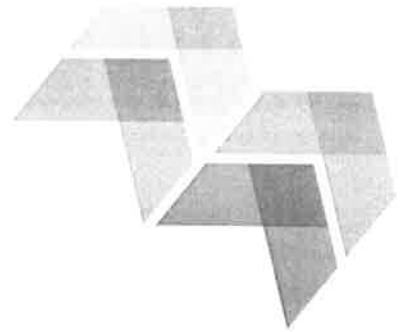
The Operational Program Research, Development and Education (in Czech abbreviated as the OP VVV) is a multi-annual thematic program under the responsibility of the Ministry of Education, Youth and Sports of the Czech Republic, during which it is possible to draw funds from the European Union. The aim of the OP VVV is to contribute to the Czech Republic's shift towards an economy based on an educated, motivated and creative workforce, on the production of quality research results and their use in increasing the competitiveness of the Czech Republic. The implementation of the Operational Program Research, Development and Education takes place at several levels. The Managing Authority - Ministry of Education, Youth and Sports is responsible for the correct and effective management of the OP VVV. During the stakeholders meeting, the managing authority was acquainted with the contents of the Action plan but because of lack of the final version of Action plan, they don't sign the document yet.

CEITEC is a unique research centre focusing primarily on the fields of life sciences, advanced materials and nanotechnologies. Since its establishment in 2011, CEITEC has quickly developed into a cutting-edge infrastructure for research which performs highly alongside the best institutes in Europe. Among the main priorities of CEITEC are the promotion of a motivating and dynamic international scientific environment, the provision of state-of-the-art research infrastructure, and the policy of open communication and equal opportunities.

3.1. South Moravian Region

The South Moravian Region is considered to be the crossroads of Europe for its advantageous position on the border with two EU countries and on the Mediterranean link with Central and Northern Europe. The South Moravian region's foreign neighbors are Slovakia in the east and Austria in the south of the territory. Within the republic, it is gradually taken from the west to the northeast of the South Bohemian, Vysočina, Pardubický, Olomoucký and Zlínský regions.

The South Moravian Region belongs to regions with significant economic potential. The generated Gross Domestic Product of the Region represents one tenth of the Gross Domestic Product of the Czech Republic. Due to the industrial tradition of Brno and its surroundings, the manufacturing industry still has a dominant position in the economy of the region; it is also possible to forget the trade and repairs of consumer goods and the so-called commercial service. Traditional agriculture, especially in southern regions, is agriculture, with almost 60% of the total area of the region being agricultural land, which accounts for 83% of arable land. The highest degree of pollination (the share of arable land in agricultural) is in the Vyškov and Znojmo districts. In terms of production areas, agriculture is mainly targeted at cereals, grape and sugar.



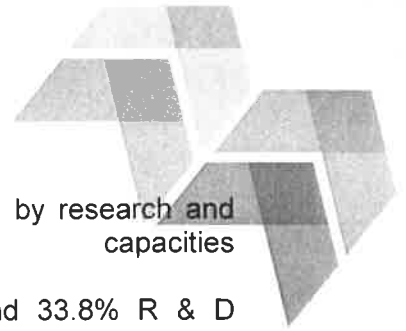
The share of region in R & D capacities of enterprises in the CR is 15.1% according to R & D personnel and 16.0% according to R & D expenditure. In terms of RIS, the dynamic growth of the number of companies that implement their own R & D is important. According to this parameter, the region is the most successful in the Czech Republic. The number of companies with their own R & D in the Czech Republic increased by 527 firms in 2006-2011. Of these, 104 companies (19.7%) belong to the region. Overall, in 2011 there were 367 companies with own R & D in the Region.

The sectorial structure of business R & D expenditure is important for targeting the regional innovation strategy. Out of a total of CZK 6.2 billion of R & D spending, two thirds of the company's R & D spending is on key sectors - the electrical, electronics, engineering and IT industries. Large R & D capacities have domestic firms (e.g. Alta, Zetor, Tescan etc.) and foreign companies (e.g. Honeywell, FEI, ABB etc.) in the region. In Brno, R & D activities are carried out by over 10 world-leading companies, while others are gradually growing. Industrial tradition, quality of engineers and university capacities, which are a source of highly qualified people, together with the existing concentration of enterprise R & D, create suitable conditions for the development of production in technologically demanding industrial fields. Similarly for services linked to technologically (demanding) demanding industrial production.

Priority economic sectors of the region: mechanical engineering (NACE 25,28); Electrical engineering (NACE 26, 27, 33), ICT (NACE 61, 62, 63) and life sciences (NACE 01, 10, 21, 86).

The South Moravian Region has been supporting research and innovation since 2003, when the first generation RIS was discussed. The region continuously supports the activities of South Moravian Innovation Centre - JIC (30 million CZK / year), South Moravian Center for International Mobility (CZK 10 million / year), Regional Development Agency of South Moravia (CZK 12 million / year). The region is the winner of the SoMoPro program (I., II.), whose purpose is to fund the arrival of foreigners and the return of Czech scientists to the region. The program size was CZK 95 million for SoMoPro I (2009-2013), CZK 105 million for SoMoPro II. (2012-2015). The region has invested five million Czech crowns into the Micro Loan Fund (JIC) by JIC since 2005 to finance innovative start-ups. The region has made several investments to support the development of innovative infrastructure: the construction of the Technological Incubator II. (120 million CZK); Construction of the INBIT biotechnological incubator and purchase of research equipment (CZK 160 million); Construction of the INMEC Science and Technology Park (CZK 394 million); Construction of the Competence Center of Kuřim machine tools and acquisition of research equipment (CZK 72 million); Construction of the Moravian Science Center Brno and purchase of the exhibition (CZK 596 million).

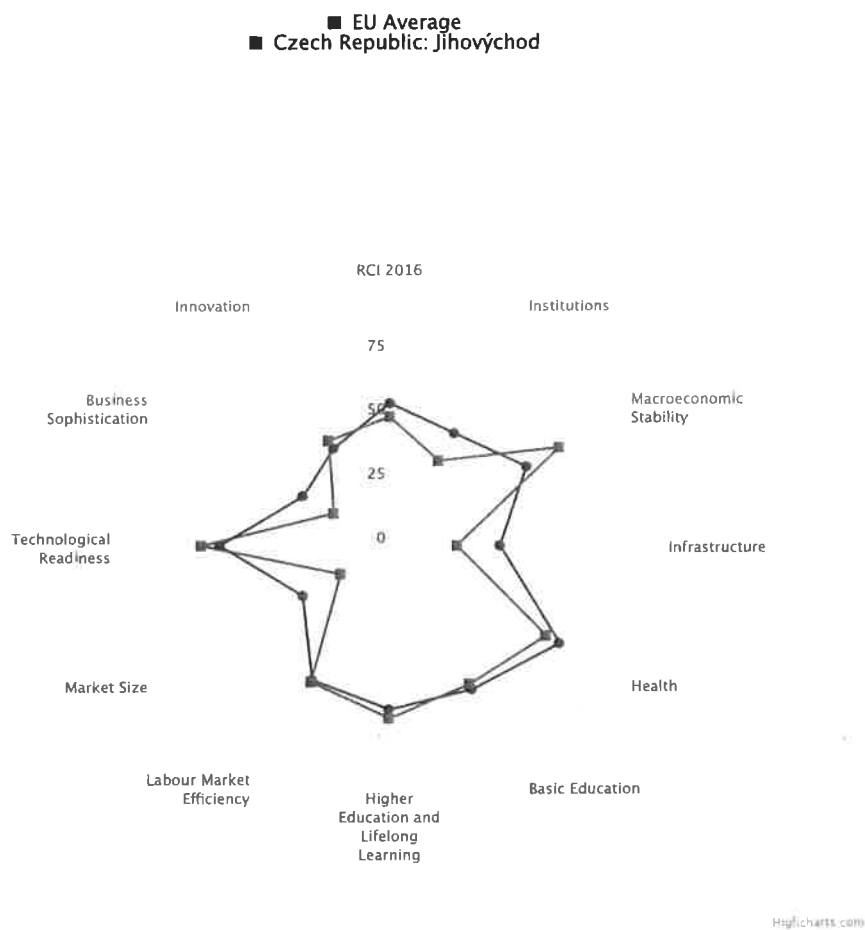
According to the extent of research and development, the region, after Prague has the most suitable conditions for the development of the knowledge economy. Its share in the total number R & D spending in 2012 amounted to 20.3% of total spending in the Czech Republic. The share of GDP is 10.5%. By number of employees in research and development, this share is 18.8%. The regional innovation system can be divided into the creators of new knowledge (most often research organizations) and their users (especially companies, but also other subjects in the field of use - eg hospitals). If it is about the research organizations, the region after Prague is the second most important region in the Czech Republic. The reason is mainly concentration the capacity of the



University in Brno. The share of the region in relation to the CR by research and development capacities

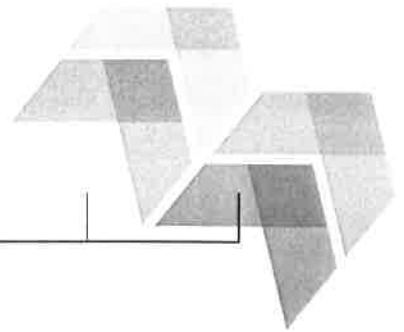
in the "higher education" sector reached 27.4% employees and 33.8% R & D expenditure. A large difference in the share of expenditure and employment in research and development in the higher education sector is related to extraordinary investments of research centers supported by OP RDI 2007-2013. Besides colleges, there are also in Brno 8 institutes of the Academy of Sciences of the Czech Republic. The share of region in the R & D sector in the "government sector" is 12.3% and 12.9% of R & D expenditure.

The region according to the European Regional Competitiveness Index compared to the EU average:



The region GDP/GDP per capita value compared to the EU average:

	2011	2012	2013	2014	2015
GDP development at comparable prices (Previous year = 100)	103,2	101,4	102,7	102,6	104
Gross domestic product, total (mil. CZK)	421 653	434 334	452 931	473 554	498 757
Gross domestic product	362 048	372 135	387 592	404 513	424 994



per 1 inhabitant (CZK)

3.2. Policy instrument

The selected policy instrument targeted in the project is the Operational Program Research, Development and Education (2014 – 2020), in Czech abbreviated as the OP VVV. It is a multi-annual thematic program under the responsibility of the Ministry of Education, Youth and Sports of the Czech Republic, during which it is possible to draw funds from the European Union. The aim of the OP VVV is to contribute to the Czech Republic's shift towards an economy based on an educated, motivated and creative workforce, on the production of quality research results and their use in increasing the competitiveness of the Czech Republic. The implementation of the Operational Program Research, Development and Education takes place at several levels. The Managing Authority - Ministry of Education, Youth and Sports is responsible for the correct and effective management of the OP VVV.

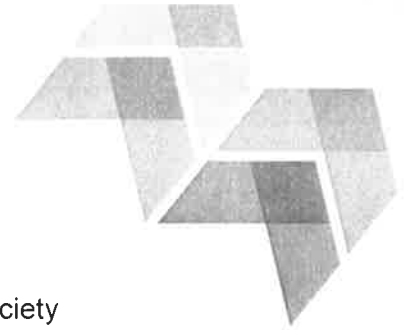
The key principle of the OP VVV is the development of human resources for the knowledge economy and sustainable development in a socially cohesive society and is supported by interventions within more priority axes. This is followed by the topic of support for quality research, for which the skilled labor force is a key input factor. Interventions in the field of education will also be supported by systemic changes aimed at improving the education system of the Czech Republic.

Priority Axis 1: Capacity building for quality research (ERDF) is aimed at achieving the top level of Czech research on an international scale, improving cooperation in research, improving the quality of infrastructure for the preparation of future researchers.

Priority Axis 2: Development of higher education and human resources for research and development (ESF/ERDF) aims at improving and openness of education at universities together with improving the strategic management of higher education institutions, the development of human resources for research and development, including the support of teaching related to research, the improvement of infrastructure conditions for improvement and the openness of education at higher education institutions.

Priority Axis 3: Equal access to quality pre-primary, primary and secondary education (ESF) is focusing on education for the social integration of children and pupils with special educational needs, improving the quality of pre-school education including facilitating the transition of children to elementary schools, improving the quality of education and learning outcomes. key competencies, developing strategic management and quality assessment in education, improving the quality of training for future and new pedagogical staff, improving the quality of education and training, including enhancing their relevance to the labor market.

The key principle of OP VVV is the development of human resources for the knowledge economy in a socially cohesive society. It is linked to the topic of support for quality research, for which a skilled workforce is a key input factor. Interventions in education will also be supported by system changes aimed at improving the education system of our country. The areas of OP VVV interventions therefore include:



- Promoting equality and quality in education
- Developing better competencies for the labor market
- Capacity building for quality research and its contribution to society

The identification of the Czech Republic's problems and needs in the areas of research and education as well as the follow-up definition of specific objectives for the OP VVV is a synthesis of the results of problem analyzes of basic strategic documents of the Czech Republic supplemented by a number of other specific documents and studies. Significant investments in the production of new knowledge, increasing the quality of human resources and linking the research and business sphere in line with the concept of smart specialization. These steps will accelerate the structural shift of the Czech Republic towards the knowledge economy, to an economy based on an educated workforce, using high technology, production of quality research results and their transformation into innovation and the competitive advantages of Czech companies.

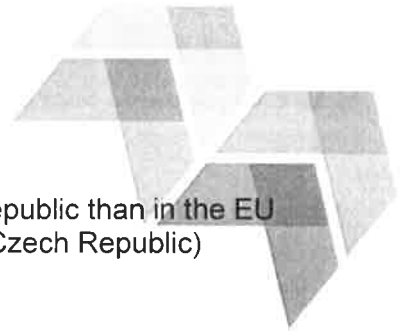
In the OP VVV program, 1,4mld € in the priority axis 1 has been already funded (0,1mld € still planned to be funded) and 0,9mld € in the priority axis 2 has been already funded (0,1mld € still planned to be funded) of the EU-funding, when these two axes are relevant from the project point of view. Within the planned funding there is 0,1mld € for the research infrastructures in general in the priority axis 1, 0,09mld € for the research infrastructures founded by universities in the priority axis 2 and 0,01mld € to support the National RIS3 strategy and its regional annexes. The objective of this particular call is to enable the individual regions of the Czech Republic to develop an innovative environment in accordance with the National RIS3 strategy and its regional annexes. The challenge will be to support the development and development of capacities, organizational structures and know-how at regional level so that research, development, innovation can be developed. It will also be supported by quality management of the so-called business process of discovering new opportunities at regional level. This process involves the private sector, research and education institutions, the public sector and other key local actors research infrastructures founded by universities in the priority axis 2.

3.3. Policy instrument SWOT

Within the project activities, supported with communication, meetings and interactions in particular with the stakeholders, regional RIIs and SMEs, the SWOT analysis below was created for the purpose of the project and the Action plan drafting.

Strengths

- Existence of the National Policy for Research, Development and Innovation for the years 2016-2020 and its implementation
- Developing strategic development plans (including innovation strategies) at regional level
- Attractiveness for foreign investment
- The rising impact of Czech research in recent years
- High openness of the Czech economy coupled with growth in export volumes
- Increasing competitiveness of high-tech industries
- Developed network of educational and research workplaces
- An evolving network of science and technology parks and incubators
- Strong tradition and base of technical and engineering industries
- R & D expenditure in the Czech Republic is growing faster than in EU



- The cost of one publication and quote is lower in the Czech Republic than in the EU
- Stable capital stock growth (reflects investment activity in the Czech Republic)
- Existence of tax incentives for investment in R & D

Weaknesses

- Unclassified competence for innovation at the level of state administration and the related incoherence of education policies, R & D, innovation, industrial policy, etc.
- Excessive number of R & D budget chapters
- Low share of high tech industries in industry and services and value added creation
- The R & D Evaluation System does not take into account the quality of the results and leads to an inefficient allocation of public R & D resources
- Double taxation of venture capital investments
- Rationalization of R & D at project level - insufficient concentration of financial and human resources to achieve excellence
- The unfavorable business environment (especially the complexity of tax collection and the procedural complexity of business termination)
- Absence of a tax advantage for venture capital investments (especially seed capital)
- Weak innovation culture
- Low innovation activity of industrial enterprises based on R & D results
- Insufficient cooperation between universities and research institutions with innovation infrastructure enterprises and institutions
- Insufficient participation of Czech entities in the R & D Framework Program
- Lack of innovative infrastructure support services
- High energy, raw material and material demand for production in the Czech Republic
- Insufficient R & D expenditure in the public and corporate sectors
- Inappropriate structure of R & D expenditure for the development of the knowledge economy
- Low efficiency of public and private R & D expenditure reflecting low patent activity
- Low share of private funding in public research
- Insufficient business spending on innovation
- The system of tax incentives for investment in R & D stimulates the strengthening of own R & D companies at the expense of cooperation with research institutions and other enterprises
- The predominance of the purchase of machinery and equipment in the costs of business for innovation
- Insufficient support for R & D and innovation in enterprises
- Not using venture capital to finance innovative projects
- Lack of resources for Czech companies to buy foreign licenses
- The fragmentation of R & D funding from the state budget

Opportunities

- Improving conditions for the arrival of qualified workers in the Czech Republic
- Increasing the interest of companies (especially high-tech) in R & D in the Czech Republic due to the growth of the knowledge-intensive production
- Creating a stimulating environment for the use of public procurement to promote innovation
- High investment activity creating the potential for growth of the Czech competitiveness
- Adoption of the R & D reform leading to the effective allocation of public R & D resources and increasing the interest of universities and R & D in transferring knowledge
- Inflow of foreign investments into technologically demanding sectors and location of R & D of multinational companies in the Czech Republic
- Development of innovative infrastructure services using EU Structural Funds (ESF - ERDF –

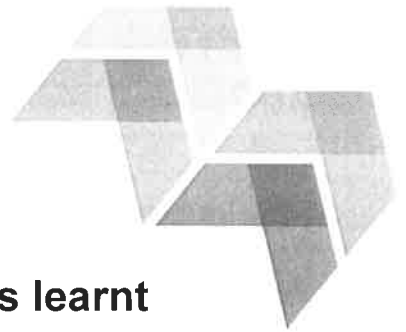


DGR funds)

- Promoting the interconnection of information networks of national and European R&Ds
- Stimulation for the involvement of Czech subjects in international cooperation in R & D and innovation
- Using technology foresight to target R & D resources on key themes
- Reducing energy demands by seeking new ways (eco-innovation)
- Change of the university management system leading to increased interest in cooperation with the application sphere
- Stimulation of cooperation between research and application sphere
- Rising R & D spending, commercialization of results and introduction of innovations using EU Structural Funds
- Creating a stimulating tax environment for venture capital investments (elimination of double taxation, allowing investment of pension funds and insurance companies, tax relief for VC and business angels)
- Inflow of foreign investments into technologically demanding sectors and location of R & D of multinational companies in the Czech Republic
- High investment activity generating the potential for growth of the competitiveness of enterprises in the Czech Republic
- Increasing the interest of companies in patents and innovations due to the strengthening of their capital strength and the transition from labor-intensive production to technologically intensive production
- Use of public procurement to promote innovation
- Introduction of tax incentives for the purchase of R & D enterprises from research institutions and universities

Threats

- Decrease in research quality and utilization of its results due to the insufficient link between public support to the evaluation of R & D results
- Decline in competitiveness of Czech enterprises
- Insufficient coherence of ESF support with R & D and innovation reforms and tertiary education
- Decline in economic stability in the context of an unregulated economic cycle with the EU
- Growth of regional disparities and the emergence of a dual economy (including inequitable use of ESF)
- Decline in attractiveness of the Czech Republic for foreign investment in R & D and technologically demanding production
- Insufficient use of research infrastructure built from EU Structural Funds
- Decline in industrial competitiveness in relation to rising energy and raw material prices
- Deepening the isolation of public R & D
- The dependence of the public research infrastructure newly built from the EU Structural Funds solely on public budget resources
- Decline in attractiveness of the Czech Republic for direct foreign investment
- Inefficient use of the ESF to fund excessive training programs



4. Interregional project findings and lessons learnt

The project brought, through the study visits and peer reviews in the phase 1 crucial acknowledgements useful for the Action plan drafting. From the Action plan drafting point of view, the following key interregional learning activity/process have been identified: the peer reviews (Brno and Skåne), the Materials Business Center (Region Skåne) Good Practice (GP) with its connection of industry, entrepreneurs, research institutes and universities, collaboration between region, university and industry, operated by regional authority and use of EU funds (ERDF) and the HOLST Centre (Brainport Eindhoven) GP with its, cross-border open innovation and public-private collaboration, leveraging on the experience of founding Flemish/Dutch partners Imec/TNO.

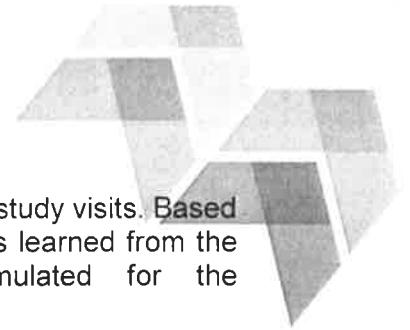
In particular the experience shared during the Peer review in Brno (with South Moravian Region, Vidzeme, Tartu, Saxony) and finally the conclusion, when even although different partners face different obstacles or issues to solve or improve in terms of the particular policy instruments, there are still clear common principles, has had the main impact and means the highest value for the Action plan. Interregional or international cooperation is necessary. Easy rules means high value in term of accessibility to whatever type of cooperation. International partners with a different experience and different point of view are capable to define and share exactly the point of improvement necessary and beneficiary to each other. These points are the topics to be highlighted as results of this process.

In more common point of view, the intensive program, the heavy load of knowledge and experience transferred, wide range of specific, targeted and detail success stories from the regional ecosystems, presented during the study visits and above all the interaction between the project partners, stakeholders involved from each partner region, local stakeholders and players in field of the regional RII, these were also highly valuable inputs to further discussions with the SMEs, research and innovation infrastructures and stakeholders here to define the aim, the purpose and the matter of the Action plan. The combination of presentation of various local bodies/players, their facilities, background, infrastructure, activities in field of RDI and cooperation with industry on one side and true face to face lectures and training on particular selected issues typical for the local ecosystem was highly valuable in terms of knowledge transfer.

4.1. Project findings and lessons learnt transposition basis

To improve the selected policy instrument through the Action plan drafted in the phase 1 of the project and then the Action plan implementation in the phase 2 of the project, we have first identified with the stakeholders, who include the policy responsible bodies, the Ministry of Education, Youth and Sports and the Ministry of Regional Development (Vladimíra Polišenská from Ministry of Regional Development, Inka Vaverková from Ministry of Education, Youth and Sports), during organized bilateral face to face meetings and stakeholder group meetings, topics that should be improved. The identified topics, we have faced them to real SMEs and regional research and innovation infrastructures (RIIs) during organized bilateral face to face meetings. However, the Managing Authority hasn't formally confirmed the final Action plan.

We have then compared our conclusions with the GPs and regional context analysis



(RCA) of the project partners and lessons learned from the project study visits. Based on the topics, feedback from SMEs and regional RIIs and lessons learned from the study visits and the GPs and RCAs we have formulated for the

purpose of the peer reviews our strategy for the Action plan. The peer reviews have given us the feedback on the designed actions from the project partners and experts and let us formulated the Action plan we can present.

4.2. Conclusions for the Action plan

Targeted improvements of the policy instrument:

- implementation of new projects (focus on interregional cooperation between R&D and application sphere)
- improvement in the management of the policy instrument (new methodology, management, evaluation models)
- change in the strategic focus (research infrastructures development to be supported)
- specific calls to support existing research infrastructures

Main issues identified:

- policy instrument is too wide, in fact support of SME - RIIs cooperation in R & D is low, main focus is on education, inclusion and so on
- only excellence in R&D can be supported, not development
- only TRL 1-3 activities can be supported (TRL 3-10 activities are supported by different policy instruments)
- policy instrument is based on the ESF (DGE), which seems to be a wrong and limited way, it needs to be changed in terms of DGR programs and further national support
- policy instrument does not allow strategic improvement within the targeted area, but only particular, what will be the next, in the next program 2020+?

Learnings from the study visits:

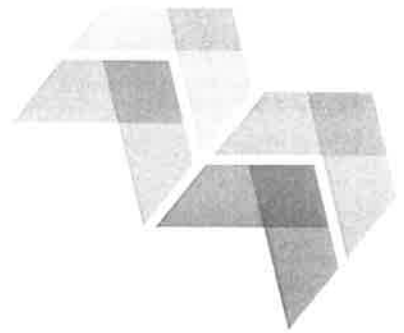
- interregional cooperation is possible and must be supported
- GPs were identified, it can be useful (methodology, management, evaluation models)
- strategic focus is one of key elements of success

Learnings from the stakeholder group meetings:

- issues and challenges across the project partners are more or less similar, however, for the Action plan only particular targets can be achievable, not all, even not the strategic ones
- stakeholders are ready to participate in solving particular issues (including government bodies), where they can directly act

Areas of interest:

- state aid
- bureaucracy
- overlaps in different policy instruments
- consistency in strategy of RIIs
- interregional and international cooperation is the key element and must be constantly developed and supported



5. Actions of the Action plan

Based on the phase 1 project findings and lessons learnt implementation basis and the SWOT analysis, we have defined the following actions of the Action plan:

Action 1, Reducing bureaucratic burden

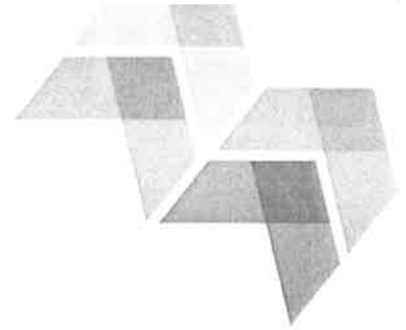
The action is connected to a partial change of methodology and management of the policy instrument. It is one of topics identified to be improved in the project in organized discussions with the stakeholders. The topic was discussed and validated as important also in discussions with SMEs and RIIIs. The topic was presented as one of possible improvements of the policy instrument to the project partners during the peer review. The peer review (the project partners and experts) provided the feedback on this topic and identified it in comparison with their practice and experience as one of important actions to be implemented (Peer Review Brno 2017, Tartu, Vidzeme, Chemnitz, Brno). The particular connections to the Inno Infra Share project activities are: Stakeholders Group, Regional Context Analysis, GPs, Peer Review. The key interregional learning activity/process is: Peer Review.

Action 2, Consistency in strategy of RIIIs

The action is connected to the GP transfer. Transferring the selected GP experience into particular program/call of the policy instrument is mentioned to improve partially the policy instrument in field of the regional innovation development and RIS. The policy instrument involves the program called the Smart Accelerator which directly supports the regional innovation development and RIS. The call is now open for the regional authorities to apply. The action aims to implement the selected GP concept to a selected region through preparation and then implementation of the regional Smart Accelerator application for the purpose of development of a selected regional RIIIs. The particular connections to the Inno Infra Share project activities are: Regional Context Analysis, GPs, Peer Review. The key interregional learning activity/lessons learned is: GP - Materials Business Center (Region Skåne), connection of industry, entrepreneurs, research institutes and universities, collaboration between region, university and industry, operated by regional authority, use of EU funds (ERDF).

Action 3, Interregional cooperation

The action is connected to the GP transfer and support of international cooperation as one of the focuses of the policy instrument. The action supports joint involvement of at least two partners of the project in preparation and realization of interregional projects and establishment of cooperation, in particular (but not limited) between German and Czech RIIIs (MERGE Cluster/TU Chemnitz/CEITEC BUT/Plastics Cluster and other subjects on both sides) with the purpose to build a cross-border open innovation and public-private collaboration. The particular connections to the Inno Infra Share project activities are: Regional Context Analysis, GPs, Peer Review. The key interregional learning activity/lessons learned is: GP - HOLST Centre (Brainport Eindhoven), cross-border open innovation and public-private collaboration, leveraging on the experience of founding Flemish/Dutch partners Imec/TNO.



5.1. Details of the actions

5.1.1 ACTION 1: Reducing bureaucratic burden

1. The background

The action was presented as one of possible improvements of the policy instrument to the project partners during the peer review. The peer review provided the feedback on this topic and identified it in comparison with their practice and experience as one of important actions to be implemented (Peer Review Brno 2017, Tartu, Vidzeme, Chemnitz, Brno). The project administration is very bureaucratic in comparing the national level to EU projects (which we are dealing on CEITEC). This fact was confirmed at the project stakeholders meetings among the partners. E.g. in national projects, providers require a list of project workers. This practice is unnecessarily complicated, taking into account that project outputs are crucial, not specific workers. In addition, more than a year may elapse between project preparation and implementation and project workers can change. The action will be taken to partially ease and simplify conditions existing in field of governance and administration of RIIs, which are limiting the practical cooperation between RIIs and SMEs. Within and among commercial/non-commercial activities in contractual research and development and collaboration between RIIs and SMEs, RIIs are limited in their activities towards SMEs (identified lower level of active approach) due to lack of clear definition within rules covering evidence of usage of laboratory equipment or instruments used by RIIs for the purpose of the cooperation with SMEs. RIIs are also limited in their activities towards SMEs due to lack of clear definition of the so-called relevant entity. This limits in fact capacities of RIIs to be open to cooperation with SMEs, in particular total yearly amount of allowed inputs from contractual research and development - commercial inputs can not get over 20% of the total capacity of the relevant entity, when at the same time there is identified uncertainty in definition of the relevant entity reporting. What is it, the relevant entity in fact? An university, a faculty, a department, a RII when based or founded as a consortium of several universities? Another way, how to make RIIs more flexible and open to cooperate with SMEs, in particular in funded collaboration projects, is to ease and simplify changes in project runtime regarding FTE/PTE distribution and its changes during the life time of the project together with unified and simplified so-called job our activity reports. It has been identified as one of critical "small" obstacles in project runtime. Solving this "small" obstacle should allow a higher level of flexibility and willingness of RIIs to cooperate with SMEs especially when using funding based on public resources (opposite there are private resources, where these obstacles simply do not exist). Unclear rules of ex post and ex ante notifications of substantial and/or non-substantial project changes during the lifetime of projects limits also willingness and capacities of RIIs and SMEs to enter into joint collaboration projects and cooperation. It is not clear within the policy instrument, where to find a clear and unified definition of substantial/non-substantial project changes, which define the ex post and ex ante notifications of such changes. This fact affects behaviour of both sides in collaboration projects, when the project life time usually needs changes and must be somehow flexible. Easing and simplifying a process of demonstration of competencies of personnel when changing personnel in projects can also allow a higher level of flexibility and willingness of RIIs and SMEs to cooperate together in collaborative projects funded form public resources, especially in cases, where personnel must be changed during the lifetime of a project and unclear conditions of a validation and an approval of new-comers (experts, researchers, Ph.D. students, technicians) are critical to project owners and represent certain risk of penalties or formal failure of such a project.



2. Activities to be implemented

a) Lab diaries/notes to be simplified or canceled (changes in technical documentation of the policy instrument)

Prepare a note to the Ministry of Education, Youth and Sports of the Czech Republic to ease or cancel the rule to evidence the usage of laboratory equipment or instruments used by RIIIs for the purpose of the cooperation with SMEs.

Send the note to the Ministry of Education, Youth and Sports of the Czech Republic.

Negotiate the demand with the Ministry of Education, Youth and Sports of the Czech Republic to achieve at least a partial change in the rule.

b) Relevant entities to be defined more clearly (changes in technical documentation of the policy instrument)

Prepare a note to the Ministry of Education, Youth and Sports of the Czech Republic to simplify and unify the definition of the relevant entity.

Send the note to the Ministry of Education, Youth and Sports of the Czech Republic.

Negotiate the demand with the Ministry of Education, Youth and Sports of the Czech Republic to achieve at least a partial simplification and unification in the definition of the relevant entity.

c) FTE/PTE distribution changes in project runtime to be simplified (changes in technical documentation of the policy instrument)

Prepare a note to the Ministry of Education, Youth and Sports of the Czech Republic to ease and simplify changes in project runtime regarding staff/personnel FTE/PTE distribution and its changes during the life time of projects and/or unify and simplify so-called job our activity reports.

Send the note to the Ministry of Education, Youth and Sports of the Czech Republic.

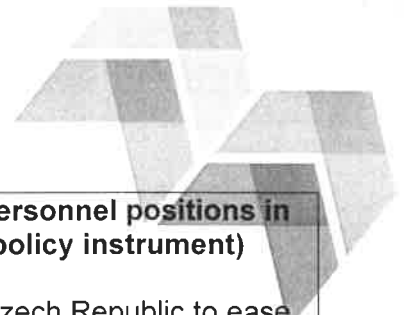
Negotiate the demand with the Ministry of Education, Youth and Sports of the Czech Republic to achieve at least a partial simplification in the process of changes in project runtime regarding staff/personnel and FTE/PTE distribution and its changes during the life time of collaboration projects and/or unified and simplified so-called job our activity reports.

d) Definition of substantial/non-substantial project changes to be defined more clearly (changes in technical documentation of the policy instrument)

Prepare a note to the Ministry of Education, Youth and Sports of the Czech Republic to at least partially clarify rules of ex post and ex ante notifications of substantial and/or non-substantial project changes during the life time of projects.

Send the note to the Ministry of Education, Youth and Sports of the Czech Republic.

Negotiate the demand with the Ministry of Education, Youth and Sports of the Czech Republic to achieve at least a partial clarification of rules of ex post and ex ante notifications of substantial and/or non-substantial project changes during the life time of projects.



e) Demonstration of competencies of personnel when changing personnel positions in projects to be eased (changes in technical documentation of the policy instrument)

Prepare a note to the Ministry of Education, Youth and Sports of the Czech Republic to ease and simplify a process of demonstration of competencies of personnel when changing personnel in projects.

Send the note to the Ministry of Education, Youth and Sports of the Czech Republic.

Negotiate the demand with the Ministry of Education, Youth and Sports of the Czech Republic to achieve at least a partial simplification of process of demonstration of competencies of personnel when changing personnel in projects.

3. Players involved (please indicate the organisations in the region who are involved in the development and implementation of the action and explain their role)

- a) the Ministry of Education, Youth and Sports of the Czech Republic, the EU and ESIF section – implementation of changes into the policy instrument technical documentation
- b) selected stakeholders –preparation and submission of the notes, communication and negotiation with the Ministry of Education, Youth and Sports of the Czech Republic.

4. Timeframe

2019 – 2020

5. Costs

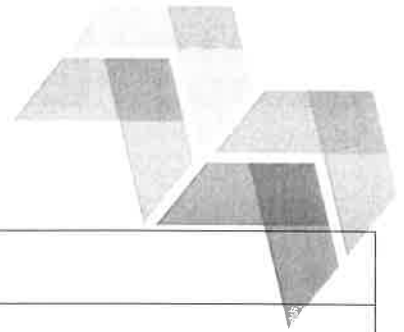
Personal costs (human resources needed in given action) will be financed by CEITEC BUT (our internal sources). We don't know the exact amount yet. It depends on how much the Ministry will cooperate with us.

6. Funding sources

CEITEC BUT

7. Results/Impact:

- a. 5 notes to the Ministry of Education, Youth and Sports of the Czech Republic according to the activities a), b), c), d) and e)
- b. discussions and negotiations with the Ministry of Education, Youth and Sports of the Czech Republic according to the activities a), b), c), d) and e)
- c. at least one of the activities a), b), c), d) and e) is succesfull – the change in technical documentation of the policy instrument is done



5.1.2 ACTION 2: Consistency in strategy of RIIs

1. The background

Within the policy instrument (OP VVV program), the priority axis 2, there is 0,01 mld € planned to support the National RIS3 strategy and its regional annexes in 2019 - 2020. There is a dedicated Smart Accelerator call for this purpose open. This call follows the previous call under the policy instrument with the same name. The objective of this particular call is to enable the individual regions of the Czech Republic to develop an innovative environment in accordance with the National RIS3 strategy and its regional annexes. The challenge is to keep a consistent strategy in development of capacities, organizational structures and know-how at regional level so that research, development and innovation can be further developed. It also supports quality management of the so-called business process of discovering new opportunities at regional level. This process involves the private sector, research and education institutions, the public sector and other key local actors research infrastructures founded by universities in the priority axis 2. The action is connected to the particular call of the policy instrument on one side and to the transfer of the GP selected in the project phase 1 on the other side. Transferring the selected GP experience into the policy instrument – into the particular call of the policy instrument is mentioned to improve partially the policy instrument in field of consistency in strategy in the regional innovation development and RIS. The action aims to implement the principles and experience of the GP - Materials Business Center (Region Skåne). They are providing cross connections between entrepreneurs, industry and researchers. Research institutes and universities collaborate with industry by authority using EU funds (ERDF). On their platform is established for industry the possibility to post technological challenges, to encourage collaborations and new businesses. Within a few years they established network of 40 Industry companies, 25 Start-ups (which they are or have been providing advice to) and 15 universities and institutes.

2. Activities to be implemented

a) Selection of a region

A region will be selected, where the concept of the principles and experience of the Materials Business Center (Region Skåne), with its connection of industry, entrepreneurs, research institutes and universities and collaboration between region, university and industry, operated by regional authority using EU funds (ERDF), can be implemented under the Smart Accelerator program. Most likely it will be our region (South Moravian region).

b) Selection of a regional RII

A regional RII will be selected within the particular selected region, where the concept of the principles and experience of the Materials Business Center (Region Skåne), with its connection of industry, entrepreneurs, research institutes and universities and collaboration between region, university and industry, operated by regional authority using EU funds (ERDF), can be implemented under the Smart Accelerator program.

c) Participation on either drafting and preparation of a regional call under the Smart Accelerator program or drafting and preparation of a project application under the Smart Accelerator program regional call or transfer of GP to the selected regional RII under a granted project under the Smart Accelerator program regional call

Principles and experience of the Materials Business Center (Region Skåne), with its connection of industry, entrepreneurs, research institutes and universities and collaboration between region, university and industry, operated by regional authority using EU funds (ERDF), will be at least partially transferred into a regional call under the Smart Accelerator program with a future impact



on the selected RII, through at least partial participation on drafting and preparation of such a regional call under the Smart Accelerator program, or into a project application under the Smart Accelerator program regional call with a future impact on the selected RII, through at least partial participation on drafting and preparation of such a project application under the Smart Accelerator program regional call, or into the selected regional RII structure, management, operations, business model and so on developed or improved under a granted project under the Smart Accelerator program regional call.

3. Players involved (please indicate the organisations in the region who are involved in the development and implementation of the action and explain their role)

- a) selected stakeholders – selection of a region and regional RII, preparation and drafting of a regional call under the Smart Accelerator program, preparation and drafting of an project application under the Smart Accelerator program regional call, transfer of GP to the selected regional RII under a granted project under the Smart Accelerator program regional call
- b) regional government (South Moravian region) – preparation and drafting of a regional call under the Smart Accelerator program
- c) selected regional RII (Central European Institute of Technology BUT) - drafting and preparation of an project application under the Smart Accelerator program regional call, transfer of GP to the selected regional RII under a granted project under the Smart Accelerator program regional call

4. Timeframe

2019 – 2020

5. Costs

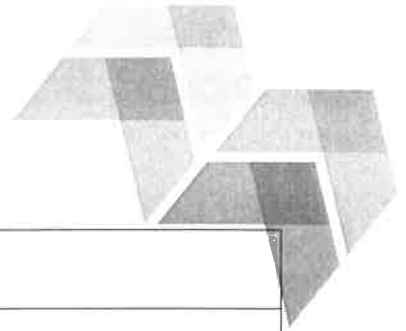
For the activities “Selection of a region” and “Selection of a regional RII” there will be no additional cost needed. For the action “Participation on either drafting and preparation of a regional call under the Smart Accelerator program or drafting and preparation of an project application under the Smart Accelerator program regional call or transfer of GP to the selected regional RII under a granted project under the Smart Accelerator program regional call”, there is funding expected up to 1mil EUR.

6. Funding sources:

For the activity Participation on either drafting and preparation of a regional call under the Smart Accelerator program or drafting and preparation of an project application under the Smart Accelerator program regional call or transfer of GP to the selected regional RII under a granted project under the Smart Accelerator program regional call funding up to 1mil EUR will be sourced from the Smart Accelerator programme.

7. Results/Impact:

- a. a region selected
- b. a regional RII selected
- c. a participation on a regional call under the Smart Accelerator program drafting and preparation and/or a participation on a project application under the Smart Accelerator program regional call drafting and preparation and/or a participation on a granted project under the Smart Accelerator program regional call to transfer the selected GP to the selected regional RII under such a granted project under the Smart Accelerator program regional call



5.1.3 ACTION 3: **Interregional cooperation**

1. The background

Operational Programmes of Research, Development and Education are significantly funding research infrastructures. The Research infrastructures are periodically evaluated and resources are allocated based on outputs of evaluation. The international collaboration of research infrastructures will increase the credit of research infrastructures by transferring of good practices. The international cooperation can be a key factor in improving the services offered in the open access mode.

The experience shared during the Peer review in Brno (South Moravian Region, Vidzeme, Tartu, Saxony) and finally the conclusion, when albeit different partners face different obstacles or issues to solve or improve in terms of the particular policy instruments, there are still clear common principles, has had the main impact and means the highest value for the Action plan. Interregional or international cooperation is necessary to make the use of RIIs by SMEs more extensive. This princip has also grown as a highlight through the whole learning process of the phase 1 of the project among all the project partners and discussions with stakeholders, in particular during the study visits and peer reviews.

Within the SWOT analysis there have been identified certain opportunities and also threats, which directly correlate with the support of interregional or international or cross-border cooperation, these are for example:

Opportunities:

- Promoting the interconnection of information networks of national and European research and innovation centers
- Stimulation for the involvement of Czech subjects in international cooperation in R & D and innovation
- Stimulation of cooperation between research and application sphere
- Rising R & D spending, commercialization of results and introduction of innovations using EU Structural Funds
- Inflow of foreign investments into technologically demanding sectors and location of R & D of multinational companies in the Czech Republic

Threats:

- Decline in attractiveness of the Czech Republic for foreign investment in R & D and technologically demanding production
- Insufficient use of research infrastructure built from EU Structural Funds
- Deepening the isolation of public R & D
- The dependence of the public research infrastructure newly built from the EU Structural Funds solely on public budget resources
- Decline in attractiveness of the Czech Republic for direct foreign investment

This action is directly connected to the GP transfer raised from the project phase 1 and the support of international cooperation as one of the focuses of the policy instrument. The action supports joint involvement of at least two partners of the project in preparation and realization of interregional projects and establishment of cooperation, in particular (but not limited) between German and Czech RIIs (MERGE Cluster/TU Chemnitz/CEITEC BUT/Plastics Cluster and other stakeholders and subjects on both sides) with the purpose to build a cross-border open innovation and public-private collaboration. The particular selected GP is the HOLST Centre (Brainport Eindhoven) with its cross-border open innovation and public-private collaboration. The Centre connects local subject and research centre, international partners, and universities (Municipality of Eindhoven and Province of North Brabant, TNO,



NWO, Ministry of Economic Affairs, Agriculture and Innovation and Imec. This connection secures founding of the HOLST Centre. This makes it possible to achieve important technological innovations, instrumental in addressing major societal challenges. Cross border collaboration is natural for Germany and the Czech Republic from the geographical, but also industrial and technological proximity point of view. This action will initially explore the collaboration opportunities between the MERGE Cluster and the Technical University Chemnitz together with selected stakeholders on the German side and Brno University of Technology, selected stakeholders (for example Plastics Cluster) and other regional RII and SMEs on the Czech side.

2. Activities to be implemented

a) Joint InnoInfraShare co-operation hotspot establishment

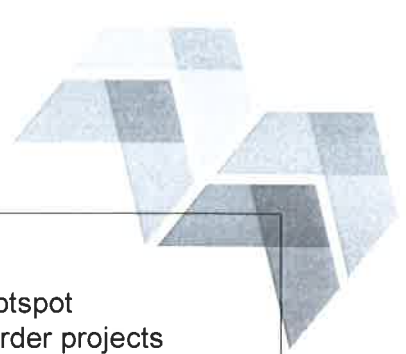
A joint co-operation hotspot will be established by Technical University Chemnitz and Brno University of Technology and selected stakeholders on both, the German and the Czech side, possibly together with other regional RIIs and/or SMEs, based on the Inno Infra Share project, its partnership and consortium. This hotspot will promote the cross-border interconnection of opportunities, possible projects of cooperation, networks of national and European RIIs and joint projects.

b) Identification and development and support to cross-border projects developing and using cross border RIIs capacities

Cross-border projects identification and foundation will be supported and developed. Using the potential of cross border RIIs capacities provided by the selected subjects, the cross-border interconnection of opportunities, possible projects of cooperation, networks of national and European RIIs and joint projects will be implemented and supported.

c) interregional matchmaking events

At least one joint interregional matchmaking event will be organized by either Technical University Chemnitz and Brno University of Technology or certain stakeholders from both, German and Czech sides to initialize the identification and development and support to cross-border projects developing and using cross border RIIs capacities.



3. Players involved

- a) Brno University of Technology - joint InnolnraShare co-operation hotspot establishment, identification and development and support to cross-border projects developing and using cross border RII capacities, interregional matchmaking events organization support
- b) Technical University Chemnitz - joint InnolnraShare co-operation hotspot establishment, identification and development and support to cross-border projects developing and using cross border RII capacities, interregional matchmaking events organization support
- c) selected stakeholders on the Czech side - joint InnolnraShare co-operation hotspot establishment, identification and development and support to cross-border projects developing and using cross border RII capacities, interregional matchmaking events organization support
- d) selected stakeholders on the German side - joint InnolnraShare co-operation hotspot establishment, identification and development and support to cross-border projects developing and using cross border RII capacities, interregional matchmaking events organization support

4. Timeframe

2019 – 2020

5. Costs

Additional costs will be financed by CEITEC BUT (our internal sources). We don't know the exact amount yet.

6. Funding sources

CEITEC BUT

7. Results/impact

- a. a Joint InnolnraShare co-operation hotspot to promote the cross-border interconnection of opportunities, possible projects of cooperation, networks of national and European RIIs and joint projects will be established, operated, and supported
- b. at least one cross-border/international/interregional project will be identified, developed and supported using cross border RII capacities on either German or Czech side
- c. at least one joint interregional matchmaking event to initialize the identification and development and support to cross-border projects developing and using cross border RII capacities

Date: July 4, 2019

Signature:



Prof. Ing. Radimír Vrba, CSc.
ředitel CEITEC VUT

Stamp of the organisation (if available):

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