EVALUATION REPORT

LaunchPad:RI_connectors as drivers of transnational research and Innovation excellence

Establishing a support action for Photon and Neutron Science cooperation in the Baltic Sea Region"
2021

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EXECUTIVE SUMMARY

BSN_Powerhouse project is aimed at enhancing the competencies of the science ministries and funding agencies in the Baltic Sea Region to design and implement international programmes to support research infrastructures (RI) to become better transnationally interconnected and develop research and innovation excellence. Particular attention is paid to ensuring wider participation of EU-13 and third countries.

LaunchPad_RI is a support instrument implemented, tested and evaluated within the BSN_Powerhouse project. The LaunchPad_RI helps to achieve the aims of BSN_Powerhouse project by identifying transnational research cooperation that can strategically connect small RI with large RI, as well as supporting the start of new collaboration projects between researchers from different RI and different fields of study.

The main research question of this study is *"Does the LaunchPad_RI support instrument as a potential widening participation measure facilitates the cooperation among participants of the research and innovation ecosystem in Baltic Sea Region countries?".* The evaluation is based on mixed research methods – data gathered during the desk research phase and the quantitative and qualitative data gathering methods. The qualitative analysis included 13 individual interviews and 2 group discussions with representatives of all the main stakeholder groups.

LAUNCHPAD SYMPOSIUM: ONLINE CONFERENCE & MATCHMAKING EVENT – HACKATHON

The Symposium aimed to provide a good platform for discussing research ideas and challenges and preparing possible future collaboration projects through matchmaking. The Symposium consisted of two parts: online conference and matchmaking event – Hackathon. The expected results of the LaunchPad Symposium defined in the application were partially achieved. Independently each event served its purpose, however, both events should have been much closer intertwined.

The online conference succeeded in identifying cooperation opportunities between the participating researchers. However, to maximise the impact and ensure a larger number of cross-border collaborations, the number of participants must be increased both for online conference and matchmaking event – Hackathon.

The matchmaking event – Hackathon achieved the expected outcome to prepare and submit draft proposals for cooperation projects. Nonetheless, the teams participating in the matchmaking event – Hackathon did not have a chance to place their ideas directly in front of the funders. The lack of involvement of the funders reduces the chance of highlighting the potential and need for joint investment in strengthening the scientific cooperation in the BSR.

FORUM. EXPERT REVIEW PANEL AND COACHING

Forum is the continuation of LaunchPad Symposium. In the Forum, teams had the opportunity to present project drafts and receive feedback from the Expert Review Panel. As the result of the matchmaking event – Hackathon, five project ideas were submitted and presented during the Forum. An independent Expert Review Panel evaluated the project drafts, selected four project drafts that got awarded the funds for Coaching. Additionally, Expert Review Panel gave recommendations for further development of every project draft submitted.

The expected results of the LaunchPad Forum were partially achieved. Project teams found the feedback received during the Forum to be helpful for the improvement of project applications and

well argued, but, due to the force majeure impact, there was not enough time and human resources to implement all the tasks initially included in the project application.

The expected results of the LaunchPad Expert Review Panel were also partially achieved. Participants found the feedback received to be helpful for the improvement of project applications. However, the scoring system used during the evaluation process was adjusted during the implementation of the activities, conflict of interest arose due to participants acting both as team members and experts. Thus the objectivity of the evaluation process was reduced.

The projects selected by the Expert Review Panel were expected to receive Coaching to transform the concept of the project draft into a concrete proposal for funding. Participants evaluated Coaching as an excellent tool to establish initial collaboration within the consortia created during the LaunchPad Symposium; however additional resources (larger funding) and time would be needed to kickstart the research projects. Although Coaching helped the teams move forward with project ideas, none of the teams succeeded in securing funding from national and EU level funding instruments during the Coaching period.

ACHIEVED RESULTS

Three main objectives were set for the LaunchPad_RI instrument:

Enhanced institutionalised knowledge and competence

Results are achieved. BSN_Powerhouse partnership has benefited from the practical learning experiences gained during the test runs of LaunchPad_RI. The involved partners developed and organised a novel and interactive online Symposium and matchmaking event – Hackathon.

Better ability to attract new financial resources

Result partially achieved. The objective to increase the capacity of ministries to establish transnational support programmes was evaluated as fulfilled. However, the funding landscape for science and research is still very heterogeneous and multi-level in the Baltic Sea Region. The inability to involve transnational funding organisations and promote the research projects to the national and international funding organisations have not increased the ease of negotiating transnational funding.

Increased capability to work in a transnational environment

Result partially achieved. Collaboration between stakeholders that participated in the events was established, thus, the concept in this test case is working successfully. However, to increase the impact of the event and ensure that the widening tool is effective, the number of participants and geographic representation should be increased by putting a more significant focus on communication and dissemination activities, as well as providing a better incentive to take part in the Symposium in the form of grants for the implementation of the project ideas.

TRANSFER OF THE CONCEPT

Based on the Gap analysis a repositioning of the LaunchPad_RI into a possible short-term and a more comprehensive version is recommended. Consequently - Young Researcher Mentoring programme as a faster attainable short-term solution and a more complex long-term solution - the Research Consortium Accelerator.

The mentoring to young researchers in connection with the BSN mobility tool BARI is a combination that can bridge the gap between the different national research ecosystems and later result in more and better team compositions for the Research Consortium Accelerator. This stand-alone solution is relatively easy adaptable and thus is considered more desirable for further

implementation. The Young Researcher Mentoring programme allows to connect to also other possible activities, e.g., Hackathons, Summer Schools.

Nevertheless, the Research Consortium Accelerator in accordance with the Vertically integrated Project methodology holds the potential to reach the SDGs and goals set for the Baltic Science Network and the Council of Baltic Sea States at a larger scale. It also requires potentially more resources and coordination to implement, thus being considered as a concept that demands more testing as a part of a larger Horizon capacity building or cascade funding project beyond the immediate scope of Baltic Science Network.

While it is known that researchers prefer the physical meetings, the trend is going into the direction of using more online tools even without the limitations imposed by different global crisis, e.g., COVID-19. Both concepts are expected to have the hybrid nature embedded in the implementation with physical meetings and travel dedicated as the award to the teams and researchers that are considered the finalists in either of the programmes. The cooperation among the chosen research consortiums and researchers are recommended to be facilitated in a physical presence as much as possible.

Both programmes have strong focus on the undergraduate and graduate researchers with a mandatory involvement of established researchers to ensure the knowledge transfer and better development of the young research careers.

ABBREVIATIONS

BSN	Baltic Science Network
BSR	Baltic Sea Region (Sweden, Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia, Iceland, Norway and Belarus)
CBSS	Council of the Baltic Sea States
COST	European Cooperation in Science & Technology
ERA	European Research Area
ERA-NET	European Research Area Network
ESIF	European Structural and Investment Funds
EU	European Union
EU-13	Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia
EU-15	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom
EU2020	Europe 2020 Strategy
EUSBSR	EU Strategy for the Baltic Sea Region
FP7	Seventh Framework Programme
H2020	Horizon 2020
LETI	Saint Petersburg Electrotechnical University "LETI"
LS	Life Sciences
MoER	Ministry of Education and Research of Republic of Estonia
MoES	Ministry of Education and Science of Republic of Latvia
MoSRED	Ministry of Ministry of Science, Research, Equalities and Districts, Free and Hanseatic City of Hamburg
NCPs	National Contact Points
PA	Policy Area
PNS	Photon and Neutron Science
R&D	Research and development
R&D&I	Research, development and innovation
R&I	Research and innovation
RI	Research infrastructures
SEWP	Spreading Excellence and Widening Participation
SOC	Scientific Organisational Committee
WP	Work package
WS	Welfare State

FURTHER DETAILS ON THE PUBLICATION

Name of the project: Baltic Science Network.
Affiliation of the project: Interreg Baltic Sea Region Programme funded project.
Title of the publication: Evaluation report. Photon and Neutron Science in the Baltic Sea Region. Enhancing Scientific Cooperation in the Baltic Sea Region: Infrastructures as the Drivers of Innovation, Cooperation and Interdisciplinarity.
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Author of the publication: Anna Rozenfelde.

Project in brief

Baltic Science Network (BSN) is a policy network gathering relevant transnational, national and regional policy actors from the BSR countries. BSN serves as a Forum for higher education, science and research cooperation in the Baltic Sea Region (BSR).

BSN_Powerhouse is an extension of the BSN project. While BSN has provided science ministries, governmental/funding agencies, university networks with a general platform to devise joint strategic approaches, BSN_Powerhouse goes one step further and provides transnational funding and support instruments for the implementation. The thematic focus is on the identified priority research fields of Photon and Neutron Science (PNS), Life Sciences (LS) and Welfare State (WS).

The main objective of BSN_Powerhouse is to enhance the competencies of the science ministries/ funding agencies to design and implement international programmes to support research infrastructures (RI) in order to become better transnationally interconnected and develop R&I excellence. Particular attention is paid to ensuring wider participation of RI from EU-13 and third countries in the BSR.

LaunchPad_RI is a support instrument implemented, tested and evaluated within the work package 2 (WP2) of the BSN_Powerhouse project. The LaunchPad_RI helps to achieve the aims of BSN_Powerhouse project by identifying transnational research cooperation that can strategically connect small RI with large RI, as well as supporting the start of new collaboration projects between researchers from different RI and different fields of study.

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1. INTRODUCTION

The **Baltic Sea Region** (BSR) is one of the most competitive, innovative science macro-regions globally, with an excellent structure of leading universities and research institutions (RI). However, the region features different research and innovation (R&I) performance levels, and existing facilities are not equally distributed and interconnected. Insufficient access to research funding and research networks has been identified as one of the key reasons that hinder the BSR from overcoming the gap in R&I performance. Small EU-13 countries do not have the resources to build up large-scale RI on their own and rely on cooperation. However, so far, the EU-13's use of these large-scale RI is limited.

LaunchPad_RI support instrument aims to better connect smaller-scale RI in EU-13 member states and Russia in Photon and Neutron Science as dedicated partner facilities with complementary services to major RI in the BSR.

This evaluation report seeks to evaluate the success of LaunchPad_RI support instrument. The main research question is "Does the LaunchPad_RI support instrument as a potential widening participation measure facilitates the cooperation among participants of the research and innovation ecosystem in BSR countries"? It will be answered in the third chapter of the study "Transfer of the concept".

Consequently, the evaluation team seeks answers to additional related questions that help to evaluate and draw conclusions about the actions implemented in the BSN_Powerhouse project:

- Have the actions in work package 2 (WP2) increased the capacity of research ministries Ministry of Education and Research of Republic of Estonia (MoER), Ministry of Education and Science of the Republic of Latvia (MoES), Hamburg Ministry of Science, Research Equality and Districts (MoSRED) funders to establish transnational support programmes?
- Have the LaunchPad_RI support instrument increased the capacity of RI from EU-13 to establish dedicated partnerships and research cooperation with RI in EU-15?
- Have the activities in WP2 facilitated closing the gap in insufficient cooperation among smaller (mainly EU-13 countries) and larger (EU-15 countries) RI users in BSR in using jointly the large RI (e.g. DESY, European XFEL, MAXIV)?

The study is structured as follows. First chapter gives brief description of the **Baltic Science Network** (BSN) and **BSN_Powerhouse** project, as well as introduces the concept of the LaunchPad_RI. Second chapter sets out goals and objectives of the project and describes the methodology used for project implementation. Changes in project methodology are described compared to project initial application. Third chapter provides analysis of project stakeholder interview results and provides conclusions on the success of the LaunchPad_RI. Final chapter gives recommendations for improvements of the LaunchPad_RI and evaluation of the potential transfer to other research areas.

1.1. BALTIC SCIENCE NETWORK ORIGIN STORY

BACKGROUND

One of the main priorities set by the European Union (EU), aiming to improve European industrial competitiveness and tackle global challenges, is R&I.[1] An integral part of realising the comprehensive R&I potential in Europe is national and international collaboration within the scientific research and research-industry collaboration.

The BSR is one of the most competitive, innovative science macro-regions globally, with an excellent structure of leading universities and research institutions. However, the region features different R&I performance levels, and existing facilities are not equally distributed and interconnected. BSR countries [2] should cooperate on a transnational level to tackle common problems, exploit the full potential of R&I, make the region more competitive, and jointly represent common interests at the EU level. [3]

CHALLENGE

Science policy in BSR is organised and pursued mainly from a regional, national or European angle, and a macro-regional dimension is missing. There is a lack of political coordination framework in higher education, science and research policy covering the whole BSR.[4]

SOLUTION

The BSN was established in 2016 to fill this gap and improve cooperation in the BSR within science and research. BSN is a network gathering relevant transnational, national and regional policy actors from the BSR countries. BSN provides a platform for multilateral cooperation to ensure that the BSR remains a hub for R&I excellence. Recommendations jointly formulated by the BSN members address the European, national and regional policy-making levels. BSN allows to combine and utilise the strengths of the EU-15 and EU-13 to foster R&I and bridge the innovation gap where necessary.

1.2. BSN_POWERHOUSE PROJECT RATIONALE

BSN_Powerhouse is an extension of the initial BSN project. The project was started in August 2019 and concluded July 2021. While BSN has provided science ministries, governmental/funding agencies, university networks with a general platform to devise joint strategic approaches, BSN_Powerhouse goes one step further and **provides transnational funding and support instruments** for the implementation. The thematic focus is on the identified priority research fields of Photon and Neutron Science (PNS), Life Sciences (LS) and Welfare State (WS).

The main objective of BSN_Powerhouse is **to enhance the competencies of the science ministries/funding agencies** to design and implement international programmes to support RI to become better transnationally interconnected and develop R&I excellence. Particular attention is paid to ensuring wider participation of RI from EU-13 and third countries in the BSR, which will allow the BSR to better adapt to demographic change.

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[1] European Commission, Industrial policy, https://ec.europa.eu/growth/industry/policy_en

[2] Sweden, Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia, Iceland, Norway and Belarus

[3] Susanne Grahl, Izabela Raszczyk, Angelika Kedzierska-Szczepaniak (2019) *The Baltic Sea Region- A Science Powerhouse*, https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Ascds%3AUS%3A233fc966-8490-4785-b468-005e08665dc1

[4] Josephine Them Parnas (2017) Challenges and barriers to research cooperation in the Baltic Sea Region, https://www.baltic-science.org/wp-content/uploads/2020/04/19-bsn-03_1-working-paper-2.pdf

Widening participation in the European Research Area (ERA) will increase attractive employment opportunities in research and education in the BSR, thus encouraging researchers to remain in the region. An increase in the quality and competitiveness of BSR R&I systems and infrastructures will eventually positively impact the attraction of researchers from outside the BSR. This will help compensate for other demographic developments and enhance the availability of a skilled workforce in R&I.

IMPLEMENTATION

The main objectives are achieved by implementing, testing and evaluating two concrete support instruments:

1. Overcoming the gap in R&I Performance
   LaunchPad_RI: a support instrument for widening participation of RI in the field of Photon and Neutron Science where EU-13 small-scale RI are matched with large-scale RI and supported to become dedicated partner facilities.

2. Increasing the interconnectedness of RI in the BSR
   BSR-RIMP (BARI): a BSR Researcher's Internship Mobility Programme in the field of Photon and Neutron Science, LS and WS. BSR-RIMP enhances the brain circulation among RI within the BSR and thus builds the basis for future research cooperation that will strengthen the excellence of the BSR in Photon and Neutron Science, Life Sciences and Welfare State.

BSN_Powerhouse supports ministries and agencies in the BSR to integrate macro-regional interests into national policies and EU Strategy for the Baltic Sea Region (EUSBSR) and EU policies by disseminating the project results, transferring the findings, experiences and recommendations into current political debates. Moreover, BSN_Powerhouse negotiates with the relevant players (funders, policymakers) about the long-term establishment and funding of the mobility programme and widening participation support action.

BSN_Powerhouse project implementation structure

WP1 Project management and administration		
WP2	**WP3**	**WP4**
Widening Participation Support Action for Photon and Neutron Science RI and their users – **LaunchPad:RI_Connector**	Brain Circulation between RI in the BSR: **BSR Researcher's Mobility Programme** (BSR-RIMP: BARI) in the fields of PNS, LS and WS	Policy Impact: Policy Dialogue, Sustainability and Dissemination
WP LEADER Ministry of Education and Research of the Republic of Estonia	**WP LEADER** University of Turku	**WP LEADER** Free and Hanseatic City of Hamburg – Ministry of Science, Research and Equalities
PROJECT PARTNERS Ministry of Education and Science of Republic of Latvia Saint Petersburg Electrotechnical University "LETI"	**PROJECT PARTNERS** German Academic Exchange Service Abo Akademi University	**PROJECT PARTNERS** The International Permanent Secretariat of the Council of the Baltic Sea States

EXISTING TOOLS FOR WIDENING PARTICIPATION

The H2020, acknowledging the necessity of additional assistance to low-performing research, development and innovation (R&D&I) regions for participating, has introduced the Spreading Excellence and Widening Participation (SEWP) programme. The primary beneficiaries are countries where the Composite Indicator of Research and Excellence is below 70% of the EU average.[5]

In the Framework programme Horizon 2020 the SEWP instruments include Teaming, Twinning and ERA Chairs. Furthermore, SEWP also includes developing new measures (Policy Support Facility, PSF) and changes in existing instruments such as European Cooperation in Science & Technology (COST) and National Contact Points (NCPs). Widening instruments have become less relevant for the whole BSR. However, joint programming instruments such as the European Research Area Network (ERA-NET) have gained importance compared to period 2007-2013.

Most SEWP beneficiaries obtain a relatively large share of support from the European Structural and Investment Funds (ESIF), which can also be considered a tool of support designed for structural reforms of national R&I systems and capacity building. However, it has to be kept in mind that the ESIF is not designed for supporting transnational cooperation. Also, ESIF has been used somewhat differently in the BSR countries. In Nordic countries, the focus has been on integrating ERA; in the Baltic States and Poland, on building the capabilities of national research systems. It has to be kept in mind that ESIF is very important for enhancing macro-region excellence but is not meant for cross-border cooperation.[6]

Some more significant regional level initiatives, e.g., BONUS EEIG (funded from the FP7) and BSR Stars (integrated with the INTERREG VB Baltic Sea Programme), are also important sources of funding for the region. While instruments connected to the EUSBSR and BONUS focus on the Baltic Sea as a critical object of research cooperation, in other initiatives, BSR is instead a place or platform for cooperation (eligible territory) driven less by functional proximity than political and policy imperatives.

The smaller university networks, e.g., Baltic University Programme, are relevant for networking, teaching, mobility of students, but much smaller in financial relevance. They tend to have a narrower thematic focus, concentrate mainly on cooperation in education and mobility in specific fields, and organise joint activities.[7]

1.3. POLICY CONTEXT OF THE LAUCHPAD_RI

By establishing the BSN, the regions and member states have taken over the political ownership of the EUSBSR in science policy. LaunchPad_RI, an instrument used to increase transnational cooperation in the development and utilisation of RI, especially among Research infrastructures of EU-13 and EU-15, fosters the involvement of EU-13 countries in creating BSR research **innovation policies.**

[5] European Commission, *Spreading Excellence and Widening Participation* https://ec.europa.eu/programmes/horizon2020/en/h2020-section/spreading-excellence-and-widening-participation

[6] Kadri Ukrainski, Erkki Karo, Margit Kirs, Hanna Kanep (2017) *Participation in ERA and Baltic Sea RDI Initiatives and Activities: Analysis and Policy Implications for Widening Participation of of Strong and Moderate Innovators*, https://www.baltic-science.org/wp-content/uploads/2020/04/15-participation-in-era-and-bsr-initiatives-report.pdf

[7] Kadri Ukrainski, Erkki Karo, Margit Kirs, Hanna Kanep (2017) *Participation in ERA and Baltic Sea RDI Initiatives and Activities: Analysis and Policy Implications for Widening Participation of of Strong and Moderate Innovators*, https://www.baltic-science.org/wp-content/uploads/2020/04/15-participation-in-era-and-bsr-initiatives-report.pdf

BSN contributes to:

- EUSBSR (flagship of EUSBSR, Policy Area (PA) Education, Research and Employability; PA Innovation) by providing a macro-regional framework for more efficient and strategic BSR science policy that will help to increase the R&I performance and eventually the prosperity of the region. BSN partners were closely involved in the revision PA Education Action plan.
- Europe 2020 Strategy (EU2020) by supporting the achievement of R&D and education targets for BSR
- The realisation of ERA and European Higher Education Area: via intensified cooperation, BSR can become a model region
- Russian Federation Strategy for the Socio-Economic Development of the North-Western Federal District by involving Russia into the BSN project and network (via Council of the Baltic Sea States (CBSS), BSRUN, BUP and UNECON)
- BSN is a cornerstone of CBSS Science Research and Innovation Agenda, CBSS Long Term Priorities, making the region more sustainable and prosperous. Furthermore, the project will help to create a regional identity
- Memorandum of Understanding (signed by Lithuania, Latvia and Estonia) on closer cooperation in higher education, research and innovation (coordinate RI development plans, support identifying shared priorities and areas of cooperation and exchange information on strategic research and development (R&D) plans)
- Final Resolution of the 2015 Parliamentary Forum Southern Baltic Sea on "Scientific and Higher Education Cooperation in the Baltic area."
- Resolution 26th Baltic Sea Parliamentary Conference 2017.

BSN contributes to many national/regional policies and strategies, e.g.:

- Germany: High Tech Strategy and Digital Agenda of the Federal German Government; BMBF-Roadmap for RI; Strategy of the Federal Government on the European Research Area; Baltic Sea Strategy for the Science Region Hamburg (adopted by the Hamburg Senate and approved by the Regional Parliament)
- Latvia: Research, Technological Development and Innovation Guidelines for 2014-2020; National Development Plan for 2014-2020; Latvian National Reform program for implementation of Europe 2020 Strategy. Research, Technological Development and Innovation Guidelines for 2021-2027; National Development Plan for 2021-2027; National Industry Policy Guidelines for 2021-2027
- Finland: Open Science and Research 2014-2017; Finland's Strategy and Roadmap for RI 2014-2020
- Estonia: Estonian Research, Development and Innovation Strategy 2014-2020 "Knowledge-based Estonia"; National strategy for the Research, Development, Innovation and Entrepreneurship 2021-2035
- Sweden: Research Bill "Research and Innovation" Prop 2012/13:30
- Poland: Programme for Internationalisation of Higher Education (2015); National Research Programme (2011).

The high impact of BSN and multiple synergies with the policies mentioned above and strategies can be expected as the BSN partner consortium consists of the national (or regional) ministries, e.g. Latvia, Estonia, Germany, that have been responsible for making the above national policies and strategies and have law-making and financing capacities to implement them. Moreover, the partner ministries have delegates in the relevant decision-making bodies at the EU level.

COOPERATION WITH THE BALTIC SEA REGION PARTNER COUNTRIES (BELARUS, ICELAND, RUSSIA, NORWAY)

The European Economic Area Member States, Iceland and Norway, and the neighbouring countries Russia and Belarus are inextricably linked to the BSR through historical, political, economic, environmental, cultural and people-to-people ties. Therefore, cooperation with these countries should be promoted, where relevant and appropriate, across the activities within all policy areas.[8]

While in the BSN, all these countries were present, in the BSN_Powerhouse project, the Russia and Belarus strong history of cooperation in science and technology prevailed based on shared interests and mutual benefits. The pilot actions were tested, involving only Russia and Belarus.

The recent history of the involvement of Russian and Belarus stakeholders in the BSN project was present from the very beginning of the BSN project in several ways:

- After the CBSS Science Ministerial co-organised with the BSN kick-off meeting (Krakow, June 2016), the Russian Ministry of Economic Development signed the Agreement with INTERREG BSR. This allowed BSN in the extension stage to include UNECON as a full project partner. The Russian Ministry of Economic Development appointed UNECON as the BSR centre for innovation/ technology transfer issues. UNECON played an essential role in the implementation of the mobility programme.

- As an additional Russian partner, the Saint Petersburg Electrotechnical University "LETI" is also involved in the project. LETI represents a University working closely with large scale infrastructures in Russia. LETI plays an essential role in widening participation. It allows to look at closer cooperation between EU-13 and EU-15 RI and between Russia and EU.

- Baltic University Programme, represented by PP8, is a full partner. This network has 23 Russian and 27 Belarus university members. BSR University Network is an associate organisation of BSN. Out of 28 university members, 7 are from Russia, 3 from Belarus. Both University Networks was expected to be important multipliers for attracting applications for the mobility programme from Russia and Belarus.

1.4. THE CONCEPT OF THE LAUNCHPAD_RI

THE CHALLENGE

Countries in the BSR face similar problems and challenges in national higher education and research systems (e.g., globalisation, economic crisis, demography, technological progress). There are also challenges (e.g., climate change, welfare, health) that the whole society faces, which can only be dealt with on a macro-regional level through transnational cooperation.[9]

The region features different R&I performance levels, and existing facilities are not equally distributed and interconnected. Insufficient access to research funding and research networks has been identified as one of the key reasons that hinder the BSR from overcoming the gap in R&I performance. Small EU-13 countries do not have the resources to build up large-scale RI on their own and rely on cooperation. However, so far, the EU-13's contribution to or using these large-

[8] Action Plan: COMMISSION STAFF WORKING DOCUMENT - Revised Action Plan replacing the Action Plan of 17 March 2017. WEB: https://www.balticsea-region-strategy.eu/action-plan

[9] Josephine Them Parnas (2017) Challenges and barriers to research cooperation in the Baltic Sea Region, https://www.baltic-science.org/wp-content/uploads/2020/04/19-bsn-03_1-working-paper-2.pdf

scale RI is limited. LaunchPad_RI support instrument aims to better connect smaller-scale RI in EU13 member states and Russia in Photon and Neutron Science as dedicated partner facilities with complementary services to major RI in the BSR.[10]

Even though there is a range of widening tools in place, the gap in participation in H2020 and other funding programs remains. Many successful international research consortia are based on 'old boy's networks', and it is extremely difficult for EU-13 or 3rd countries to join. There is a lack of awareness among EU-15 about excellent RI in EU-13 or 3rd countries that complement expertise. Less advocacy and support were available for EU-13 RI to increase their capacity to access funds.[11]

The unequal distribution of infrastructures is very evident in the field of Photon and Neutron Science. Unique large-scale RI are based in Sweden, Germany, Poland, Russia, some of them financed and run based on international cooperation. Photon and Neutron Science research relies heavily on access to large RI. Whereas Germany and Nordic countries have several initiatives to strengthen international collaboration in the Photon and Neutron Science sector, the members of the BSN Photon and Neutron Science expert group from the East BSR stated a strong need for new ways to allow closer cooperation with EU-13 higher education institutions and RI.[12]

LAUNCHPAD_RI DESCRIPTION

Some of the goals on the BSR, EU and national levels are to increase the effectiveness of and the investments in research, R&D&I, improve the transparency, openness and accessibility of RI, and reduce the administrative burdens in RI utilisation, collaboration and research programmes. On the macro-regional and national levels, cross-border cooperation in R&I is one of the keys to improve upon the aspects mentioned above.[13]

The common challenges faced by the BSR countries is an opportunity to be used as motivators for cooperation based on joint interests and overlapping areas of excellence. The ministries of Education and Science in the BSR have an opportunity to take advantage of mutual benefits from the RI in the BSR. The ministries are encouraged to engage in collaborative value-adding projects to support the macro-regional framework for R&I.

Regarding the BSR strategic vision the following future aspects were identified:

- Increased cross-border cooperation and co-utilisation of research facilities will be facilitated and promoted and is expected to become a more usual way of working.

- In the future, more aligned and coherent financing mechanisms will be developed in the region to facilitate the development of jointly financed projects.

LaunchPad_RI is a support instrument implemented, tested and evaluated within the work package 2 (WP2) of the BSN_Powerhouse project. LaunchPad_RI addressed the need by offering a support instrument for widening participation of EU-13 small-scale RI matched with large-scale RI and supported to become dedicated partner facilities. The instrument complements existing instruments of the H2020 (Twinning, Teaming, ERA Chair).

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[10] Susanne Grahl, Izabela Raszczyk, Angelika Kedzierska-Szczepaniak (2019) *The Baltic Sea Region- A Science Powerhouse*, https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Ascds%3AUS%3A233fc966-8490-4785-b468-005e08665dc1

[11] Kadri Ukrainski, Erkki Karo, Margit Kirs, Hanna Kanep (2017) *Participation in ERA and Baltic Sea RDI Initiatives and Activities: Analysis and Policy Implications for Widening Participation of of Strong and Moderate Innovators*, https://www.baltic-science.org/wp-content/uploads/2020/04/15-participation-in-era-and-bsr-initiatives-report.pdf

[12] Josephine Them Parnas (2017) Challenges and barriers to research cooperation in the Baltic Sea Region, https://www.baltic-science.org/wp-content/uploads/2020/04/19-bsn-03_1-working-paper-2.pdf

[13] Action Plan: COMMISSION STAFF WORKING DOCUMENT - Revised Action Plan replacing the Action Plan of 17 March 2017. WEB: https://www.balticsea-region-strategy.eu/action-plan

The LaunchPad_RI:

- Helps to **identify transnational research cooperation** that can strategically connect large RI with small RI in the Baltic Sea Region.
- Supports the **start of new collaboration projects** between researchers from different RI and different fields of study.

GOALS AND OBJECTIVES

LaunchPad_RI aims at the better connection of smaller-scale RIs in EU-13 member states and Russia as dedicated partner facilities with complimentary services to major RIs in the BSR. The test run provides regional and national ministries and agencies with a proof of concept of an effective support tool for widening participation (complementary to existing tools).

RESULTS TO BE ACHIEVED BY LAUNCHPAD_RI

1. **Enhanced institutionalised knowledge and competence**
   BSN_Powerhouse partnership benefits from the practical learning experiences gained during the test runs of LaunchPad_Connectors: developing and organising appropriate, interactive symposium/forum and workshop formats, interaction with the funders and service providers, the establishment of a review panel.
2. **Better ability to attract new financial resources**
   The funding landscape for science and research is very heterogeneous and multi-level in the BSR, making it difficult to negotiate a transnational fund among institutions with completely different governance levels and available budgets. The practical test of a new decentralised multi-level funding programme will offer regional and national ministries and governmental funding agencies a model to finance flexible and from different sources future transnational activities.
3. **Increased capability to work in a transnational environment**
   Not only the BSN_Powerhouse partnership but also the target group of the LaunchPad_RI will benefit from the practical learning experiences and the new transnational and multi-level contacts and cooperation opportunities.

SPECIFIC AIMS OF THE PROJECT:

- Test LaunchPad_RI for Photon and Neutron Science RI to increase the capacity of EU-13 and Russian RI to seize research cooperation opportunities with large-scale RI.
- Evaluate and refine the concept.
- Create recommendations for the long-term establishment of a similar instrument.

THE INVOLVED PARTNERS

The lead partner of the BSN_Powerhouse project Hamburg Ministry of Science, Research, Equalities and Districts had an important role in project implementation – responsibilities include the oversight of the activity implementation, achievement of the WP2 objectives and the efficient use of project funds.

The WP2 leader is the Ministry of Education and Research of Republic of Estonia (MoER). The responsibilities of the project activities were distributed equally among the other partners –

Ministry of Education and Science of Republic of Latvia (MoES) and Saint Petersburg Electrotechnical University "LETI" as well.

Scientific Organizing Committee (SOC) was created to help steer the implementation in alignment with the research community. The SOC's task together with the WP2 project partners was to design the methodology and make practical advice for organising events – Symposium, Forum, and Coaching. It was intended to have a hands-on committee to receive feedback and guidance from the RI and researcher's point of view – what would work best in, e.g., build-up of the events, event agenda, themes and speakers, template of abstract, guidelines for the matchmaking session for the participants.

Expert Review Panel was created to carry out independent evaluation and conclusions of the submitted project proposals in accordance with the set framework by the WP2 project partners and SOC. The Expert Review Panel served as additional quality insurance by giving valuable feedback to the proposal and served as a selection body for choosing which proposals were awarded Coaching. The Expert Review Panel consisted of 10 international experts with the different background and connections to Photon and Neutron methods and different perspectives: scientific (6 experts from different fields of research), research facilities' (2 experts), industry's (1 expert) and ministerial perspective (1 expert).[14]

THE LAUNCHPAD_RI METHODOLOGY IN A NUTSHELL

Based on the initial BSN_Powerhouse project application LaunchPad_RI was designed to consist of 3 main steps:

1. Meet&Match: LaunchPad Symposium

- In the first 6 months of the INTERREG BSN_Powerhouse project, an International Symposium would have occurred for large and small-scale Research Infrastructure (RI) and their users.
- The Symposium event would have started with the call for abstracts.
- Abstracts would be reviewed, and relevant abstract authors invited as speakers to attend the Symposium.
- Planned Symposium outcomes - a better (documented) overview of cooperation opportunities between large and small RI, personal contacts between EU-13/EU-15/Russian researchers and ideas for future cooperation.
- The selected small and large RI would have presented their scientific field in the plenum; afterwards, small workgroups would have been formed for RI to discuss ideas for 5-10 project outlines for RI_Connector projects (concrete project briefs for bilateral or multilateral cooperation projects would have been drafted).

The project application foresaw two conferences regarding (1) Photon Science in Riga, Latvia and (2) Neutron Science in Tallinn, Estonia. However, during the project partner meeting in Stockholm in October 2019, a decision was made to organise only one conference in Riga covering both topics.

2. Pitch&Review: LaunchPad Forum

- The Forum would have been organised for consortia of RIs that have prepared a project brief.
- In the Forum, they would have met with potential funders, intermediaries, Coaching/consultancy service providers, and peers (Expert Panel) (based on the initial project application).

[14] https://www.baltic-science.org/launchpad-3steps/

- In the Forum, RI would have pitched their RI_Connector project outlines in the plenum;
- The planned project methodology included funders and service providers presenting their offers to the consortia of RI.
- In interactive format (e.g. speed-dating, bar camp), project partners directly would have engaged with peers.
- Would have provided the opportunity to place ideas (apart from open calls) to funders, funding agencies, research councils, national/ regional ministries.
- It would have helped to identify suitable funding opportunities and Coaching for grant applications (e.g. open calls for seed money, widening, RI).
- Would have organised a meeting of potential funders (raise awareness of the importance of connectors and better cooperation between different BSR funders).

An independent Expert Review Panel would have reviewed the project proposals regarding their scientific excellence and impact for the region in serving as "connectors" between large and small-scale RI and EU-13/EU-15/Russia. The Panel would have met back-to-back at the LaunchPad Forum and selected 1-3 projects to become lighthouse projects as connectors and receive Coaching.

3. Advocacy&Enabling: LaunchPad Coaching

The selected RI_Connector projects would have received support from BSN in terms of advocacy and the Coaching to transform the concept of the RI_Connector project into a concrete proposal for funding. The exact format and specific aim of the Coaching would have been tailor-made for each of the selected 1-3 projects.

The Coaching could have included support for:

- Identifying suitable funding opportunities.
- Project partner search.
- Developing grant applications.
- Meeting of potential funders, stakeholders, e.g., the Coaching format could be a workshop/boot camp with the active involvement of selected participants from the Forum.

In spring 2020, LaunchPad_RI project implementation was interrupted by the global outbreak of the COVID-19 pandemic. Due to restrictions imposed by the states following the outbreak, changes in project methodology were needed to carry out the LaunchPad_RI support instrument successfully.

PROJECT TRANSFORMATION DUE TO COVID-19 IMPACT

The activity stages described above (Symposium, Forum, Coaching) were initially planned as traditional face-to-face events and activities. However, due to travel and gathering restrictions, it was impossible to implement the activities as initially planned. Therefore, the project concept was transformed to adapt it to an online format:

- The Symposium consisted of two parts: an Online conference and an online matchmaking event – Hackathon
- Forum (Pitching)
- Expert Review Panel.

The table below compares the initial methodology included in the project application and the implemented activities. The main results achieved during each of the activities are also described below

Comparison between project methodology described in the project application and the implemented project

No.	PROJECT APPLICATION	IMPLEMENTED PROJECT
1	**Meet&Match: LaunchPad Symposium**	**Online Symposium: Conference &** matchmaking event – **Hackathon**
	In the first 6 months, 1 or 2 international Symposium (one in Riga, Latvia and one in Tallinn, Estonia) had to be held for large - and small-scale RI and their users. Symposium had to be organised with a call for abstracts and documented.	One Symposium was organised, which consisted of two parts: an international online conference and a matchmaking event – Hackathon. Instead of two separate events for (1) Photon and (2) Neutron Science, there was only one for Photon and Neutron Science. The event was decided to be organised by the MoES. Decision to organise one conference was made, during the Partners meeting held in Stockholm in October 2019. That also triggered the changes in the responsibilities among the partners for the project activities.
	Symposium outcomes were expected better (documented) overview of cooperation opportunities between large and small RI, personal contacts between EU-13/EU-15/Russian researchers and ideas for future cooperation.	The **Online conference** (1st part of the Symposium) with its speakers and presentations helped the participants generate/develop collaboration ideas about how research could be carried out in traditional and 'novel' ways of using photons and neutrons methods. The ideas shared and generated during the online conference were further elaborated on and developed during the matchmaking event – Hackathon.
	On this basis of the Symposium, **5-10 concrete project briefs** for bi- or multilateral cooperation projects were expected to be drafted by a team of EU-13/EU-15/Russian researchers.	The Symposium was followed by the call for draft project proposals for bi- or multilateral collaboration. The **online matchmaking event – Hackathon** (2nd part of the Symposium) supported the participants in the matchmaking process and facilitated joint ideas for collaboration. Matchmaking event – Hackathon resulted in the preparation and submission of draft proposals for cooperation projects.

		The result after the Conference & matchmaking event – Hackathon: • **19 participants were active during the matchmaking event – Hackathon** • **11 participants joined one of the ideas** • **5 project ideas submitted** **The Online conference brought several case studies that demonstrated the opportunities in cooperation between large and small RI.**
2	**Pitch&Review: LaunchPad Forum**	**Submit & Review: Forum&Evaluation**
	The Forum had to be held for consortia of RIs that prepared a project brief to meet **potential funders, intermediaries, Coaching/consultancy service providers**, and peers (Expert Review Panel). In the Forum, RI could have pitched their RI_Connector project outlines in the plenum.	**Forum (Pitching)** Project teams had the opportunity to present their project proposal drafts and receive feedback from the **Expert Review Panel**.
	Funders and service providers could have presented their offers. In interactive formats (e.g. speed-dating, bar camp), project partners could have directly engaged with peers. The Forum was expected to: • provide the opportunity to place ideas (apart from open calls) to funders, funding agencies, research councils, national/ regional ministries. • Help identify suitable funding opportunities and Coaching for grant applications (e.g. open calls for seed money, widening, HE, RI). • **Organise a meeting of potential funders** (raise awareness of the importance of connectors and better cooperation between different BSR funders).	Potential intermediaries, Coaching/consultancy service providers were not included in the Forum. Meeting with potential funders was not organised. There was only one representative at the Expert Review Panel from a funding organisation. No help identifying suitable funding opportunities and Coaching for grant applications was provided. No interactive formats were used, participants did not meet other project teams**.**

	Expert Review Panel An independent **Expert Review Panel** panel was planned to review the project proposals regarding their scientific excellence and impact for the region to serve as "connectors" between small and large -scale RI and between EU-13/EU-15/Russia. The Panel was planned to meet back-to-back at the LaunchPad Forum and **select** **1-3 projects** that have the potential to become lighthouse projects as connectors.	**Expert Review Panel** An independent **Expert Review Panel** evaluated the proposals regarding their scientific excellence and impact for the region in serving as 'connectors' between small - and large - scale RI and within the BSR. The Panel selected projects that had the greater potential to become lighthouse projects and be awarded the funds for **Coaching**. The selected projects received support in terms of guidance and Coaching to transform the drafted concept into a concrete proposal for gaining access to research facilities or funding. **The result after the evaluation:** ● **4 projects have been awarded funding for Coaching.** ● **Expert Review Panel has given recommendations for further development of every project (3-4 short recommendations per project)**
3	**Advocacy&Enabling: LaunchPad Coaching**	**Advocacy & Enabling: Coaching**
	The selected RI_Connector - projects were expected to receive support from BSN in terms of advocacy and **Coaching** to transform the concept of the RI-Connect project into a concrete proposal for funding. The exact format and specific aim of the **Coaching** were meant to be tailor-made for each of the selected 1-3 projects. This could have included support for: ● identifying suitable funding opportunities ● project partner search ● developing grant applications ● meeting of potential funders, stakeholders, e.g. format of the Coaching could be a workshop/ boot-camp with the active involvement of selected participants from the Forum.	The selected projects received funds for **Coaching** activities, which gave a better chance of getting access to research facilities or funding. The funding was awarded for activities that would: • Enable moving forward with the project e.g., benchmarking, proof of concept, expanding the applications • Involve additional partners, especially from the side of the industry as well as partners from the Baltic Sea Region EU-13 countries e.g., consultations, meetings, workshops, travelling to partner facilities.

LAUNCHPAD IMPLEMENTATION

The timeline of the project is shown in the figure below. Due to the impact of the Covid-19 pandemic, the timeline of the BSN_Powerhouse LaunchPad_RI project shifted considerably.

Timeline of the project

	Year	2019	2020												2021					
	Month	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Planned timeline (project application)	Project planning																			
	Project set-up																			
	Setting up the Symposium																			
	Symposium																			
	Evaluation and preparing for Forum																			
	Forum																			
	Coaching																			
	Evaluation																			
	Transfer of the concept																			
Transformation made at Partners&SOC meeting, Tallinn, January 2020	Project planning																			
	Project set-up																			
	Setting up the Symposium																			
	Symposium																			
	Evaluation and preparing for Forum																			
	Forum																			
	Coaching																			
	Evaluation																			
	Transfer of the concept																			
After the transformation due to COVID-19 impact	Project planning																			
	Project set-up																			
	Setting up the Symposium																			
	Symposium																			
	Evaluation and preparing for Forum																			
	Forum																			
	Coaching																			
	Evaluation																			
	Transfer of the concept																			
	BSN final conference																			

In the initial project application, it was planned that during the implementation of LaunchPad_RI, MoER would be responsible for:

- Overall coordination of the work package - setting deadlines, developing work plan in cooperation with activity leaders.
- Coordinating the LaunchPad_RI and co-organising a Symposium, organising and hosting Forum and workshop.

It was planned that MoES would be responsible for:

- Organising the Symposium, co-organising Forum and workshops, and hosting events in Latvia.
- Evaluating LaunchPad_RI.
- Transfer of concept, drafting up a refined concept and developing recommendations.

It was planned that Saint Petersburg Electrotechnical University "LETI" would be responsible for:

- Organising Expert Review Panel, workshops, events in Russia, encouraging Russian RI to participate in the project.
- Providing Russian perspective to transfer of the concept.

It was planned that within WP2, the Hamburg Ministry of Science, Research and Equality would be responsible for:

- Ensuring the active contribution of its RI.
- Engaging in the LaunchPad Forum and contributing to the transfer of the concept from the perspective of EU-15 countries.

There were changes in the responsibilities of the project partner after the transformation of the concept of the activities, shown in the figure below.

Project partner responsibilities related to the organisation of LaunchPad_RI activities

	Estonian MoER	Latvian MoES	LETI
According to the initial project application	• Overall coordination of the work package • Organising and hosting a Symposium in Tallinn • Organizing Forum	• Organising the Symposium in Riga • Co-organizing a Forum • Hosting events in Latvia • Evaluation and transfer of concept	• Organising Expert Review Panel, Workshops • Organising events in Russia
Re-vised responsibilities after Partners meeting Stockholm, October 2019	• Overall coordination of the work package • Co-organizing the Symposium • Co-organising Coaching	• Organising the Online Symposium: Conference and matchmaking event • Evaluation and transfer of concept	• Organising Expert Review Panel • Organising events in Russia
After the transformation due to COVID 19 impact, 2021	• Overall coordination of the work package • Co-organizing the Symposium • Organising Forum and Expert Panel • Co-organising Coaching	• Organising the Online Symposium: Conference and Hackathon • Evaluation and transfer of concept	• Co-organising Expert Panel • Co-organising Coaching

After the project transformation (both due to Covid-19 impact and other factors)

MoER was responsible for:

- Overall coordination of the work package
- Organising Forum and Expert Review Panel
- Co-organising the Online Symposium: Conference and matchmaking event – Hackathon
- Co-organising Coaching.

MoES was responsible for:

- Organising the Online Symposium: Conference and matchmaking event – Hackathon
- Evaluating LaunchPad_RI instrument
- Transfer of concept, drafting up a refined concept and developing recommendations.

Saint Petersburg Electrotechnical University "LETI" was responsible for:

- Co-organising Coaching
- Co-organising Expert Review Panel
- Providing Russian perspective to transfer of the concept.

Hamburg Ministry of Science, Research, Equality and Districts was responsible for:

- Ensuring the active contribution of its RI
- Supporting the Symposium events organisation
- Engaging in the LaunchPad Forum and contributing to the transfer of the concept from the perspective of EU-15 countries.

LINK TO OTHER WORK PACKAGES OF BSN_POWERHOUSE PROJECT

LaunchPad_RI is linked to other work packages of the BSN_Powerhouse in the following aspects:

- LaunchPad_RI results were expected to feed into the activities of WP4.
- RI involved in LaunchPad_RI were expected to have increases cooperation also via the WP3 mobility tool.

SELF-ORGANISATION

Exploring the power of self-organising processes to engage stakeholders to take responsibility for their collaboration is one of the key concepts of the project. In real-life situations, self-organisation is often successful when there is enough time for all important stakeholders to buy-in. How to create conditions for successful rapid self-organisation is not well understood.

One of the meta-goals of the project is to explore and better understand how this works. During the project events, groups were encouraged to self-organise around the challenge they are dealing with. The project program provides a 'structured framework' in which only the key moments – the Symposium – are fixed. The rest of the working time can be filled in by each group to best suit the group dynamic. To support this process, groups work in a 'lightly facilitated process' with a facilitator who, ideally, intervenes as little as possible and mostly keeps the self-organising dynamic on track.

2. EVALUATION OF THE CONCEPT

2.1. EVALUATION METHODOLOGY

The main research question is **"Does the LaunchPad_RI support instrument as a potential widening participation measure facilitates the cooperation among participants of the research and innovation ecosystem in Baltic Sea Region (BSR) countries?"**. It will be answered in the third chapter of the study, "Transfer of the concept".

Consequently, the evaluation team seeks answers to additional related questions that help to evaluate and draw conclusions about the actions implemented in the project:

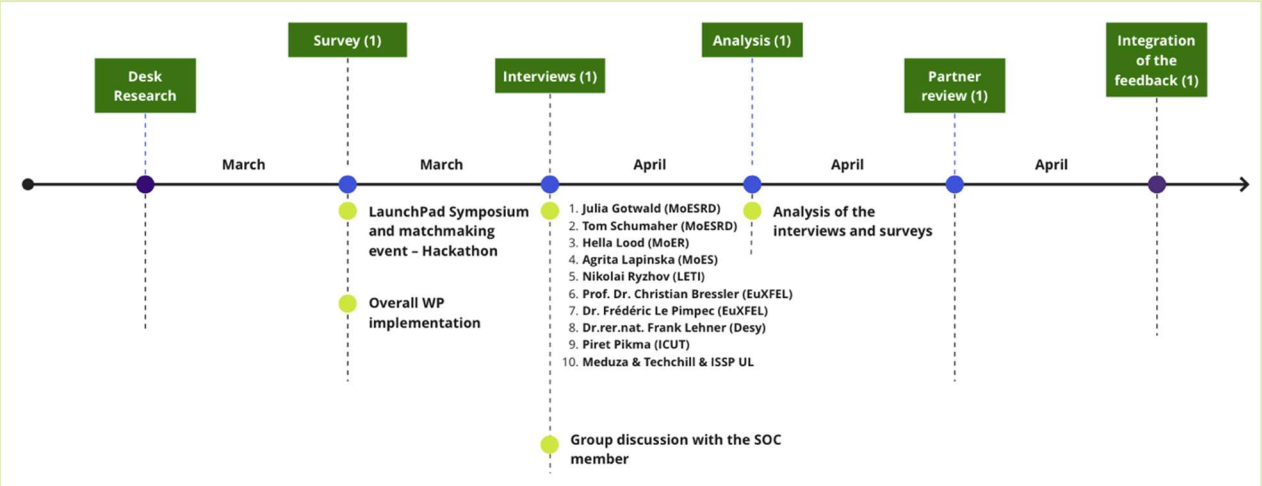
- Have the actions in work package 2 (WP2) increased the capacity of research ministries funders to establish transnational support programmes?
- Have the LaunchPad_RI support instrument increased the capacity of research infrastructures (RI) from EU-13 to establish dedicated partnerships and research cooperation with RI in EU-15?
- Have the activities in WP2 facilitated closing the gap in insufficient cooperation among larger (EU15 countries) and smaller (mainly EU13 countries) RI users in BSR in using the large RI jointly, e.g. DESY, European XFEL, MAXIV?

The evaluation is based on mixed research methods – data gathered during the desk research phase and the quantitative and qualitative data gathering methods. The evaluation benchmark is indented.

LaunchPad_RI design and implementation process described in the "BSN_Powerhouse" project application.

STAGE 1

Evaluation of the implementation of WP2 and
LaunchPad Symposium: Online conference and matchmaking event – Hackathon

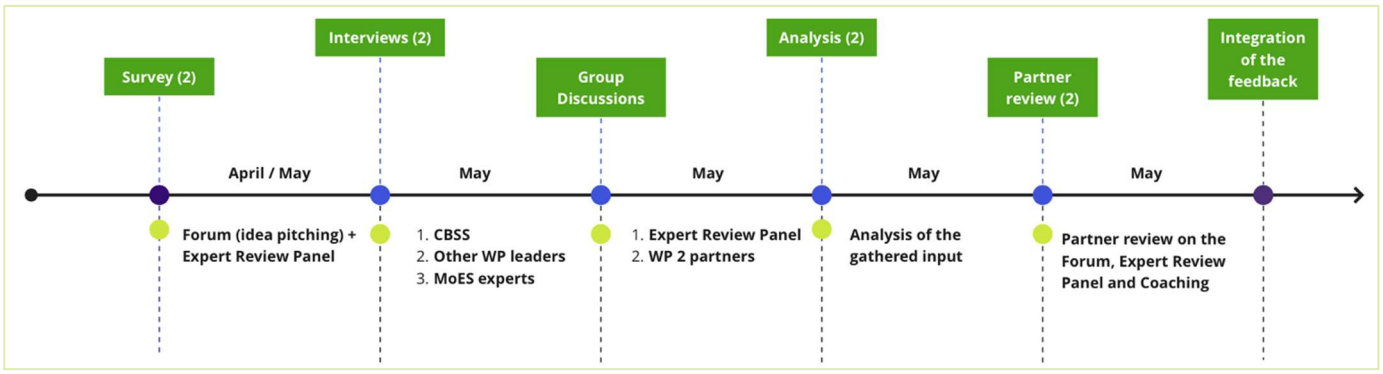


The LaunchPad_RI concept evaluation is divided according to the different parts of the concept and the impacting factors:

1. Overall WP2 implementation, transformation and achieved results.
2. Online Symposium: Conference and matchmaking event – Hackathon – development and implementation.
3. Forum: Development and implementation (Idea pitching and Expert Review Panel).
4. Coaching: Development and implementation.

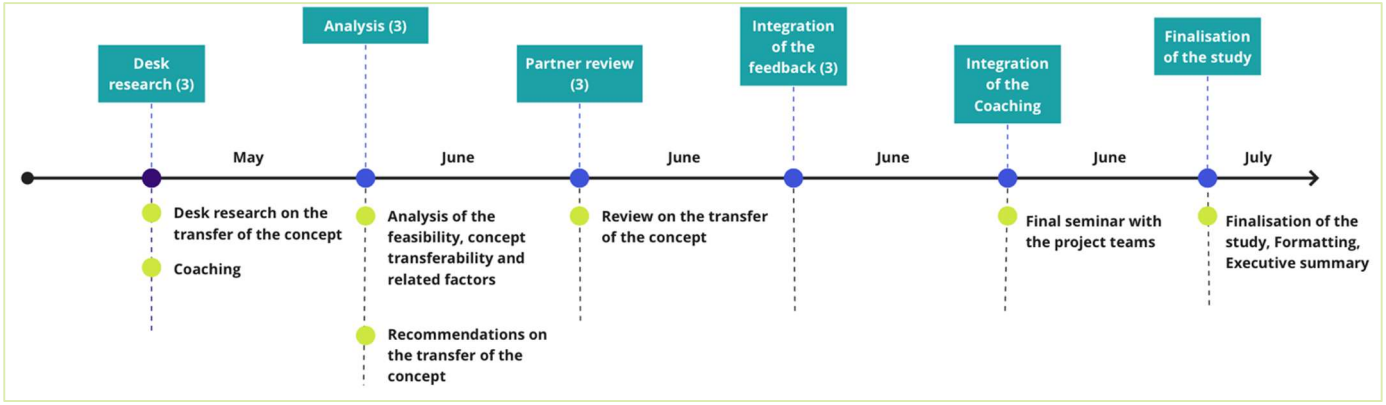
STAGE 2

Evaluation of the Forum, Expert Review Panel and Coaching



STAGE 3

Transfer of the Concept



The research process is time - sensitive, and the qualitative research part has to be followed step by step through the intended phases of the qualitative research.

The quantitative research is organised by designing separate surveys for each of the LaunchPad_RI concept parts. This part of the research focuses on gathering standardised data and generalising it across groups of people to explain a particular phenomenon in each of the LaunchPad_RI concept sections.

The qualitative research part stresses the socially constructed nature of reality, the relationship between the researcher and what is studied, and the situational constraints that shape inquiry. Answers will be found to questions that stress how the social experience was created in the participation process of development and implementation of the LaunchPad_RI and how the participants view the success or failure in attaining the initially set goals of the project.

The qualitative analysis is split into individual interviews (13 interviews) with representatives of all the stakeholder groups and group discussions (2 discussions) with all the main stakeholder groups:

1. Scientific Organizing Committee
2. Expert Review Panel
3. WP2 representatives and involved project partners.

The qualitative research design is purposeful – people, organisations, events, critical incidences are selected because they are "information-rich" and illuminative. They offer valuable manifestations of the phenomenon of interest; sampling is aimed at insight about the phenomenon, not empirical generalisation derived from a sample and applied to a population.[15]

The overall rationale of the chosen approach is to describe a solid benchmark of the intended concept implementation against which the status quo results will be evaluated. The research team will gather standardised answers about all the LaunchPad_RI concept parts. These results will be supplemented with the insights from the individual interviews of all the stakeholder group representatives. The gathered feedback will be formulated into concrete conclusions of the overall success of the concept and each of its part in facilitating the aims defined in the project application:

- Enhanced institutionalised knowledge and competence.
- Better ability to attract new financial resources.
- Increased capability to work in a transnational environment.

The conclusions are validated in the group discussions to make sure a precise representation of the stakeholder group views is formulated in the final report.

The evaluation conclusions include:

- Summary of findings – the answers to research questions. A narrative summary of the key findings and key lessons learned was not known before conducting the study.
- Recommendations – key findings tied with the policy recommendations or actions to be taken to improve the concept in reaching the set aims.
- Future research – note any further evaluation or research needed due to the study's limitations or any remaining gaps in the study.

Avoiding the biases

Mainly biases can be of two types – participant bias and researcher bias. Participant bias stems from the respondents or participants responding to the questions based on what he or she thinks is the correct answer or what is socially acceptable rather than what he or she feels. Another aspect that may introduce participant bias is if the participants are opinionated about the interview's sponsor, which could lead them to agree either to everything or nothing proposed to them.[16]

Example solution: Ensure a separation between the participants in different phases of the research process, e.g., individual interviews are organised strictly between the interviewer and the interviewee.

On the other hand, bias from a researcher's end may get introduced if researchers unknowingly interpret data to meet their hypothesis or include only data that they think are relevant. They might ask questions in an order that may affect the participant's response to the next question or ask leading questions that may prompt a specific response.

[15] USC University of Southern California Research Guide. Web: https://libguides.usc.edu/writingguide

[16] Queen's University Belfast: https://pureadmin.qub.ac.uk/ws/portalfiles/portal/126780610/EBNBiasFINALJuly2014.pdf

Example solution: The structure, questions and the approach of carrying out the quantitative and qualitative analysis has been designed in close cooperation with the Ministry of Education and Science of the Republic of Latvia (MoES) BSN_Powerhouse Project Manager.

In summary, minimising bias is a key consideration when designing and undertaking research. Researchers have an ethical duty to outline the limitations of studies and account for potential sources of bias. The evaluation team pledges to guarantee a fair and to the best capability unbiased evaluation of the LaunchPad_RI.

2.2. OVERALL WORK PACKAGE 2 EVALUATION

The original project idea foresaw that those actions in WP2 would increase the capacity of participating research ministries funders to establish transnational support programmes. The paragraphs below summarise insights from stakeholder surveys and expert interviews. The respondents represent the partners implementing the activities in the work package, members of the Scientific Organizing Committee (SOC) and technical service providers of online conference and matchmaking event – Hackathon.

Overall, the interviewed stakeholders evaluated the implementation of the activities in the WP2 positively. **Interviewed stakeholder and the Symposium participant responses show overall positive feedback regarding the organisational and content matters of the Symposium. The surveyed and interviewed stakeholders expressed the view that the cooperation was well facilitated and improved among the participants; however, several remarks were made that the number of participants should have been higher to maximise the impact on the BSR**.

The Symposium Online conference gathered sufficient reach of people from the BSR (94 participants), gathering participants from academic sector (established researchers, young researchers, including PhD students, post-docs), research infrastructures, industry, as well as policymakers. Based on registration data for the Symposium online conference:

- around 75% of the participants were researchers (55% being established researchers and 20% young researchers)
- around 15% represented industry
- around 10% represented other stakeholder groups, including policymakers.

The matchmaking event – Hackathon had much lower participation – 46 participants applied, but only 19 were active. Moreover, the low impact is highlighted by the fact that the Baltic States and other EU-13 countries were poorly represented among the participants that took part in the idea development. Only 1 person from EU-13 (Latvia) country group joined one of the project teams during the matchmaking event – Hackathon. After the matchmaking event – Hackathon event, additional participants joined project teams, including 4 participants from Baltic States (three from Lithuania and one from Estonia).

WP2 implementation process had strong and weak points identified by the stakeholders in the surveys, interviews and group discussions. The most common aspects are summarised below.

STRONG POINTS IN THE WP2 IMPLEMENTATION

Impact/results achieved

- The results set out in the project have been achieved, a collaboration between stakeholders that participated was established. Only one of the people interviewed said that results were not achieved.
- The task to test the approach of a new regional widening support instrument was achieved, experience in organising such events was obtained and can be used in future.
- Three interviewees claimed that researchers gained experience using online tools, which will be valuable for similar events in the future.
- Particularly positive impact for Russian participants involved - fostered dialogue with western partners and created future collaboration possibilities.
- Coaching of researcher consortiums on macro-regional level is a practice that has been mentioned during the evaluation as underutilised but very much appreciated by the researchers. However, Coaching concepts were novel to the field of Natural Sciences and caused the participants a challenge to incorporate them in the project development process, thus strong communication should be done before the start of Coaching activities for the target groups to better understand the concept and its benefits.

Organisational/technical aspects

- All project partners agreed that there was a good and effective collaboration between project partners and SOC as well as project partners and technical organisers of Online conference and matchmaking event – Hackathon, including good personal relationships.
- A flexible and open-minded approach to project management allowed to react to external factors and changes in a timely manner.
- More innovative approaches to the organisation were used than planned initially due to Covid-19: online matchmaking event – Hackathon, different (bottom-up) approach to Coaching.
- The online format allowed to attract a wider audience than face-to-face events.
- Top-notch key-note speakers for the conference, mentors for the Hackathon and members of the Expet Review Panel were involved that otherwise would not be able to participate due to conflicting schedules.

WEAK POINTS IN THE WP2 IMPLEMENTATION

Impact/results achieved

- The number of participants should have been larger in matchmaking event – Hackathon to maximise impact (only 19 were active) e.g., the number of potential collaborations, new project ideas, future relationships are correlating with the number of participants. In every event, the participation results are directly proportional to the critical mass of the **participants from the target stakeholder groups.**
- Low involvement from the Baltic States and EU-13 countries significantly impacts the scope of collaboration and engagement of the main target group. e.g., the aim of creating collaborations between EU-13 and EU-15 countries was not fully reached.
- Focusing project funding more on the end receiver (the newly created teams), creates more incentives to participate and spend time to establish collaboration, e.g., during the interviews, 4 people mentioned the need for grants to attract and motivate participants.

- Due to the online format of the events, networking between participants was challenging, the extent of networking was limited. At a face-to-face event, networking happens organically as all participants are in the same room. Such networking opportunities are not possible at a virtual event.
- Event organisers must plan for ways to allow attendees to make meaningful connections with each other - breakout sessions, one-on-one networking video calls etc.

Organisational/technical aspects

- The workload increased, and there was not enough time and human resources to implement all of the tasks initially included in the project application due to Covid-19, e.g., meetings with funding organisations and consultancy service providers were not organised during the matchmaking event – Hackathon. The activities in the Forum and consequently in Coaching related to securing long term funding for the cooperation project ideas - helping to identify suitable funding opportunities and Coaching for grant applications, organising a meeting of potential funders - were not implemented.
- The project implementation was severely delayed – by six months e.g., the initial timeline in the project application foresaw the Symposium to take place in April/May 2020; however, it happened only in October 2020.
- The concept and purpose of the project were insufficiently elaborated, which could have impacted the number of participants. The main ideas behind the project could have been better explained in the external communication.
- One of the respondents mentioned that Hackathon interactions were disconnected from the intro day presentations (Online conference). According the respondent's view, participants did not grasp the common goal of the two events. To create better connection between these two events, the online conference could be organized in two morning sessions in two days instead of one full day. The conference (morning) sessions then would be immediately followed by the matchmaking event – Hackathon session.
  The format would allow raising the interest for the Hackathon during the first session of the conference. In the conference second-day session could also be included a summary of the current Hackathon status. It could address those lost in the first Hackathon session.
  This format was considered, but not chosen due to several factors:
  - the online conference and matchmaking event – Hackathon were run by different service providers; different technical solutions were used and it could have created more confusion among the participants
  - raises the risk for overrunning the matchmaking event – Hackathon session by the morning session
  - in case of choosing this format, the budget of the event would increase for approximately 20-30%.
- Communication and dissemination activities should have been better planned and executed. By improving communication and dissemination, a larger number of participants could have been attracted, resulting in a larger number of collaborations and would help reach the goal of fostering collaboration between EU-13 and EU-15 countries.

CONCLUSIONS ON WORK PACKAGE 2 IMPLEMENTATION

TRANSFORMATION

- Covid-19 was the primary catalyst for the challenges that caused different alterations in the original implementation plan. An important external factor impacting the project implementation was the Covid-19 pandemic and the imposed travel and social gathering restrictions. The Symposium (activity 2.1A) and Forum (Activity 2.1B) were initially planned as face-to-face events. Significant changes were needed in the project concept to implement the WP2 activities. The delay was caused primarily due to following factor:
  - WP2 project partners in cooperation with SOC changed the concept from face to face to online within couple of weeks, while redrafting the whole plan to implement the concept in an online environment demands significant time effort to design and agree on the changes and adjust legal procedures to comply with the INTERREG and national regulations.
- The gathered feedback concludes that the team implementing the WP2 activities was flexible and well adapted to the initial project plan based on external factors and challenges identified during the project planning:
  - The initial task split was revaluated successfully, ensuring that the to-do list was distributed among the members based on the strong suit of each partner organisation.
  - The team was daring enough to experiment with new concepts that had not been widely used in the public and scientific sector, e.g., matchmaking event – Hackathon.

IMPLEMENTATION

- Active involvement from project partners was needed – timely response to project communication and information requests, active participation in project meetings. Based on the interviews with project partners, the team was evaluated as possessing the qualities mentioned above and successfully reacted to external factors and changes, ensuring implementation of the project despite changes needed in the concept.
- **The overall speed of adapting to change caused to Covid-19 circumstances in the project has been evaluated as adequate**.
- All stakeholders consider the concept of the project to be transferable. During the implementation process, several changes have been identified as potential improvements to the concept:
  - Broadening the research areas covered. Photon and Neutron Science is a narrow field of research. Interdisciplinarity is a prerequisite in the majority of the international funding calls, therefore broadening the scope of the LaunchPad_RI to focus on the challenges rather than on the specific field of science tends to be a better way to solve joint challenges and deliver an impact
  - LaunchPad Symposium could be organised annually to establish a tradition of a joint BSR research facilitation initiative
  - The instrument should consist of two phases- in addition to Coaching support provided in the LaunchPad_RI instrument, a follow up activity should be implemented, where teams receive funding that could cover research costs and other eligible costs that could help moving forward with the project.

- The communication process could be improved by implementing a systematic method of informing the relevant public and private institutions in EU-13 countries about the project, joint opportunities should be established to attract a sufficient critical mass of participants.

ACHIEVED RESULTS

- **Enhanced institutionalised knowledge and competence**
  Results are achieved. BSN_Powerhouse partnership has benefited from the practical learning experiences gained during the test runs of LaunchPad_RI. The involved partners developed and organised a novel and interactive online Symposium and matchmaking event – Hackathon. The activities to engage funding organisations was missing. Nevertheless, the project was a significant learning opportunity for all the involved stakeholders and was reported as a valuable experience that helps increase the capacity to work in an online environment.

- **Better ability to attract new financial resources**
  Result partially achieved. The objective to increase the capacity of ministries to establish transnational support programmes was evaluated as fulfilled. Based on the interview results, project partners successfully tested the approach of a new regional widening support instrument and obtained experience in launching such instruments. All stakeholders consider the concept of the project to be transferable to other fields.

- However, the funding landscape for science and research is still very heterogeneous and multi-level in the Baltic Sea Region. The inability to involve transnational funding organisations and promote the research projects to the national and international funding organisations have not increased the ease of negotiating transnational funding.

- **Increased capability to work in a transnational environment**
  Result partially achieved. Collaboration between stakeholders that participated in the events was established, thus, the concept in this test case is working successfully. It was concluded after the end of coaching activities, that three out of the four teams, who received coaching support would not have formed a consortium or developed a project idea if they had not participated in the LaunchPad_RI project activities. However, to increase the impact of the event and ensure that the widening tool is effective, the number of participants and geographic representation should be increased by putting a more significant focus on communication and dissemination activities, as well as providing a better incentive to take part in the Symposium in the form of grants for the implementation of the project ideas. Only 1 person from EU-13 (Latvia) ended up joining one of the project teams during the matchmaking event – Hackathon (additionally, four people joined after the matchmaking event – Hackathon, three from Lithuania and one from Estonia). The geographic scope of participants involved was even worse in teams supported during Coaching (illustrated in the figure below), thus, cooperation between EU-13 and EU-15 institutions was not established on sufficient scope.

Countries represented in the project teams supported by Coaching and number of participants

2.3. LAUNCHPAD SYMPOSIUM: ONLINE CONFERENCE & MATCHMAKING EVENT – HACKATHON

The Symposium was held for researchers, large and small-scale RI and their users and industry in the field of Photon and Neutron Science in the BSR. The Symposium aimed to provide a good platform for discussing research ideas and challenges and preparing possible future collaboration projects through matchmaking. The Symposium consisted of two parts: online conference and matchmaking event – Hackathon.
For the implementation of these project activities was responsible Ministry of Education and Science of Republic of Latvia.

The activities and tools selected for implementing the LaunchPad Symposium in both events had strong and weak points identified by the stakeholders in the surveys, interviews and group discussions. The most common aspects are summarised below.

ONLINE CONFERENCE

The first part of the Symposium – Online conference aimed to prepare the participants – researchers, RI, industry for the matchmaking event – Hackathon.
The conference aimed to share good examples of how research could be carried out in traditional and "novel" ways of using photons and neutrons as methods and share good collaboration practices within the field, including involving industry. Based on the project application, the planned outcomes of the first part of the Symposium were:

- A better (documented) overview of cooperation opportunities between large and small RI.
- Personal contacts between EU-13, EU-15 and Russian researchers and ideas for future cooperation.

STRONG POINTS OF THE ONLINE CONFERENCE

Impact/ results achieved/ content

- Different perspectives were covered during the online conference: research facility's perspective e.g. European XFEL, Desy, MAX IV Laboratory, scientific perspective, and some topics for the industry e.g. from LINX.

- Different fields of research covered, including those which are not 'classical' in the sense of Photon and Neutron Science. This approach allowed to identify cross-sectorial collaboration opportunities.
- Online conference presentations included various topics and examples of different ways to apply photon/neutron research for various scientific disciplines. They also gave an idea about the large range of different societal challenges that can be addressed with the help of photon/neutron research.
- Leading research institutions and topics were very well represented, with sufficient cross - disciplinarily.
- Good representation during the online conference e.g. European excellence centres in related topics.

Organisational/technical aspects

- Both technical event organisers and project partners gave the following evaluation: Online conference was very well executed and excellently hosted. The organising team – Project Partners, SOC and events' technical service provider – was open-minded, allowing to successfully adapt to external factors.
- Participants of the Online conference evaluated the overall organisation of the event as very good. Out of 8 people who participated in the evaluation survey, 7 found the organisation process outstanding
- Participants were well involved during the online conference via a chat function.
- It was useful to have the guidelines before the online conference, and technical testing was a good exercise for the organisation of the project.
- Good quality visuals of the whole online conference program including online visuals, event program etc.

WEAK POINTS OF THE ONLINE CONFERENCE

Impact/ results achieved/ content

- During the interviews, 6 people claimed that the event didn't succeed in providing enough industry-related content. Several aspects from interviews illustrate the point:
    - Photon and Neutron Science in the RI and industry context were discussed during the same - Research infrastructure and industry session; however, as two SOC members noted, the topics are too wide and significantly different
    - An additional session could have been organised to address the research - industry collaboration.
- Few respondents mentioned that some the presentations of Scientific session were too focused on the scientific side of the topic and failed to illustrate practical application. However, based on the feedback of Symposium event collected during the event, 87% of respondents evaluated Scientific session of the online conference very positively (58% – excellent, 29% – very good).

Organisational/technical aspects

- Technical organisers of Symposium online conference claimed that some speakers were insufficiently experienced with this event format thus had technical challenges on several occasions.
- Only for a few presentations the time limit was exceeded, thus good engagement rate remained throughout the event - around 70 participants were online all the time (total

number of participants – 94), considering event took whole working day.

- The WP2 leader mentioned that guidelines on the presentation content were sent to speakers of the online conference, but apparently, some speakers didn't use them. This could hinder the achievement of project goals if the speakers don't follow the guidelines and not cover the details or topics expected from them.

MATCHMAKING EVENT – HACKATHON

The ideas shared and generated during the online conference had to be further elaborated and developed during the matchmaking part of Symposium – **Hackathon**, which had to result in the preparation and submission of draft proposals for cooperation projects. Based on the BSN_Powerhouse project application, the objectives of the matchmaking event – Hackathon included:

- Providing the opportunity to place ideas to funders, funding agencies, Research councils, national and regional ministries.
- Organising a meeting of potential funders (raise awareness of the importance of connectors and better cooperation between different BSR funders).

STRONG POINTS OF THE MATCHMAKING EVENT – HACKATHON

Impact/ results achieved/ content

- Participants from 8 countries were active in the matchmaking event – Hackathon, mainly representing EU-15 countries, especially northern Europe (Sweden, Finland), and Russia. International exposure fostered cross border collaboration which resulted in international project teams. Such events are needed to find project partners outside the community.
- Matchmaking event – Hackathon was organised in the innovative way for R&D industry which resulted with positive feedback from the participants of the event and with ability to use this event as an example for similar events in the future.

Organisational/technical aspects

- Participants of the Hackathon evaluated the overall organisation of the event as very good. Out of 8 people who participated in the evaluation survey, 5 found the organisation process outstanding
- Feedback from the event technical organisers, individual interviews and group discussion with the stakeholders highlighted the following positive aspects of organising the matchmaking event – Hackathon online: (1) gives the ability to work on joint ideas without travelling. (2) Helped to attract participants who would otherwise not be able to attend due to travelling.
- Procuring a professional outside service provider for the matchmaking event – Hackathon allowed to streamline solutions to technical challenges and led to a highly professional organisation of the event. Experience in organising similar events helped to avoid "novice" mistakes.

WEAK POINTS OF THE MATCHMAKING EVENT – HACKATHON

Impact/ results achieved/ content

- Five of the people interviewed mentioned that there were not enough participants. The full benefit of the (online) matchmaking event – Hackathon concept could have been gained in a higher number of participants, e.g., the number of potential collaborations, new project ideas, future relationships are correlating with the number of participants. In

every event, the participation results are directly proportional to the critical mass of the participants from the target stakeholder groups.

- Funding organisations were not involved in the event. It was caused by a lack of resources due to Covid-19 – the workload for the project partners who were involved in this activity increased significantly compared to the project application. The lack of involvement of the funders reduces the chance of implementing the cooperation opportunities identified during the project, thus reducing its long-term impact.
- In order to create higher interest and achieve better outcome of matchmaking event – Hackathon, the conference and Hackathon could be organized in two morning/afternoon sessions in two days instead of one full day. The conference (morning) sessions then would be immediately followed by the matchmaking event – Hackathon (afternoon) session.
  The format would allow raising the interest for matchmaking event – Hackathon during the first session of the conference. In the conference second day session could also be included a summary of the current matchmaking event – Hackathon status. It could address those lost in the first matchmaking event – Hackathon session.
  This concept was considered, but not realised due to following factors:
  - the online conference and matchmaking event – Hackathon were run by different service providers (technical organisers), different technical solutions were used and it could have created more confusion among the participants.
  - raises the risk for overrunning the matchmaking event – Hackathon session by the morning session
  - in case of choosing this format, the budget of the event would increase for approximately 20-30%.

Organisational/technical aspects

- Preliminary preparation of the proposals of other participant profiles, preliminary selection of partners was unsuccessful (mentioned by 5 interviewees). Part of the attendants and much of the time was lost by redesigning teams.
- During the interviews, 3 people mentioned that participants were not entirely focusing on the event. They were multitasking (doing other things not related to the event). According to technical organisers of the event, more interactive tools/platforms could have been used to increase the activity of participants and make sure they are fully focused on the event and not multitasking.
- The face-to-face networking component was missing. At least one event could be organised in a face-to-face format for everyone to get to know each other. All of the people interviewed said that networking is more effective when done face-to-face.
- The pre-hackathon explanatory meeting could have been organised to explain the process to participants and ensure a smooth event as 4 interviewees claimed that participants didn't fully understand the concept and what to do.

CONCLUSIONS ON LAUNCHPAD SYMPOSIUM: ONLINE CONFERENCE AND MATCHMAKING EVENT – HACKATHON

TRANSFORMATION

- The main positive aspects of the transformation of the LaunchPad Symposium concept were related to the strong points brought by the nature of online events:

- easier engagement of specific stakeholders in larger numbers from multiple countries by lifting travel requirement challenges imposed
- opportunity to attract top-notch key-note speakers for the online conference and mentors for the matchmaking event – Hackathon that otherwise would not be able to participate due to conflicting schedules
- safer space to express concerns/questions via moderated chat function throughout the whole conference and matchmaking event – Hackathon.

> At the same time, the main weak point of online events was strongly highlighted:
  - Considerably more difficult networking compared to face-to-face events. Online networking works better when people are already familiar, or it is organised for specific target groups that mainly consist of younger generation, e.g., Generation Z[17]. In the context of the project, more intensive involvement of young generation scientists (master, doctoral or post-doctoral level students) could be correlated with a possible higher activity in the networking. However, there should be a balance kept among the participating researcher groups in terms of seniority. The dominance of one or the other group sways the concentration of the research excellence, which is the bottom-line measure for success in the European Research Area.

> In the light of the *force majeure* transformation imposed by the COVID-19, the activities in the matchmaking event – Hackathon and consequently in Coaching related to securing long term funding for the cooperation project ideas were not implemented (helping to identify suitable funding opportunities and Coaching for grant applications, organising a meeting of potential funders)
  - An increase in the workload during the project preparation compared to the initial effort planned in the project application increased the implementation cost and limited the financial and human resources capacity to implement the activities mentioned above.

IMPLEMENTATION

> A general remark that is valid in the context of the transformed **LaunchPad Symposium concept** is that adapting to the online tools has had a particular learning curve for everyone, and operating from a home environment imposes challenges in itself. This context can make or break a concept of any event. The overall evaluation of the event implementation concludes that the concept can be categorised as successfully implemented, understanding it as a trial version.

> **Meeting and video conferencing online platform** chosen should be widely used among the target stakeholder group to avoid technical challenges. Participants need to be already familiar with the platform and have experience in its use. The platform needs to be able to create breakout rooms for discussions in smaller teams. Guides and demonstrations of the use of online platforms should be available in video and written formats, which are posted on the official website and sent to the participants before events.

> In a multi-stakeholder environment, a clear framework for cooperation is of utter importance. The interviewed participants highly regarded the experience of the procured experts to organise **both events**; nevertheless, specific aspects, e.g., information flow protocols, are essential to organise the processes in a timely manner and high quality.

[17] Deloitte: Welcome to Generation Z (https://www2.deloitte.com/content/dam/Deloitte/us/Documents/consumer-business/welcome-to-gen-z.pdf)

- An important aspect to consider – the general unfamiliarity of the **matchmaking event – Hackathon concept** outside the start-up ecosystem. Although the concept is well known in the start-up field, it is not widely used among scientists. More careful risk assessment might have better prepared both the organisers and participants for the demands and opportunities imposed by the matchmaking event – Hackathon concept.
- **Matchmaking event – Hackathon concept** could be designed in various forms depending on many aspects that have to be considered, including the stakeholder profile, the purpose of the event, availability of the mentoring support, financial and other aspects.
- Thorough mapping and experienced event organisers of the needs for the result to be achieved might have highlighted the specific needs, e.g., the need for a specific team formation stage before the matchmaking event – Hackathon and participant profiling.

ACHIEVED RESULTS

The expected results of the LaunchPad Symposium defined in the application were partially achieved. Important consideration must be made towards the synergy of the two separate events under the umbrella of a LaunchPad Symposium. Independently each event served its purpose.

The Symposium Online conference had diverse content and spread the information about different case studies and research in Photon and Neutron Science.

Matchmaking event – Hackathon managed to produce several ideas to put forward to test at the Expert Review Panel. However, the missing link and transition between the both Symposium events – online conference and matchmaking event – Hackathon are evident, e.g., based on the facts in a significant drop of the participation levels from event to event. A further hypothesis of whether there was a useful continuation of the team ideas from event to event is yet to be evaluated.

- In post factum evaluation, Online Conference and matchmaking event – Hackathon were stand-alone events with a different aim. The former was awareness building event and an attempt to facilitate some networking and the later was an attempt to establish partnership between different researchers to go internationally within the Baltic Sea Region for a common research purpose.
- In brief, both events should have been much closer intertwined, however, it was impossible due to budgetary constraints and lack of human resources to implement full-spectrum of activities and the challenge of an adoption rate and learning curve when it comes to introduction of a novel concept and framework to work together among the participants.
- Symposium with a meet - and - match activities in a nutshell should have served as the building block for possible partnerships in larger quantity to be advanced further to the matchmaking event – Hackathon.
- Matchmaking event – Hackathon in essence should have produced joint solutions to the challenges set forth by the society or policy makers. The reality proved that there was hardly any choice to benchmark the team applications because there was not enough critical mass of them going to the matchmaking event – Hackathon and coming out of it.
- **A better (documented) overview of cooperation opportunities between large and small RI.** The Online conference brought several case studies which demonstrated the opportunities that lay in cooperation between large and small RI.

- **Personal contacts between EU-13, EU-15 and Russian researchers and ideas for future cooperation.** Result partially achieved. The online conference succeeded in identifying cooperation opportunities between the participating EU-13, EU-15 and Russian researchers. However, to maximise the impact and ensure a larger number of cross-border collaborations, the number of participants must be increased both for online conference and matchmaking event – Hackathon. An important point to take into consideration is the involvement of EU-13 countries, especially Baltic States:
    - **Ten participants** from Estonia, three participants from Lithuania and one from Latvia took part in the online conference
    - **One participant** from EU-13 countries (Latvia) joined the teams formed during the matchmaking event – Hackathon
    - Additionally, **four people** - three from Lithuania and one from Estonia – joined with project ideas after the matchmaking event – Hackathon.
- **Providing the opportunity to place ideas to funders, funding agencies, research councils, national and regional ministries.** Result partially achieved. While the teams participating in the matchmaking event – Hackathon did not have a chance to place their ideas directly in front of the funders. The presence of different ministries and research organisations in the events indirectly showcased the capacity for joint innovation.
- The outcome of the matchmaking event – Hackathon to prepare and submit draft proposals for cooperation projects was achieved.
- **Organising a meeting of potential funders (raise awareness of the importance of connectors and better cooperation between different BSR funders).** The result was not achieved. The lack of involvement of the funders reduces the chance of highlighting the potential and need for joint investment in strengthening the scientific cooperation in the BSR.

2.4. FORUM: EXPERT REVIEW PANEL AND COACHING

FORUM AND EXPERT REVIEW PANEL

Based on the initial project application, the Forum had to be held for consortia of RIs formed during the LaunchPad Symposium, that prepared a project brief to meet potential funders, intermediaries, coaching and consultancy service providers, and peers. In the Forum, RIs could have pitched their project ideas in the plenum.

Funders and service providers could have presented their offers. In interactive formats (e.g. speed-dating, bar camp), project partners could have directly engaged with peers.

The Forum was expected to:

- provide the opportunity to place ideas to funders, funding agencies, research councils, national and regional ministries;
- help identify suitable funding opportunities and coaching for grant applications;
- organise a meeting of potential funders (raise awareness of the importance of connectors and better cooperation between different BSR funders).

Due to the impact of Covid-19 pandemic, there was not enough time and human resources to implement all the tasks initially included in the project application, thus, the concept of the Forum was transformed.

Forum is the continuation of LaunchPad Symposium. As the result of the matchmaking event – Hackathon, five project ideas were submitted and presented during the Forum.

In the Forum, teams had the opportunity to present project drafts and receive feedback from the Expert Review Panel.

Potential intermediaries, coaching and consultancy service providers were not included in the Forum. Meeting with potential funders was not organised. No help identifying suitable funding opportunities was provided. No interactive formats were used, participants did not meet other project teams.

An independent Expert Review Panel evaluated the project drafts regarding their scientific excellence and impact for the region in serving as 'connectors' between RI within the BSR. The Expert Review Panel selected four project drafts that got awarded the funds for Coaching. Additionally, Expert Review Panel gave recommendations for further development of every project draft submitted.

Responsible partners for the implementation of these project activities were Ministry of Education and Research of Republic of Estonia and Saint Petersburg Electrotechnical University "LETI".

The activities and tools selected for implementing the Forum and Expert Review Panel had strong and weak points identified by the stakeholders in the surveys, interviews and group discussion. The most common aspects are summarised below.

STRONG POINTS OF THE FORUM AND EXPERT REVIEW PANEL

Impact/ results achieved/ content

- Most survey respondents (10 out of 13) gained high or very high personal outcomes from the Forum and Expert Review Panel. In addition, respondents, who presented their ideas during the Forum found the feedback received to be helpful for the improvement of project applications (specific recommendations were given for each project draft) and were well argued.
- Forum activities helped get an adequate view of project ideas, clarify issues, ask questions, elaborate on details, and develop the proposal further. In addition, feedback on project drafts was given before the application submission, allowing project teams to improve their applications, thus resulting in higher quality projects.

Organisational/technical aspects

- Survey respondents found the concept of the of the Forum and Expert Review Panel to be suitable for professional feedback and receiving suggestions for further development (12 out of 13 participants).
- Participants of the Forum and Expert Review Panel evaluated the overall organisation of the event as very good. Out of 13 people who participated in the evaluation survey, eight found the organisation process outstanding.

WEAK POINTS OF THE FORUM AND EXPERT REVIEW PANEL

Impact/ results achieved/ content

- The Expert Review Panel consisted almost exclusively of experts from academia. More people with an industrial background in the panel were needed to provide insights on a possible transfer of research results to the industry.

Organisational/technical aspects

- A document on the principles of evaluation prepared by the organisers of the

LaunchPad_RI activity Expert Review Panel included a clause that the criteria and the scoring system should be taken as a helping tool, and the Expert Review Panel themselves need to agree on the evaluation criteria and the scoring system. However, for the evaluation process to be transparent and trustworthy, the criteria should be set before the LaunchPad_RI implementation.

- The members of Expert Review Panel did not fully understand the concept of Coaching and how the Forum, Expert Review Panel and Coaching activities are connected, thus negatively affecting the evaluation process.
- Initial evaluation criteria prepared by the organisers and sent to the Expert Review Panel were based on criteria widely used for evaluating international scientific project proposals. However, the aim of Expert Review Panel was not to grant funding for research activities, in which case strongest project proposals should receive most points, but to grant funding for Coaching activities, where the lowest-rated team should have gotten the highest prize, as the team with the worst project draft would benefit most from the Coaching activities. New weights for evaluation were agreed and introduced between the Expert Review Panel in the last panel session.
- Initially, there was no conflict-of-interest policy introduced. Conflict-of-interest declaration was prepared from the organisers before the event resulting in a long discussion about the topic. This topic became urgent because one of the Expert Review Panel members was representing the same institution as one of the project teams, illuminating the need for policy that regulates the potential situations for conflict of interest. Conflict-of-interest declaration was developed and sent to the Expert Review Panel after the event had already started.

CONCLUSIONS ON FORUM AND EXPERT REVIEW PANEL

TRANSFORMATION

- The main advantage of Covid-19 transformation was the chance to attract high-level experts for the Expert Review Panel that otherwise would not participate due to conflicting schedules. However, similar to the LaunchPad Symposium, lack of face-to-face contact negatively affected the quality of discussions and networking opportunities during the Forum.
- Forum and Expert Review panel would be best organised as a hybrid event. Presentations and discussion with the project teams (the Forum) should be done face-to-face to foster networking, improve communication and discussions between project teams and Expert Review Panel. For internal discussions within the Expert Review Panel, online meetings would be sufficient.
- In the light of the *force majeure* transformation imposed by the COVID-19, the activities in the Forum and consequently in Coaching related to securing long term funding for the cooperation project ideas - helping to identify suitable funding opportunities and Coaching for grant applications, organising a meeting of potential funders - were not implemented. An increase in the workload during the project preparation compared to the initial effort planned in the project application increased the implementation cost. It limited the time and human resources capacity to implement the activities mentioned above.

IMPLEMENTATION

- The concept of Forum and Expert Review Panel in a nutshell was expected to be much more complimentary than it was actually implemented. Therefore it is not possible to evaluate how well the theoretical intention of the Forum and Expert Review Panel would have worked. Furthermore, there was little to no competition to get the funding as 4 out of 5 teams received the funding. However, from the version that was implemented, it is evident that both events served well to provide feedback on research and innovation project drafts. The teams deemed that to be a valuable experience. Hence, it is possible to conclude that in terms of the mentoring, the activities served well, but in order to have the highest quality in all aspects of the submitted projects, the competition (number of teams) should have been much higher.
- The main strength of the **Forum** is the opportunity for participants to receive recommendations on possible improvements before applying for funding. In addition, discussing project drafts to clarify issues and elaborate on details decreases the importance of proposal writing skills, giving fewer experienced scientists and industry representatives without extensive proposal writing experience a better chance to compete for funding.
- The level of competition for specific funding is incomplete, but still, the governing measure in ERA also for the excellence of the application approved. For example, suppose the rate of success in Horizon projects are below 14%, but in the LaunchPad_RI it was 80% (4 out of 5 application were funded). In that case, it is an obvious risk not to have the competitive enough on the European scale consortiums being developed.
- The **Expert Review Panel** should include more people with industrial backgrounds to provide insights on possible use cases of research results in industry and promote knowledge transfer between science and industry. Successful exploitation of R&D results is an essential part of the innovation process and fundamental for regional competitiveness.
- Correct evaluation criteria and scoring system used by the Expert Review Panel should be set before the start of the LaunchPad Symposium events (Online conference and matchmaking event – Hackathon) and made available to Expert Review Panel and event participants on the project webpage. An example of this approach is Horizon 2020 and Horizon Europe programs, where evaluation criteria are known to applicants before the subbmitision of the application. Changing the criteria or scoring system during the event reduces the transparency and objectivity of the evaluation process.
- The conflict-of-interest policy should should be introduced toto the Expert Review Panel, which should also be published before the start of LaunchPad Symposium events. All members of the Expert Review Panel should sign a confirmation on compliance with the policy. Participating in the activities both as experts and members of project teams should not be allowed unless the Expert Review Panel member does not participate in evaluating their project draft, does not participate in the discussions about their project draft, can not affect the evaluation result in any way.

ACHIEVED RESULTS

The expected results of the LaunchPad **Forum** defined in the application were partially achieved.

- Project teams found the feedback received during the Forum to be helpful for the improvement of project applications and well argued. Forum activities helped get an

adequate view of project ideas, clarify issues, ask questions, elaborate on details, and develop the proposal further.

- Due to the force majeure impact, there was not enough time and human resources to implement all the tasks initially included in the project application; thus, the meetings with potential funders, intermediaries, Coaching and consultancy service providers, and peers were not organised.

The expected results of the LaunchPad **Expert Review Panel** defined in the application were partially achieved.

- The independent Expert Review Panel evaluated project drafts and selected ones that got awarded the funds for Coaching.
- Although a scoring system was adjusted during the implementation of the activities, conflict of interest arose due to participants acting both as team members and experts. Thus the objectivity of the evaluation process was reduced.
- Expert Review Panel gave recommendations for further development of every project draft submitted. Participants found the feedback received to be helpful for the improvement of project applications.

COACHING

Based on the initial project application, the projects selected by the Expert Review Panel were expected to receive support from BSN in terms of advocacy and Coaching to transform the concept of the project draft into a concrete proposal for funding. The exact format and specific aim of the Coaching were meant to be tailor-made for each of the selected projects.

During the implementation of the project, the concept of coaching was slightly changed. Coaching activities aimed to give project teams a better chance of getting access to funding and supporting the development of "soft skills", team building, and partnership.

Following Coaching activities were supported:

- Organising project team building and project partner meetings/events
- Supporting project partner search/widening partnership
- Identification of suitable funding opportunities, meeting with potential funders and stakeholders
- Study trips travel to a research facility for guidance, expert exchange visits
- Training
- Consultations (e.g. for writing a grant application)

Coaching activities were strongly affected by the travel and gathering restrictions imposed by the COVID-19. The initial concept of Coaching strongly focuses on covering travel costs for the activities listed above and organising networking and team building events that are less effective when transferred to an online format.

Responsible partners for the implementation of these project activities were Ministry of Education and Research of the Republic of Estonia and Saint Petersburg Electrotechnical University "LETI".

STRONG POINTS OF THE COACHING

Impact/ results achieved/ content

- Coaching activities were an excellent way to get acquainted with project partners found during the LaunchPad Symposium and build a base for future collaboration.
- The activities implemented by project teams were helpful for further development of the

project drafts – feedback and recommendations given by external experts and workshops, discussions, and other events helped to move forward with project ideas.

- All in all, the coaching of researcher consortiums on macro-regional level is a practice that has been mentioned during the evaluation as underutilised but very much appreciated by the researchers.

Organisational/technical aspects

- The respondents mentioned no particular strong points regarding the organisational/technical aspects of the Coaching.

WEAK POINTS OF THE COACHING

Impact/ results achieved/ content

- Although the Coaching helped the teams to move forward with project ideas, the impact of the Coaching was very limited. Three out of four teams only partially achieved the objectives of coaching activities. None of the project teams secured additional funding during the Coaching period or shortly afterwards. For the teams, the eligible additional activities besides the mentoring, supported under the Coaching were not the most useful to advance the projects to the next stage. Three out of four teams mentioned that in order to advance further, it would be beneficial to cover pilot research costs and remuneration for the project team. A great challenge to the teams is to be able to find funding for moving beyond idea formulation.
- The knowledge gap in the formation of consortium using the methods in LaunchPad_RI was a challenge. In the way how researchers from the field of Natural Sciences form groups and develop ideas are different enough from those that were used in LaunchPad_RI. Hackathon, Forum, and Coaching concepts were novel to the field of Natural Sciences and caused the participants a challenge to incorporate them in the project development process. The concept and its benefits should be througly communicated to the target groups to improve the efectivness of the activities.
- Project teams that came up with ideas during the LaunchPad Symposium were not ready to apply for national and EU level funding instruments by the end of Coaching, as none of the teams succeeded in securing funding from national and EU level funding instruments during the Coaching period or shortly afterwards.
- Based on the feedback from project teams, additional support instrument is needed to develop project ideas further. The additional funding could cover remuneration of the staff cost, paid time to use certain infrastructure, travelling and other costs. Large scale infrastructure could participate by providing beam time or other services.
- An event organised after the Coaching, where more mature project ideas are presented to the public and funding organisations, could also be advantageous according to project teams.

Organisational/technical aspects

- All of the project teams found the period allocated to Coaching activities to be too short, limiting the amount of progress made during the LaunchPad_RI project implementation and the impact of funding invested.
- The eligible costs for Coaching were too narrow. Project teams mentioned the need for broader eligible activities, most commonly referring to the need to cover remuneration of the staff. The issue of narrow eligible costs was intensified by the travel and gathering

restrictions imposed by the COVID-19, as covering the travel costs was the main focus of initial Coaching concept.

CONCLUSIONS ON COACHING

TRANSFORMATION

- Due to the intense focus on activities requiring international travel, Coaching activities were strongly affected by the travel and gathering restrictions imposed by the COVID-19. In addition, team building and networking activities, which were an essential part of the Coaching concept, are less effective when performed remotely – in an online format. As a result, the impact of Coaching was low, and project teams struggled to find ways to use the funding allocated, especially within the limited time frame of LaunchPad_RI.

IMPLEMENTATION

- An essential drawback of Coaching was the narrow focus of eligible activities. As a result, Coaching support did not cover the activities most needed to improve project ideas further. As already mentioned before, according to the project stakeholders, funding should have been focused more on the end receiver (the newly created teams) by offering grants for pilot research and the development of ideas.
- Furthermore, according to agile principles, to test the ideas fast, the projects often need funding to do piloting of their research idea. The costs might consist of categories, e.g. Remuneration of the staff cost, paid time to use certain infrastructure, travelling and other costs (materials to design / run the pilot). The final amount in each category should be evaluated separately.
- Large scale infrastructure could participate in the LaunchPad_RI by providing beam time or other services in the portfolio of the large-scale RI. This in-kind contribution can allow to test and locate the teams close to the infrastructure that later on might allow to convert the researchers in to costumers. Beam time costs could be inluded in the eligible costs of the support instrument. Neverthelees, to provide such opportunity the level of excellence should be high enough to make this service available.
- The period allocated to Coaching activities was too short for the teams to benefit from the support provided fully and develop the project drafts enough to attract additional funding from other national and international R&D support programs. Much more realistic approach would be to focus on creating a roadmap for the teams on how to access the funding opportunities already available in ERA.

ACHIEVED RESULTS

- Coaching aimed to support teams in project partner search, identify suitable funding opportunities, develop grant applications, and meet potential funders. Unfortunately, although Coaching helped the teams move forward with project ideas, none of the teams succeeded in securing funding from national and EU level funding instruments during the Coaching period.
- Participants evaluated Coaching as an excellent tool to establish initial collaboration within the consortia created during the LaunchPad Symposium; however additional resources (larger funding) and time would be needed to kickstart the research projects.

> The results achieved by each of the teams are described below

TEAM 1 Structural behavior of high entropy alloys and bimodal harmonic structure materials under neutron irradiation	Results partially achieved	The team planned to implement two activities during coaching: 1) Organise open meetings or workshops in order to attract additional participants to the consortium. The workshop was organised, it included extensive discussions abput the topic and how to move forward with the project. The number of participants was much lower than expected and the project team did not succeed in attracting enough partners from the industry. 2) Organise training for proposal writing. The activity was not implemented due to travel restrictions imposed by Covid-19 pandemic and the short time period allocated to Coaching activities. After Coacing activities, the project idea is not developed enough to apply to EU level funding instruments. Countries represented: Finland, Sweden, France
TEAM 2 Undulator Effect by Wakefield in a Periodically Bent Waveguide with Dielectric Filling	Results partially achieved	The project team included participants from Russia and Germany, however, during the Coaching phase, the collaboration with German participant was not sussessful, therefore external expert from Russia was involved. The project team gained valuable feedback form the external expert, however the project lacks international collaboration. Countries represented: Russia, Germany (unsuccessful collaboration)
TEAM 3 Towards a Virtual Human Body built on a broad network of Life Science Expertise and Advanced Research Infrastructure Tools in the Baltic Sea Region	Results partially achieved	The project team partially implemented/ contributed to each of the tasks included in the initial action plan, however there was not enough time and resources to implement all of the tasks. In order for the team to fully achieve the results during Coaching, the work performed by the participants should have been compensated - larger funding needed for research activities. Countries represented: Sweden, Germany, Latvia, Russia
TEAM 4 Fractal organization of chromatin in the nucleus of a biological cell	Results achieved	Regular meetings between participants were established, workshop was organised (however the number of participants was smaller than initially planned), beamtime for experiments was obtained, first samples were prepared and sent to Germany. Countries represented: Estonia, Russia

2.5. THE FORCE MAJEURE IMPACT ON THE LAUNCHPAD_RI

All of the activities of LaunchPad_RI (Symposium, Forum, Coaching) were initially planned as traditional face-to-face events and activities. However, it was impossible to implement the activities as initially planned due to travel and gathering restrictions. Therefore, the project concept was transformed into an online Symposium, which consisted of two parts: an online conference and an online matchmaking event – Hackathon.

Significant changes were needed in the project concept and the concept of all of the activities. Additional administrative and organisational work was needed; therefore, the implementation of the WP2 was delayed, and the workload increased during the planning stage of the events.

Based on the interviews with project partners, the project team successfully reacted to external factors and changes, ensuring implementation of the project despite changes needed in the concept.
Following negative impact of COVID-19 was identified during the interviews:

- The networking part of the LaunchPad_RI instrument activities - LaunchPad Symposium, Forum, and Coaching - was heavily impacted by the changes in the activity concept due to COVID-19. All of the stakeholders interviewed said that networking is more effective when done face-to-face; therefore, online networking was less effective.
- Funding organisations were not involved in the event, and funding opportunities were only published on the website. A lack of resources caused it due to increased workload. The lack of involvement of the funders reduces the chance of implementing the cooperation opportunities identified during the project, thus reducing its long-term impact.

THE GLOBAL CONTEXT OF THE CHANGES IN EVENT ORGANISATION

COVID-19 restrictions have forced us to rely on technology to connect with others and have been a catalyst for the rapid uptake of digital solutions to simulate the physical environment and the benefits that large gatherings through conferences and workshops brought to people. Connection and social interaction are still an integral part of human life, and the current online tools cannot fully substitute that. The future lies in the hybrid version of the events and a more calculated risk and decision-making for social gatherings. Social distancing rules and guidelines are to stay.

Communication Platforms

The most common platform that event organisers have utilised is Zoom, which went from being practically unknown to becoming a household name within a few short months. Initially, the online meeting app was used primarily for small to medium-sized meetings and conferences.

The next frontier for Zoom and other platforms is hosting diverse virtual events, e.g., virtual history tours, business conferences and live group meditation sessions. Hence, the digital spaces are here to stay, and their application to different social settings is yet to increase.

"Hybrid" events will be the norm, incorporating both live and virtual elements. This is an excellent opportunity for event planners, who will no longer be limited by the size of the venue and can expand their audience to include virtual attendees, as well as those who prefer to attend in person.

3. TRANSFER OF THE CONCEPT

3.1. VISION FOR THE BALTIC SCIENCE NETWORK

Understanding the Baltic Science Network (BSN) future vision is important to decide how the revised concept of LaunchPad_RI best fits in the overall context of BSN and the landscape of the cooperation facilitation tools.

In the final conference of project BSN_Powerhouse[18], it was argued that BSN has proven to be a strong voice of the Baltic Sea Region science community and can serve as a role model for other macro-regions. According to Klaus von Lepel, Project Director of the Baltic Science Network, BSN will continue and welcome new members. BSN vision for 2030 is still being developed. However, the BSN aims to be a common voice of the science and research community in the macro-region.

Building on its key strengths, BSN strives to be:

- the common voice of the BSR science community at the macro-region in representing scientists, policy actors, funders and innovators;
- a coordinator and joint platform to initiate joint projects and initiatives among members and others;
- a project enabler to foster the cooperation of scientists and researchers on the ground.

The thematic focus of the BSN - build on the strong network in its current priority areas while expanding the thematic coverage where opportunities arise.

- Continue its work in the three thematic priority areas (life science, photon neutron science, social sciences) and cross-cutting issues like research infrastructure cooperation, mobility, and strategy making.
- Allow a flexible choice of additional topics.
- Cover interdisciplinary and cross-cutting topics (e.g. green transition, sustainability, digitalization).

Membership of the BSN, BSN's strength is the diversified voice it represents.

- Continue as a multi-level network.
- Operate as an open network that welcomes new members.
- Encourage all members to initiate joint projects and initiatives actively.
- Enhance efforts to integrate countries currently not represented in the network.

Cooperation facilitation – BSN will continue to strengthen synergies with existing policy frameworks and initiatives in the BSR.

- Continue efforts to integrate into and make use of existing policy frameworks such as EUSBSR & CBSS.
- Strengthen cooperation with other organisations, programmes and initiatives like the European Universities or Nordic Cooperation.
- Strengthen efforts to position macro-regional interests in science and research policy at the EU and national and regional levels.

Create awareness – BSN's unique position to create the awareness of the opportunities and rationale for a joint BSR research area.

[18] Baltic Science Network (BSN) and CBSS Baltic Sea Science Day: Towards a new ERA for Research and Innovation in the Baltic Sea Region, 16.06.2021

- Through the activities that are being implemented in the various projects linked to Baltic Science Network, continue to bring the awareness of the research and policy initiatives that are formed and advanced in the macro-region.
- Share best practices on how to involve the society in science and explain the research to the society.

The later chapters of the Transfer of the concept will consider the ambition of BSN and the evaluation results to conclude the recommended ways of developing the LaunchPad_RI.

Responsible partner for the development of the Transfer concept was Ministry of Education and Science of the Republic of Latvia.

3.2. COMPETING SOLUTIONS

ANALYSIS OF EXISTING SOLUTIONS

The Analysis of Existing Solutions is being carried out based on the results of the LaunchPad_RI concept and the evaluation of its implementation that can be seen in the section of the Evaluation of the concept.
The analysis of the existing solutions is important to understand how does the LaunchPad_RI fit in among all the support tools with the intention or potential to deliver similar results as the Launchpad_RI?
The analysis helps build the arguments of how the concept can be improved and possibly improved by being a complimentary tool rather than duplicate existing initiatives.
The general description of the solution and their opportunities and weaknesses in delivering on the BSN aims will be discussed.

EU level instruments for fostering cooperation and stakeholder engagement
Spreading Excellence and Widening Participation (SEWP) under Horizon 2020 and Horizon Europe actions contribute to building research and innovation capacity for countries lagging[19]. They will strengthen their potential for successful participation in transnational research and innovation processes, promote networking and access to excellence.[20]

One of the activities of SEWP is **TWINNING**, which stands for institutional networking. A twinning project strengthens a specific field of research in an emerging institution in a Widening country. In addition, it links the institution with at least two internationally-leading counterparts in Europe. Activities like short-term staff exchanges, expert visits, on-site or virtual training, workshops, conference attendance, dissemination and outreach are supported.[21]

Opportunities	Weaknesses
Large budget available from Horizon 2020 and Horizon Europe framework programmes	SEWP instruments focus on building the excellence of one scientific institution, not building large cooperation networks.

EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY (COST) is a funding organisation for creating research networks, called COST Actions. These networks offer an open space for collaboration among scientists across Europe and beyond. COST is bottom-up; this means that researchers can create a network – based on their research interests and ideas – by submitting a

[19] The Member States currently eligible for Widening support are: Bulgaria, Croatia, Cyprus, Czechia, Estonia, Hungary, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia and Slovenia
[20] *Widening participation and spreading excellence*, https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/widening-participation-and-spreading-excellence_en
[21] *Twinning*, https://ec.europa.eu/programmes/horizon2020/en/h2020-section/twinning

proposal to the COST Open Call. The proposal can be in any science field. It is possible to join ongoing Actions, which keep expanding over the funding period of four years. They are multi-stakeholder, often involving the private sector, policymakers as well as civil society.

COST funding intends to complement national research funds. They are exclusively dedicated to covering collaboration activities, such as workshops, conferences, working group meetings, training schools, short-term scientific missions, and dissemination and communication activities. The minimum number of countries included at the proposal stage is seven COST Members. Out of the seven, a minimum of 50% must be Inclusiveness Target Countries[22].

Opportunities	Weaknesses
Strong focus on creating international research cooperation networks. Bottom-up approach (proposal can be in any science field).	In order to submit a proposal and receive funding, there should already be an established consortium consisting of seven countries.

EUROPEAN RESEARCH AREA NETWORK (ERA-NET) is a funding instrument designed to support public-public partnerships in their preparation, the establishment of networking structures, design and implementation, coordination of joint activities. One of the most important activities of ERA-NET projects is the organization of joint research project competitions. Joint research projects are open to scientific institutions, companies and other organizations from the ERA-NET project countries. The ERA-NET project country provides funding for its scientific institutions and companies in the most successful research projects. In addition, the European Commission co-finances part of the research project costs (up to 30%).

The focus of ERA-NET has shifted from funding networks to 'topping-up funding of single joint-calls for transnational research and innovation. This is done in selected areas with high European added value. This aims to increase substantially the share of funding that the Member States dedicate jointly to challenge-driven research and innovation agendas.

Opportunities	Weaknesses
Promotes organization of joint research project competitions, mobilising EU and national funding for transnational research projects.	The program has shifted focus from building networks to providing funding for transnational research projects within specific areas that do not match the ones that are of interest to BSN. Setting up ERA-NET is a complicating exercise that demands a commitment from multiple countries.

THE EUROPEAN INSTITUTE OF INNOVATION AND TECHNOLOGY (EIT) is an independent EU body. The EIT brings together leading organisations from business, education, and research, the so-called 'knowledge triangle', to form dynamic cross-border partnerships.

The Innovation Communities:

- Develop innovative products and services;
- Start new companies; and
- Train a new generation of entrepreneurs.

[22] Albania, Bosnia and Herzegovina, Bulgaria, Cyprus, Czech Republic, Estonia, Croatia, Hungary, Lithuania, Latvia, Luxembourg, Malta, Moldova, Montenegro, Poland, Portugal, Romania, Slovenia, Slovakia, Republic of North Macedonia, Republic of Serbia and Turkey.

Examples of EIT matchmaking events

Opportunities	Weaknesses
Provides funding for joint innovation projects and actively fosters cooperation, organises networking and matchmaking events to create collaborations.	It covers only specific fields, limiting the scope of cooperation

In addition to the instruments described above, a large number of EU level R&D&I programs are available for funding joint research projects. Programs include:

- Horizon Europe
- Digital Europe
- EUREKA
- European Regional Development Fund (e.g. Interregional Innovation Investments instrument)
- European defence fund
- IPCEI
- European Space Agency

Program-specific networking and matchmaking events

Implementing a joint research project starts with finding potential cooperation partners with common interests and complementary skills and resources. Then, partner search and participation in international R&D&I programs, program-specific networking, and matchmaking events are organised. The events are typically focused on specific funding opportunities (e.g. Specific Horizon 2020 call, EIT call for proposals) and aim to create consortiums for participation in the funding program. Example content of such event is shown below:

1. Introduction session, information about the funding opportunity
2. Plenary session, pitching of project ideas or skillset by participants
4. Networking session (1:1 meetings, sessions in small groups)
5. Workshops and other activities to further work on project ideas

In order to implement matchmaking and networking events, digital platforms are often used.

According to the information from Hackathon.com[23], the most common areas where hackathons are being organised are (1) Different specific industry hackathons, (2) non-profit hackathons with a call for diverse solutions and (3) hackathons based on IT solutions (IoT, AP, Fintech, AI). Unfortunately, information regarding the split of Hackathons by science fields is not available. According to the source, the most active countries in organising the Hackathons are United States, United Kingdom and Canada. In Europe, the leaders are Germany and France, and from the BSR, three of the Nordic countries follow the trail - Finland, Denmark and Sweden[24]. The information indicates that the Hackathons like the one organised in LaunchPad_RI (Natural sciences with a strong focus on the low TRL research) are rare. Therefore, the participation might be in limited numbers.

Before the event, each participant creates a matchmaking profile. The profile highlights the kind of expertise the participant is offering, what kind of cooperation they are looking for and what ideas they would like to discuss with potential partners. All cooperation profiles are then published online and are available for everyone to see. Participants can initiate and arrange pre-scheduled 1:1 meetings at the event. Intelligent search options allow for the quick identification

[23] https://www.hackathon.com/

[24] The information can be incomplete due to the fact that there are hackathons identified, but not included in the list.

of suitable participants and profiles. Participants can also use a public forum (part of the platform) to promote offers and needs for all platform participants by posting project ideas.

Examples of digital platforms used for online events:

- EIT Manufacturing's MatchMaking Event 2021.[25]
  Platforms used:
  https://hopin.com/. Virtual venue with multiple interactive areas that are optimized for connecting and engaging.
  https://getwideideas.com/. Used for post-event collaboration.
- EIT Urban Mobility - Matchmaking Event Series[26]
  Platform used:
  https://www.b2match.com/. An all-in-one event management solution for virtual, hybrid, and physical events specialized in b2b matchmaking.
- Deep Tech Atelier[27]
  Technology conference Deep Tech Atelier is dedicated to the creation and development of international scientific start-ups, offering not only a platform for discussions and views of stakeholders – entrepreneurs, science and technology developers, industry, investors and policy makers.
  Platform used: https://www.mitto.me/. Within the platform, participants created their profiles and set up their interests regarding the agenda and networking. As a result, they had access to exciting and valuable presentations and workshops on three stages, networking with other participants.

Innovation camps

Innovation Camps are a condensed process in which economic, social, technological, cultural and environmental challenges can be addressed at policy, strategy and operational levels, and how they can be tackled and solved innovatively by key Quadruple Helix[28] stakeholders and experts.

Innovation Camps are a tool used at a European level to support the implementation of Smart Specialisation strategies. In particular, the methodology is intended to contribute to strengthening the Entrepreneurial Discovery Process and accelerating its active use. This can be achieved thanks to its Open Innovation 2.0-type of co-creation procedure and interaction between Quadruple Helix actors in a concentrated period (2 or 3 days), which helps narrow down broad priorities and transform them into concrete interventions.

As opposed to most of the other participative methodologies, the Innovation Camps develop an innovation process led by the stakeholders themselves, starting from shaping the challenges during the Camp preparation to reframing them and conceiving innovative solutions during the face-to-face Camp to make those solutions feasible, testable, and able to be implemented and scaled up as part of the Camp process, once the face-to-face camping is over.

Groups are expected to organise their work processes within the Camp programme. Each group will follow its process and timing to work through the main activities of the Camp.

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[25] *Matching innovations & ideas at EIT Manufacturing's MatchMaking Event 2021*, https://eitmanufacturing.eu/matching-innovations-ideas-at-eit-manufacturings-matchmaking-event-2021/

[26] *EIT Urban Mobility - Matchmaking Event Series*, https://eit-urban-mobility-matchmaking.b2match.io/

[27] *17th Ignition Event*, https://www.commercializationreactor.com/ignition-event/

[28] Peris-Ortiz, Marta; Ferreira, João; Farinha, Luís; Fernandes, Nuno (2016-05-27). *"Introduction to Multiple Helix Ecosystems for Sustainable Competitiveness".* Multiple helix ecosystems for sustainable competitiveness. Cham: Springer. pp. 1–14. doi:10.1007/978-3-319-29677-7. ISBN 978-3-319-29677-7. OCLC 950971633.

The Camp programme has a few fixed plenary moments, following a 5-phase structure:

1. Exploring the challenge
2. Exploring the opportunities
3. Generating and combining promising ideas
4. Creating initial prototypes
6. Thinking forward (6 weeks / 6 months / 6 years).

Innovation camps are not intended only for the researchers; they bring together people from different professions, lines of business and government organisations—the more diverse the group, the better. Specific age group, demographics, and seniority is not a prerequisite for the participants. The more diverse the teams, the more novel solutions can be generated.

Opportunities	Weaknesses
Actively fosters cooperation and organises networking and matchmaking events to collaborate among a diverse pool of quadruple helix actors. Connects the societal challenges to the solutions, thus adding direct societal importance to the solutions that are being generated.	It works well in a face-to-face setting but is difficult to be organized online, which lessens the impact and the quality of the results from the innovation camp. Has proven itself for societal challenges, not focusing on heavy research projects. Innovation camps are still just a concept with no sustainable funding. It has to be funded by the interested parties.

Hackathon events

A hackathon is an event where people come together to solve problems. Hackathons originated as a way to develop new software technologies quickly. However, they have been transferred to other industries and widely used for the creation of innovative ideas. For example, since the start of the Covid-19 pandemic, many hackathons have been organised throughout Europe to address the challenges caused by the virus.

Examples are presented below

Name	Organiser	Geographical coverage	Description
#EUvsVirus	European Commission	Europe	Pan-European hackathon to connect civil society, innovators, partners and buyers across Europe to develop innovative solutions to overcome coronavirus-related challenges
Hacking Health Camp 2021	Faculty of Medicine of Strasbourg	Worldwide	This hackathon brought together cross-disciplinary groups of researchers to work on disinformation detection in the context of the COVID-19 pandemic. They were invited to use existing data sets containing disinformation and fake news to create algorithmic solutions to research questions of their choice.
COPERNICUS HACKATHON 2020 - COVID-19 CHALLENGE	Copernicus	Europe	This initiative, financed by the European Commission, aimed to bring together all kinds of disciplines to develop new applications based on Copernicus Earth observation (EO) data and services.

COVID 19 INSPIRE Hackathon 2020	Plan4All	Europe	COVID 19 INSPIRE Hackathon 2020 developed and shared agri-food economy solutions to balance the imperatives of the present with the demands of the future.

An example online hackathon program is shown below:

- Participants register for the event. Challenges to be solved during the event are available on the hackathon website. In addition, online tools such as devpost.com and app.jogl.io can be used to organise the hackathon.
- Using online communication tools (e.g. Slack), participants post and discuss their ideas, get feedback.
- After finding an attractive idea, participants assemble a team of 2-12 dedicated people with the necessary skills. Finally, participants register their team and start working on the solution.
- Experts are available in the chat rooms to answer questions and provide guidance on developing elements of the solution.
- Participants submit their projects.
- Experts evaluate the projects and select the winners.

Strengths	Weaknesses
Efficient tool to mobilize resources and knowledge in a short period to address important challenges and come up with innovative ideas.	Typically used to develop new software technologies; thus, the concept of the event needs to be adapted if used in other fields. Demands strong facilitators of the Hackathon challenges if the topics are very technical.

CONCLUSIONS ON EU LEVEL INSTRUMENTS, PROGRAM SPECIFIC NETWORKING AND MATCHMAKING EVENTS AND HACKATHONS

- EU level instruments mobilise funding for joint research projects, providing a large number of support programs. However, most programs require an already established consortium and developed project idea. Therefore, there is a need for additional activities aimed at creating networks and consortiums, developing project ideas. The additional activities aim to engage the researchers in a pre-defined context where their first steps in collaboration are facilitated by experienced researchers or facilitators, or other relevant actors. Since the BSN focuses on macro-regional cooperation and other macro regions in Europe, it would be recommended to pilot these tools within specific geographical areas instead of the whole of Europe. From the standpoint of footprint to nature, close geographical proximity for the core partnerships might also help Europe advance its sustainability goals. The structure of the events is elaborated in the later sections of this document.
- Events aimed at finding potential cooperation partners with common interests and creating cooperation networks are mostly focused on specific funding opportunities (e.g. Specific Horizon 2020 call, EIT call for proposals). Therefore, there is a need for events that facilitate universally important solutions on the European level that focus on the impact and can be positioned for many funding opportunities without focus on specific funding opportunities from the outset.
- The added value of the LaunchPad_RI instrument compared to other networking and matchmaking events are the function that was carried out by the Expert Review Panel –

providing participants' feedback on their project drafts and activities supporting an improvement of the projects.

3.3. A SWOT ANALYSIS OF THE LAUNCHPAD_RI CONCEPT IN THE CONTEXT OF THE COMPETING SOLUTIONS

The SWOT analysis explicitly focuses on the LaunchPad_RI concept in the context of competing or complementing solutions. The table summarises the key points of the SWOT analysis. More in-depth descriptions are provided in the sections beyond the SWOT table.

STRENGTHS	OPPORTUNITIES
1.1 The online format of the events 1.2 The relative advantage of a pioneer 1.3 Cooperation bridge between Russia and EU 1.4 Reputation as an organiser 1.5 Influence on the overall research ecosystem 1.6 Top-notch researcher line-up for the events 1.7 Pre-submission review and counselling	2.1 Opportunity to leverage reach within the network of organisations 2.2 High-motivation for widening researchers to participate if the tool is positioned correctly 2.3 Being a platform to kick-start the cooperation instead of working with advanced projects 2.4 Additional support from EC to the macro-region development tools 2.5 Potential to develop a BSR mission that supports a specific development initiative that inspires the whole region 2.6 External service providers give a learning opportunity for the public sector employees
WEAKNESSES	**THREATS**
3.1 Low level of competition compared to ERA due to a low number of participants in the Hackathon. Higher event attendance is needed to achieve sufficient impact 3.2 External communication insufficiently explain the main ideas behind the organisation of LaunchPad_RI 3.3 The Coaching activities provide a very limited scope of options for team development. 3.4 The inflexibility of the INTERREG project framework when offering financial support to third parties. The "carrot" to motivate the teams to participate and gain value are too few. A larger incentive to participate is needed (in the form of, e.g. larger grants) 3.5 Insufficient presence of industry/society representatives in all parts of the concept 3.6 Unsuccessful preliminary partner search before the matchmaking event – Hackathon caused issues in the formation of the partnerships	4.1 Long term budget is needed to continue the instrument, which may not be secured 4.2 Organising the events in an online format limits the extent of networking between participants 4.3 A large number of already existing instruments with similar goals 4.4 There should be set KPIs for LauncPad_RI to justify the need for such an instrument 4.5 Online events have a hard time keeping people engaged because they are prone to enabling multitasking. 4.6 Lack of conflict of interest policies and evaluation criteria terms of reference 4.7 Finding employees for ministries for the concept implementation in a long-term 4.8 The unfamiliarity with the concept might push off the potential participants

One of the goals for the WP2 activities to reach in the BSN_Powerhouse project was to enhance institutionalised knowledge and competence by piloting the concept of LaunchPad_RI. The fact that the partners in the Work Package 2 have already tested the methods and tools used in the LaunchPad_RI gives a significant advantage to advance the concept further.

The following sections, the “Strengths and Opportunities” and “Threats and Weaknesses” a more detailed version of the SWOT table above are discussed. The analysis is based on the evaluation of the LaunchPad_RI implementation.

STRENGTHS AND OPPORTUNITIES

Strengths

Strengths are internal, positive attributes of the concept. These are the aspects that the owner of the instrument controls.

1.1. On the concept level, online events can have the capacity to attract a wider audience than face-to-face events. Top-notch key-note speakers for the conference and mentors for the matchmaking event – hackathon can be involved who otherwise would not participate due to conflicting schedules.

1.2. The fact that the involved partners have the experience of organising the series of events under the LaunchPad_RI is advantageous over other policy makers who do not hold such institutional experience. In addition, the project team has experience from the pilot project to redesign the agenda, flow of the events and communication particularities to have a better participant attraction and retention in the subsequent events.

1.3. The LaunchPad_RI allowed facilitating the cooperation between the Russian and EU research counterparts. Unfortunately, there are not many tools and opportunities that can help to bridge the gap in meaningful cooperation. According to Russian partners' testimonials, the events fostered dialogue with western partners and created future collaboration possibilities.

1.4. The ministries across the Baltic Sea Region as the concept owners have a significant advantage due to holding a position of high reputation, trustworthiness and visibility among the researchers and holds the potential to impact the whole research community through implementing policy change derived from the insights of such events (create a positive upward spiral).

1.5. The ministries hold the potential to redistribute funding among different funding instruments on the national level to fuel any instrument that they deem contributing to the ministries' goals and missions.

1.6. Ability to gather top-notch science representatives and have them share their knowledge at the conference.

1.7. In the forum, counselling on the project application drafts from the teams in Hackathon was evaluated as a very valuable activity. The counselling was mentioned as a significant aspect that provided insights to increase the quality of the project application drafts before the application submission to other funding instruments. Furthermore, discussing project drafts to clarify issues and elaborate on details decreases the significance of proposal writing skills, giving fewer experience scientists and industry representatives without extensive proposal writing experience a better chance to compete for funding.

Opportunities

Opportunities are external factors in the concept environment that are likely to contribute to the success.

2.1 BSN has an established network of partners and associate organisations that can communicate the events, attract participants and disseminate project results.

2.2 Research institutions in EU-13 countries have a high incentive to participate in widening activities as international collaboration helps universities attract and retain talent, reducing brain drain from member states with weak research systems.

2.3 EU level R&D&I support instruments mobilise funding for joint research projects, providing a large number of programs with generous funding. However, most programs require an already established consortium and developed project idea. There is a need for additional activities aimed at creating networks and consortiums, developing project ideas.

2.4 European Commission re-launched ERA in 2020 with revised policy priorities, governance and monitoring at the national and EU level, thus increasing international collaboration in Europe. The ERA will better incentivise Europe's high-quality researchers and innovators to work together to foster global leadership.[29] Moreover, prioritizing international collaboration on the European level results in larger financial and political support available for macroregional instruments such as LaunchPad_RI.

2.5 An integral part of the Horizon Europe framework programme beginning in 2021 is missions, which are commitments to solve some of our world's most significant challenges. Each mission will operate as a portfolio of actions – such as research projects, policy measures - to achieve a measurable goal that could not be achieved through individual actions. EU missions will contribute to the goals of the European Green Deal, Europe's Beating Cancer Plan, and the Sustainable Development Goals.[30] Similar to Horizon Europe missions, missions for macro-regions could be an opportunity to foster interregional collaboration to solve challenges prominent in the macro-region and improve the region's global competitiveness. BSR missions could contribute to the goals of EUBSR and help bridge the gap in the research approach from regional to pan-European.

2.6 Procuring professional external service providers can be a learning opportunity for the public sector employees to gain additional experience of how private service providers organise events based on novel concepts (e.g. Hackathons) and with what tools. Furthermore, the gained experience of novel methods can be applied after that to their line of work.

WEAKNESSES AND THREATS

Weaknesses

Weaknesses are negative factors that detract from strengths. These are things that might need to be improved to be competitive.

3.1 The level of competition as a measure for specific funding is incomplete but still the governing measure in ERA for the excellence of the approved applications. So, for example, if the rate of success in Horizon projects is below 14%, but in the LaunchPad_RI, it was 80% (4 out of 5 applications were funded), then it is an obvious risk to not have the competitive enough on the European scale consortiums being developed. A large enough number of participants need to be attending the events to achieve the intended impact, a sufficient number of collaborations and new project ideas.

[29] European Commission (2020) *A new ERA for Research and Innovation*, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A628%3AFIN

[30] European Commission, *Missions in Horizon Europe*, https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/missions-horizon-europe_en

3.2 Potential participants do not fully understand the concept and purpose of the project. External communication lacks sufficient explanation of the main ideas behind the project, which can impact the number and appropriateness of participants.

3.3 The Coaching activities lack the added value to the teams to help them advance further in their collaboration journey. The teams would need more mentoring and help with a development roadmap creation to better position the teams to utilise the opportunities in the ERA. In case the length of the LaunchPad_RI would be bigger, the access to research facilities and grant money to cover actual research expenses could be considered.

3.4 A larger incentive to participate is needed. The small grant amount offered by LaunchPad_RI for Coaching activities is not sufficient motivation for a large number of participants to spend time creating project ideas and establishing collaboration without a clear strategy where to access the funding. The INTERREG project framework is inflexible to run series of activities like in the concept of LaunchPad_RI. The positioning of the concept of how it fits in the larger picture of ERA support instruments and the exact added value of LaunchPad_RI should improve the motivation to participate. Furthermore, introducing a lump sum or financial support to third parties (FSTP) concept could be introduced to overcome this weakness.

3.5 Insufficient presence of industry/society challenge representatives in all parts of the concept, but especially in the evaluation and Coaching, significantly limits the opportunity scope of the accepted projects.

3.6 Preliminary partner search before the matchmaking event – Hackathon had very limited success, thus having a trickle-down effect on the formation of the partnerships in the later stages.

Threats

Threats are external factors that the owner of the instrument has no control over. Contingency plans for dealing with the threats if they occur needs to be set in place.

4.1 The organisation of LaunchPad_RI events and granting funds to project teams for Coaching activities require a substantial budget. Moreover, in the evaluation phase, it was concluded that additional funding would also be needed to implement the research projects. Thus, to establish the program long-term, the baseline cost of running the programmes would have to be funded from the national budgets of BSN countries with a European Commission top-up funding to support the development of the macro-regional strategy. Moreover, finding additional funding in the already tight national budgets is always a great challenge and thus have a high likelihood that the process will be lengthy, hence threatening the programme's implementation.

4.2 On an ad-hoc project basis or as part of a specific funding programme promotion element, some activities aim for similar results – increased collaboration within a specific research project. The framing of why exactly and to whom this tool will be helpful is of paramount importance.

4.3 There should be better set metrics for why the tool is needed and for how long. Without KPIs, there is a significant threat to secure any future funding.

4.4 Lack of conflict of interest policies and evaluation criteria terms of reference might impact the concept's reputation and its organisers in potential dispute cases as they were experienced during the pilot project.

4.5 The organisation of such a process as it was done in the BSN_Powerhouse project does not fit in the ministries' regular competence spectrum. Hence, finding appropriate people for the concept implementation in the long term is a challenge. That would require adopting these functions in the organisation's core allocating appropriate funding for the staff positions. The evaluation team is aware that it is uncommon to have such personnel as permanent staff in the ministries. Nevertheless, the conclusion points to the rationale of considering the introduction of such positions.

4.6 Long-running online events have a hard time keeping people engaged because the online format enables people to multi-task and decreases the level of presence and attention to detail. This, in turn, means lower quality input from the participants and lower quality of final project results. Splitting the events into shorter sessions over several days can help with attention retention in acceleration programmes.

4.7 Organising the events in an online format limits the extent of networking between participants. A hybrid version might help to solve this challenge.

4.8 The unfamiliarity of the Hackathon concept might create a barrier for the potential participants to participate if the reasoning for the exact format and its role in a larger context is not communicated and positioned well to the target audience.

GAP ANALYSIS

A gap analysis examines and assesses current performance to identify the differences between the current state of performance and where the LaunchPad_RI should be in the future. After analysing the landscape of the existing solutions and carrying out the SWOT analysis, the gap analysis could be summarised by answering these three general questions:

- **Where are we now?**
  The concept of LaunchPad_RI is piloted with limited success in terms of the impact the tool generated on the teams and the potential future funding providers. Nevertheless, there are numerous valuable lessons learned on all aspects of organising the concept. Moreover, the people who were a part of the LauncPad_RI generally positively evaluated the experience throughout the programme, giving a good base to build upon.
- **Where do we wish we were?**
  The concept aimed to reach an impact discussed in more detail in each section of the evaluation titled “Achieved results” (Conclusions of the WP2, Conclusions of the Launchpad Symposium: Online Conference & MATCHMAKING EVENT – Hackathon, Conclusions of the Forum and Expert review Panel and Conclusions on Coaching). Nevertheless, the LaunchPad_RI aims to support widening participation and facilitate cooperation among participants of the research and innovation ecosystem in Baltic Sea Region (BSR) countries.
- **How are we going to close the gap?**
  The gap analysis summarises the idea that it is recommended to redesign the LaunchPad_RI. Moreover, more importantly, to play on the strengths and more sustainable practices that would be compatible with the ministry in-kind resources to commit to the concept implementation.

To sum up the Gap analysis, it is recommended to foresee two different scale transformations of the LaunchPad_RI. The transformed solutions ought to cover the cross-collaboration based on the research areas defined in the BSN Future Vision section: 1) Photons and Neutrons 2) Life Science 3) the Welfare States. The events (Matchmaking, Hackathon, Coaching) have been widely used in the support programmes for business creation and acceleration. Hence, examining deeper on how

the activities carried out in the LaunchPad_RI and the improvements identified in the gap analysis overlap with the concept of Business Accelerator, it is worth looking at the sparse but rapidly growing use of Business (and Seed) Accelerators and what principles can be adapted to the improvement of the LaunchPad_RI. As a result of the evaluation and research, a consolidated version of LaunchPad_RI – **Young Researcher Mentoring programme** – and a more extensive programme - **Research Consortium Accelerator** – is recommended.

Factor	Current state	Future state	Gap	Actions to close the gap
Positioning of the concept	Support instrument for widening participation of RI in Photon and Neutron Science where EU-13 small-scale RI are matched with large-scale RI.	An accelerator is bringing together researchers, industry and civil society to solve challenges prominent in the macro-region. After the teams have completed LaunchPad_RI activities, strong support from organisers in providing the next steps (e.g., what is the angle in the research idea for it to be more successful, what funding instruments are available to implement the idea, how to best access that funding) to secure funding from other national and international sources are ensured to continue the development of the research idea.	The instrument focuses on fostering collaboration without a larger goal or a challenge it is trying to solve. Moreover, potential participants do not fully understand how the LaunchPad_RI could help develop meaningful collaboration with other BSR researchers. Moreover, the incentives and motivators in the LaunchPad_RI were limited. Hence, the researchers had a low incentive to join the events and actively participate. These principles are also relevant to transferring the concept to other research areas as Life Science and Welfare State. Therefore, a framework is needed on how to identify the most critical challenges prominent in the region on the policy level and tie them with the interests of local researchers.	Defining key challenges where the grassroots initiatives are welcomed, especially in the BSR and using them as the overarching goal for cross border collaboration is needed to solve the challenges. A more precise composition of the target groups is needed. Hence a mapping exercise should be conducted. Positioning the LaunchPad_RI (in future – Research accelerator) as a place to fast-track international researcher career in the guidance of top-notch experts in the BSR. Providing support to participants in overcoming the "valley of death".[31]
Hosting organisation	Ministry of Science, Research, Equalities and Districts, Free and Hanseatic City of	The international governmental organisation is supported by BSN and other	An organisation with an international agenda delegated by all the countries in the Baltic Sea region could	Identify precise funding needs. Gain political support from BSR member states and

[31] The "valleys of death" concept is used to describe situations where technology/research failed to reach clinical / tested in real environment implementation. Termination of studies in a "Valley" when a technology / research has shown efficacy, yet is unable to obtain financing to take it to commercialization or further research stage.

Factor	Current state	Future state	Gap	Actions to close the gap
	Hamburg with the active involvement of Ministry of Education and Research of Republic of Estonia (MoER) and Ministry of Education and Science of the Republic of Latvia (MoES).	representatives of the quadruple helix (society, industry, government, academia) in the region.	take over the organisation of the LaunchPad_RI instrument in the long term. For the short-term solution, the hosting organisation can be one of the ministries focusing on a smaller regional coverage with the involvement of more niche researchers. Nevertheless, the long-term solution is more favourable due to the sustained impact it can create across the BSR, including holding the common pot to fund the core activities.	commitment to funding the new establishment. The organisation could be CBSS, where a specific international unit that deals with research development is created. In order to implement at least one of the international funding pooling principles, an already established organisation, e.g. CBSS, can source the funding from the governments and direct it towards the goal the countries have agreed to.[32]
Partnership composition	> Ministry of Education and Science of Republic of Latvia, > Saint Petersburg Electrotechnical University "LETI", > Hamburg Ministry of Science, Research and Equalities.	Members from all BSR countries in the Steering Committee and a dedicated legal establishment that executes the strategy of the Steering Committee.	Not all BSR countries are represented in the BSN, and not all of them want to be a part of the network. However, with clearer positioning, the appeal to be in the organisation should increase.	Define the benefits of BSN and the new Research accelerator. Engage with stakeholders representing all groups of quadruple helix model to create a large, diverse and robust network of partners.
Funding mechanism	INTERREG project: Baltic Science Network- A Science Powerhouse	National funding of BSR countries or funding allocated from European Structural and Investment Funds that the European Commission tops up aims to support macro-regional strategy implementation.	Long-term funding mechanism. Political support from ministries in BSR countries responsible for science policy and funding international science cooperation.	Develop the long-term funding mechanism, including the amount of contribution needed from each country, participation conditions, and participation in the program. Gain political support from ministries in BSR

[32] The CBSS, is one of the key actors at the macro-regional level which consists of countries around the Baltic Sea. Norway and Iceland also count to the CBSS. The CBSS exists since 1992 summoning up government leaders and Foreign Ministers. The Council deals with different challenges which plague the region and fosters trust and security. The CBSS Baltic 2030 Action Plan foresees several priorities where research cooperation plays an important role. For a long-term version of LaunchPad_RI, the organisation is better suited than the BSN, because the preamble of the organisation already have mechanisms established for pooling of member state funding for a joint effort, e.g. PSF funding.

Factor	Current state	Future state	Gap	Actions to close the gap
				countries responsible for science policy and the commitment to fund the program.
The regularity and length	One time event. LaunchPad_RI project lasted 1.5 years. Coaching lasted for four months.	Events should be grouped on a batch basis. Researcher groups are onboarded separately for each batch. The events are organised once or twice a year, depending on the budget and needs. Two batches per year can often be supported (e.g. each batch with a different challenge to solve). Teams are supported for a time period of, e.g., six months to a year, depending on the funding availability.	In order to create a culture and community around a certain effort, the regularity of the event is lacking. With a dedicated team who takes care of the core organisation process, organising yearly events often require fewer resources per batch than a single stand-alone event organisation. A more extended (usually ~6 months) support period for the teams should be provided to better support establishing the ties among consortium members.	Decide on how to approach the further use of LaunchPad_RI – a single standalone solution or a regular cycle of events organised in batches. For a standalone solution that focuses on mentoring, the application and users can be decentralised and applied within different contexts. For the long-term solution, a permanent project team for the organisation of the events is recommended to ensure that the capacity to use the concept and organise the chosen events are done efficiently. The whole organisation of the event will still be a mix of external expertise costs and internal event coordination costs.
Target Audience	> Researchers > Research teams > Research infrastructures > Research infrastructure users > Industry > Experienced researchers > Young researchers > Researchers “outside”	Interdisciplinary specific target groups based on challenge addressed. The target audience should include the research sector, industry, and civil society because that allows for a higher impact on the whole value chain. There should be a good understanding of the application of the research topic chosen to the industry.	Target groups are too broad, hindering the communication and dissemination activities. More specific targets groups should be defined based on the challenge that is being addressed.	Define challenges that will be addressed. Identify which specific target groups need to be involved in solving the challenges successfully. Communicate project ideas to target groups, adapting the communication materials to each group. For example, the event could be targeted more

Factor	Current state	Future state	Gap	Actions to close the gap
				towards researchers in their early careers.
Foreseen KPIs	The defined KPIs (e.g., 5-10 project briefs) have not been tied to significant international KPIs (e.g., Sustainable Development Goals, national, European or macro-regional development goals and KPIs). Objectives were primarily focused on enhanced institutional knowledge and competence, and KPI in the example delivers on the objective. However, it does little to prove the tool's effectiveness to help create an impact that would be characteristic[33] to widening support action tool.	Measurable KPIs are needed to assess the impact of the instrument and the success of the organisational process with a clear path of impact and contribution to a goal on a larger scale. Following KPIs can be used and put into specific policy and thematic contexts: > number of participants and countries in the events (e.g., representing the reach of the event) > number of project teams formed according to thematic research field who submit the application (e.g., representing the level of competition) > number of projects, which include science-industry collaboration and other research fields (e.g., representing multidisciplinary and commercialisation potential).	Quantitative KPIs to measure the effectiveness and impact of the instrument are missing. Having KPIs aligned with the initiatives in which the LaunchPad_RI is operating allows to better reason the existence of the widening support action and translate the investment into running the tool into a concrete contribution towards a wider group of political KPIs.	Define goals and objectives of the LaunchPad_RI with a clear contribution to the macro-regional or European strategic KPIs. Decide how the progress in the achievement of the goals and objectives can be measured. Develop KPIs that measure the organisational success of each of the events and tie them to larger initiatives. More context and clear definition will allow policymakers, funders and participants to understand the reasoning for such support instrument better.
Communication channels	Online media and Existing networks	In addition to online media and existing networks, representatives of each target group should be reached through private and	Clear communication and dissemination strategy is missing with the risk management plan if the approach used in the	A systematic way to inform the relevant public and private institutions in BSR countries about the project, collaborative

[33] Widening actions under the Spreading Excellence and Widening Participation part of Horizon 2020 address the causes of low participation by fully exploiting the potential of Europe's talent pool. It ensures that the benefits of an innovation-led economy are both maximised and widely distributed across the European Union. Synergies with European Structural and Investment funds are an important component.

Factor	Current state	Future state	Gap	Actions to close the gap
		public sector institutions and NGOs they are affiliated with. The partners should perform this in each of the BSR countries. Industry representatives can be reached through industry associations.	dissemination action plan is not working.	opportunities should be established to attract a sufficient critical mass of participants.
Connected opportunities	A connection to the WP3 activities was expected, but no practical synergies were possible except communication and dissemination.	The new research accelerator (LaunchPad_RI) should serve as the connector between the different, more established initiatives within the funding landscape that supports attaining the more significant challenge that the accelerator aims to provide research solutions to.	Neither the mobility nor other initiatives have been connected successfully to the LaunchPad_RI.	Careful positioning of the tool in the life cycle of creating the islands of excellence can help understand with whom, how and when to connect to provide more value.
Tools being used	All events were organised online, using Zoom. Slack was used for communication between project teams during the Hackathon. Participants, in general, prefer physical events for the networking part.	Physical networking has been proven to deliver a feeling of more focus and presence when meeting for the first time. However, with a facilitator and pre-matched groups of people (using the data submitted by participants), Digital networking can reach good results regarding the formation of teams for the Hackathon.	Tools with larger functionality specifically created for matchmaking and hackathon events are needed if the event should be online. And also, for hybrid events, the support of dedicated online platforms, e.g. Bizzabo, Swapcard, Rume, Remo, should be used to mitigate the segregation of online/physical attendees. Facilitated matchmaking is a process that is often used in Hackathons and could be a helpful approach in having higher participant retention and engagement in the further stages of the Hackathon.	Identify the most suitable platforms and tools. Offer assistance to participants who are not familiar with the chosen tools. Use a simple and dedicated platform for participants to create a matchmaking profile. The profile highlights their expertise and interests. All cooperation profiles are published online and are available for the registered participants to see. Participants are engaged with each other through facilitated matchmaking and can initiate and arrange pre-scheduled 1:1

Factor	Current state	Future state	Gap	Actions to close the gap
				meetings at the event.
Professional Competences	Currently needed competencies: > Project management skills > Knowledge of the science and innovation system in Europe.	> Project management skills > Knowledge about the science and innovation system in Europe > Experience in organising similar events (seminars, hackathons) > Experience in science and innovation management and commercialisation of research results > Deep knowledge and experience with attracting funding for R&D activities, including knowledge on EU level funding instruments > Experience in creating international partnerships and consortia for R&D projects.	Experienced science and innovation managers who could guide project teams, help them develop project ideas, offer feedback and mentoring. R&D funding experts could identify the best relevant funding sources and help project teams prepare grant applications. Experts in partnership creation who could assist the project teams in partner search.	Create a project team explicitly working with the LaunchPad_RI instrument. Attract experts from science and innovation ministries of BSR countries and other partner organisations in in-kind contributions.

The Critical Success Factors (CSFs)[34] that academic authors have identified for the Business accelerator are: (1) Links to sources of funding, (2) Brand, (3) Business expertise, (4) Product expertise, (5) Start-up financial support, (6) Urgency created by time-limited programme, (7) Quality of the programme, (8) Mentorship, (9) Networking, and (10) Action-orientation. These success factors very much characterise also the environment for research development. Therefore, by putting these factors in the context to create a system for successful research project development, they can be formulated as (1) Providing links to sources of research funding, (2) Branding of the consortium to convince other researchers to join the consortium, (3) Demonstration of research excellence, (4) Product expertise/vision for the research application, (5) Having research financial support, (6) Urgency created by time-limited programme, (7) Quality of the programme, (8) Mentorship, (9) Networking, and (10) Market/solution-orientation.
Therefore the recommendation on the transfer of the concept very much relies on the existing principles that govern cooperation facilitation and joint excellence creation *per se*.

[34] Michael Fowle (2017) *Critical Success Factors for Business Accelerators: A Theoretical Context*, https://www.researchgate.net/publication/320183467_Critical_Success_Factors_for_Business_Accelerators_A_Theoretical_Context

3.4. RECOMMENDATIONS FOR IMPROVEMENTS AND TRANSFER OF THE LAUNCHPAD_RI

Earlier reports have indicated that "Cooperation in Photon and Neutron Science is important to solve current and future challenges. Societal challenges like health issues, climate protection or power supply are not limited to one country's borders. There is a need for long-term thinking, sustainable solutions and new technologies. This fact is recognised beyond the European borders and is also tackled by, e.g. members of the Organization for Economic Co-Operation and Development (OECD)[35]". However, the way to scale the creation and transfer applied research to useful innovations is insufficient and often poorly understood. Based on the Gap analysis, repositioning the LaunchPad_RI into a possible short-term and long-term solution is recommended. Consequently - **Young Researcher Mentoring programme** as a faster attainable short-term solution and a more complex long-term solution - **the Research Consortium Accelerator.**

SHORT-TERM SOLUTION

A method that has been the backbone for knowledge development and transfer since ancient times is still a highly valued opportunity to this day – mentoring. The feedback from the teams regarding the added value of the LaunchPad_RI has highlighted the importance of the Coaching activities, specifically research mentoring. Hence, in transferring the concept, a high degree of importance has been attributed to the research mentoring.[36] **Young Researcher Mentoring programme** can be spun out from the LaunchPad_RI as a short-term standalone solution to be applied in various contexts.

From the global best practice, the National Research Mentoring Network (NRMN)[37] in the USA has been tackling a somewhat similar challenge that the researchers representing the EU-13 countries often mention as a significant challenge in advancing their careers. In the studies leading to the creation of the NRMN initiative, evidence showed that individuals from historically marginalized groups were disproportionately underrepresented at all levels of the biomedical workforce, from undergraduate students to faculty members.

Meanwhile, in the European Research Area, researchers of less established innovation ecosystems have expressed that their chances of winning competitive research funding are negatively impacted due to their marginalised position of not being a part of the "old-boys-networks". This phenomenon has been discussed at length also in previous studies at the Baltic Science Network and elsewhere, often in connection with the concept of the Mathew effect in Science.[38]

These challenges have not been left without attempted solutions by the European Commission. For example, one of the solutions to even the playing field regarding access to research funding has been the Widening and Spreading Excellence calls. Also, incentives in previous Framework programmes, e.g., where the consortium should include a member from an EU-13 country, have had limited success in establishing long-term success and closer cooperation of the EU-13

[35] OECD (2018), *OECD Science, Technology and Innovation Outlook 2018: Adapting to Technological and Societal Disruption*, OECD Publishing, Paris, https://doi.org/10.1787/sti_in_outlook-2018-en.
[36] National Academy of Sciences (US), National Academy of Engineering and Institute of Medicine (US) Panel on Scientific Responsibility and the Conduct of Research (1993), *Responsible Science: Ensuring the Integrity of the Research Process: Volume II,* https://www.ncbi.nlm.nih.gov/books/NBK236193/
[37] *National Research Mentoring Network*, https://nrmnet.net/about-nrmn/
[38] Robert K. Merton (1968), *The Matthew Effect in Science*.

consortium members in the following projects.[39] This aspect adds to the argument that the cooperation can be sustained if developed based on the benchmark principles that govern the willingness to cooperate *per se* – research excellence, shared impact and scientific complementarity.

A graduate student perspective on the offer of a local research ecosystem regarding the degree of availability of experienced researchers as mentors is another challenge in the same context but from a different angle. Access to excellent researchers for the PhD students and at the post-doc level is very important to develop a successful research career. If there is no access to more prominent researchers within the BSR in the desired field of study, the mentorship is sought elsewhere. On the project level, consortium partners are found beyond the borders of BSR. The unavailability of mentorship in close geographical proximity forces the researchers to look outside the Baltic Sea Region, thus often helping to advance the research ecosystems of other regions.

This aspect also was proven in the projects that were approved in the LaunchPad_RI, e.g. Team with the idea of "Fractal organization of chromatin in the nucleus of a biological cell", provided an answer to the question on the small size of the consortium based on the merit that there are not enough counterparts in the BSR who could contribute to the development of the research idea. Thus, emphasising the importance of access to coaching and mentoring in close geographical proximity facilitates the creation of networks in BSR and, consequently, a more integrated BSR research area.

To conclude, mentoring a less-experienced researcher is a professional responsibility of all scientists. The ultimate goal of the mentor is to establish the trainee as an independent researcher. Mentoring responsibilities include sharing knowledge and skills, overseeing the trainee's work, helping the trainee contact other researchers and assisting with career counselling. The trainee reciprocates by providing work hours and a fresh perspective for the mentor and taking a proactive role in learning, developing and landing a job.[40]

Studies have shown that mentoring in research[41] is as important as it is in business development. Therefore, evidence-based mentorship and professional development programming that emphasizes the benefits and challenges of diversity, inclusivity, and culture within mentoring relationships, and more broadly, the research workforce are necessary components that help propel the researcher's career.

LONG-TERM SOLUTION

Research Consortium Accelerator[42] would allow to gather the top talent and established parties from the related fields to create international BSR islands of research excellence. In order to give a clear incentive to the research community, it would be necessary to borrow some of the aspects that are being used in the creation and operations of top-notch research excellence centres and even business acceleration programmes due to aspects discussed earlier in the Gap Analysis. Furthermore, research institutes and "centres of excellence" worldwide exist to draw talent and share resources - all to solve important problems. People unite to solve important challenges.

[39] Visionary Analytics (2017) *Study on Research Cooperation in the Baltic Sea Region: Existing Networks, Obstacles and Ways Forward*

[40] American Psychological Association, *Responsible Mentoring of Researchers*, https://www.apa.org/research/responsible/mentoring

[41] Sorkness, C.A., Pfund, C., Ofili, E.O. et al. *A new approach to mentoring for research careers: the National Research Mentoring Network*. BMC Proc 11, 22 (2017). https://doi.org/10.1186/s12919-017-0083-8

[42] The definition of a business accelerator

Therefore, to link the calls for researchers should be made with a communicated message on how the specific application call welcomes and further accelerates the creation of solutions to issues relevant, at least on the macro-regional scale.

Moreover, most already existing funding programmes are designed with a specific challenge to be solved at the centre of its existence. For example, the LaunchPad_RI was organised within the scope of a specific research field; however, it is recommended to organise it with a specific central challenge at the heart that the countries across the Baltic Sea Region would like to have solved. The BSN Vision paper has defined that the future activities will cover interdisciplinarity topics such as green transition and sustainability and continue the priority areas of Life science and Photon and Neutron Science. The angle within these areas still has to be found. Nevertheless, it is a good basis to give context to the future programmes of LaunchPad_RI.

Furthermore, the research infrastructures are an obvious prerequisite for doing top-notch research and a cornerstone characteristic to research excellence centres to help develop the solutions to the great challenges. The LaunchPad_RI already in the trial version provided the opportunity to get to know the available research infrastructure in the macro-region. The cooperation and ties between the various size research infrastructure representatives should also be strengthened further in future cooperation facilitation programmes.

Consequently, the LaunchPad_RI could take a more established form as a solution (Research Consortium Accelerator) that supports all the main aims of the Baltic Science Network:

- the common voice of the BSR science community at the macro-region in representing scientists, policy actors, funders and innovators;
- a coordinator and joint platform to initiate joint projects and initiatives among members and others;
- a project enabler to foster the cooperation of scientists and researchers on the ground.

Furthermore, it could complement and tie to the goals of The Baltic Sea Region international group (created in 2008) with three Missions for the Macro-region:[43]

- to make the Baltic Sea regions the leading innovative and people-centric macro-region by 2030;
- to make the Baltic Sea macro-region the most sustainable forerunner in Europe;
- to make the Baltic Sea the first plastic-free sea in the world.

The most significant difference between the LaunchPad_RI and other initiatives, e.g., BANOS[44], which also aims to foster research excellence and bring together the researchers across the region, is that LaunchPad_RI niche is to serve as the connector between the grassroots initiatives and more established funding programmes.

The evaluation results point to the overall agreement that LaunchPad_RI can be transferred to other research disciplines. There are no visible obstacles to use the same methods in advancing the cooperation overall. However, considering all the drawbacks pointed out in the evaluation phase and the gap analysis, it is recommended to make numerous improvements to various aspects of the LaunchPad_RI concept.

[43] European Committee of the Regions, *Interregional groups*, https://cor.europa.eu/en/our-work/Pages/Interregional-groups.aspx
[44] *The Baltic and North Sea Coordination and Support Action*, https://www.banoscsa.org/banos_csa

One such aspect is that a completely bottom-up approach makes the idea formation process much more fuzzy and difficult. Therefore, a framework is needed even for bottom-up initiatives to measure impact on the areas of interest to ministries and funders represented in the BSN.

Another aspect is the option to have the opportunity to choose the focus and scale of the LaunchPad_RI activities, hence the short-term and long-term version. Thus, for example, the Young Researcher Mentoring Programme could be taken up in a short period and adapted within the specific context of a larger support programme in the macro-region as a stand-alone solution. Finally, it is worth mentioning that in the planning of the events, it is of paramount importance to take into account the context and specifics of the particular research area, e.g., the evaluation concluded that representatives of the Photon and Neutron Science field would prefer at least hybrid version of the event with some sections taking place on the physical premises while other being conducted on-line.

IMPROVEMENTS RECOMMENDED IN THE LAUNCHPAD_RI CONCEPT

These sections on the short-term and long-term solutions will bring forth the suggestions on the improvement of the LaunchPad_RI concept that are expected to increase the rate of collaboration in the Baltic Sea Region among the researchers. Moreover, will provide recommendations to the Baltic Science Network project partners and the policy makers who are interested in strengthening the Baltic Sea Region as a joint research area. Also, taking into account the evaluation done in this study and the nature of the improvements suggested, the transfer to other research areas are considered feasible and do not require any significant changes to the concept presented below.

LaunchPad_RI concept can be transformed into two versions – the short term – **Young Researcher Mentoring Programme**, easily adaptable stand-alone version that focuses on specific aspects in mentoring young researchers and a more thorough programme – **Research Consortium Accelerator** - focusing on creating networks of researchers from various stages of the research careers.

YOUNG RESEARCHER MENTORING PROGRAMME

The standalone **Young Researcher Mentoring programme** focuses on the younger researchers as the core value receivers. The goal is to involve “next-generation scientists” – master or doctoral level students - and expose them to the possibilities in their research careers connected to the Baltic Sea Region. The mentors are expected to be established researchers who can provide guidance, network and support to the young researchers. In that way, a knowledge transfer among the more experienced and young researchers take place.

GOALS AND OBJECTIVES

The main goal of the Young Researcher Mentoring programme is to perform as “LaunchPad_RI” for individual research careers by utilising the opportunities provided in the Baltic Sea Region. Furthermore, it provides the chance to create networks of researchers of different seniority (upstarting and established) and cultural and institutional backgrounds. The researchers in their early phase of the career are chosen because of their adaptability to the changing environment and openness to better integrate with the BSR research ecosystem.

RESULTS TO BE ACHIEVED BY MENTORING

Increased capability for young researchers to work in a transnational environment as a result of facilitated mentoring and knowledge exchange.

THE APPROACH

The approach to achieve the set goals is split into a seven stage process in a consecutive order.

Stage 1: Scoping

Defining key challenges where the young researcher initiatives are welcomed in the BSR. The challenges should match the available pool of established researchers or industry representatives who can provide the mentoring within the scope of the programme. The length of the mentoring is subject to change because it is in direct correlation with the purpose of the funders programme and available budget, hence making the concept very flexible.

Stage 2: Scouting

The precise composition of the target researchers is needed. Hence a mapping exercise is recommended to be conducted. A critical factor to consider is the quality and line-up of primarily the "mentors". If the mentors are well-fitting the scope of the event, it will be a lot easier to engage the target young researchers.

Stage 3: Positioning

The ultimate goal of the mentor is to establish the trainee as an independent researcher. The provided mentoring could include sharing knowledge and skills, overseeing the trainee's work, helping the trainee contact other researchers and assisting with career counselling. The trainee reciprocates by providing work hours and a fresh perspective for the mentor and taking a proactive role in learning, developing and landing a job.

Stage 4: Preparation

The organising team that represents the institution that has taken up the initiative prepares all the technical and researcher (mentor) remuneration contracts, designs all the promotion materials and rules for evaluating the applicants, gathers the line-up of mentors.

Stage 5: Open call and outreach

A specific challenge (or several) that could be addressed in the open call is recommended to be defined. The challenges and programme opportunities should be communicated to the target groups by carefully crafting and adapting the communication materials and the core message. It is expected that the open call approach will be combined with the targeted engagement of the preferred stakeholders. The outreach activities should also clearly emphasise the mentoring format and what it means to be a part of this programme. The aim is to set clear expectations for the potential participants – mentors and young researchers.

Among the potential outreach channels, the experience from the research institutions in Hamburg might be useful. Namely, organising the "Wissen vom Fass" (Science on tap https://www.wissenvomfass.de) where the city researchers' public spaces provide keynote speeches without presentations to explain in simple terms and plain language about their research discoveries and the research field they represent. That can serve as a good publicity event to bring awareness of what challenges can be solved with the help of science, inspire young

upcoming researchers to turn to science and promote certain profiles of the researchers available for mentoring.

Stage 6: Application and Matchmaking

The applicants are recommended to fill a simple form about themselves using a modified researcher table introduced in the new Horizon Europe project application template, including the choice of the challenge where the participant is willing to seek mentoring. Furthermore, the participants do not have to submit the ideas; they have to indicate what problem they want to solve, their background and why they would like to receive mentoring.

Stage 7: Mentoring

Mentoring can take place in any form (online, physical, hybrid). The character of the events allows picking the most convenient way for the participants. There should be an opportunity to meet at least once in person with the mentor and perform other joint activities, .e.g., going on a study visit to the research facilities within the macro-region where the young researcher is interested in continuing the career.

Mentoring can very well be connected with the BARI mobility tool, piloted as part of the BSN_Powerhouse project WP3.

More on the BARI tool

The mobility flow of academics and students is not equally spread within the Baltic Sea Region yet. BSN allows overcoming these differences (significantly decrease the presently clear East-West gap in the macroregion) with its mobility tool.

BARI received internship offers from PhD candidates, but not all of them were matched with an intern. Therefore, BARI can set up a “light version” on the BARI website as a follow-up activity after BARI. This would mean posting the internship offers on the BARI website (with the consent of the PhD candidate). Bachelor and Master students can then view the internship offers and contact the PhD candidate directly. Some of the BARI funders can even allocate a scholarship for the internship. In other cases, the Bachelor and Master students are advised to ask for Erasmus+ Internship funding from their home institution for the internship period.

With “BARI light”, the BARI idea can be maintained for a while even without the BARI portal and BSN_powerhouse project. Next steps for establishing BARI:

1) Set up the “BARI light” by including the available internship offers on the BARI website.

2) Funding for BARI portal, administration and marketing: Explore available funding opportunities, such as Erasmus+ Partnerships for Cooperation and build the consortium.

3) Funding for student scholarships: Discuss with Universities, University networks, Research Institutions and other relevant institutions and ask them to fund student scholarships.

Other tools that can be complimentary to the Mentoring process

THE HACKATHON

To facilitate the cooperation among a larger group of researchers, a hackathon is an excellent concept to be used. A potential format on how the Hackathon could be organised in the context to reach the goals set by the vision of the BSN are laid down in the following paragraphs:

- Each team will have an assigned mentor who will guide the teams through the ideation and conceptualisation exercises. The Hackathon starts with an onboarding session on Friday where the team has time to get to know each other in a facilitated meeting. The Hackathon as an activity can take place in all three ways – physical, online and hybrid.
- A 5-day Hackathon will be kicking off on Monday. The workflow of the teams will be arranged in collaboration with the team mentor. Each day holds an hour-long public session where a specific keynote or training session will be organised. The Hackathon ends with an Expert review panel judging a 5-minute pitch of each team explaining the research solution they are willing to work on. Finally, the five top-scoring teams get accepted to the Research Consortium Accelerator.
- The Hackathon is expected to be a fully online experience. Stretching out the agenda of the Hackathon allows grabbing the participant attention in smaller time increments each day while allowing the teams to self-organise with the help of the team mentor. The short spurts of demanded attention spread throughout five days are specially designed to help the participants to fit into the schedule the demands of the team to formulate and demonstrate the idea.
- The scoring and evaluation should be carefully crafted and done transparently to avoid building trust in the fairness of the process and giving fewer grounds for disputes with the participants.
- Participating in the activities both as experts and members of project teams should not be allowed unless the Expert Review Panel member does not participate in evaluating their project draft, does not participate in the discussions about their project draft, can not affect the evaluation result in any way.

SUMMER SCHOOLS FOR LARGE RESEARCH INFRASTRUCTURES

In this tool, large research infrastructures could arrange a summer school with Baltic Sea Region in mind. This tool is expected to widen the user pool of the large-scale research infrastructures and give opportunities to those who do not have these infrastructures in their country to get to know and use them. The target audience is researchers in the early phase of their career.

RESEARCH INTERNSHIPS

Research internships offer doctoral students the possibility to hire master/bachelor students for their research projects for an internship period. Working jointly on a research project of mutual interest will foster personal ties between different nationalities and the interest in research and scientific cooperation. Additionally, the PhD students gain valuable people management skills. Unfortunately, there are no comparable EU programs available.

SHORT-TERM PHD VISITS (1-3 MONTHS)

The program will help to achieve the research objectives of the individual PhD students. In addition, it will strengthen their organisational skills, confidence, and interest in international cooperation, which is a good starting point for future cooperation with the BSR.

RESEARCH CONSORTIUM ACCELERATOR

A more comprehensive solution - **Research Consortium Accelerator** - focuses on the engagement of researchers using the methodology of Vertically Integrated projects[45]. Meaning the goal is to enable initial cooperation of a group of researchers who form a consortium that works on a specific challenge. In contrast to the Young Researcher Mentoring programme, the mentors for the research consortium are expected to represent a wider group of stakeholders who help to position the solutions envisaged by the research consortiums in the wider context of where an how it could be applied in practice.

GOALS AND OBJECTIVES

The main goal of the Research Consortium Accelerator is to perform as a widening participation measure that facilitates the cooperation among a diverse group of researchers from the Baltic Sea Region. The objective is to increase the research excellence of the selected research consortiums, improve the interconnectedness and strengthen the capacity for researchers to be aware of the possibilities to use the available research infrastructure in the BSR and access the available funding sources in the Baltic Sea Region and European Research Area.

RESULTS TO BE ACHIEVED BY LAUNCHPAD_RI

1. Enhanced institutionalised knowledge and competence by transforming the concept of LaunchPad_RI and advancing the elements of the piloted concept to build on the already accumulated knowledge of how to organise such activities.

2. Better ability of the research consortiums to attract new financial resources by following the guidelines in the Roadmap created during the Acceleration programme.

3. Increased capability of the research consortiums to work in a transnational environment and expand the networks as a result of facilitated matchmaking and Research Consortium Accelerator programme activities.

THE APPROACH

The Research Consortium Accelerator is designed to use the Vertically Integrated Projects (VIP) Program to engage researchers of different experience and seniority in multidisciplinary project teams led by experienced researchers. The Research Consortiums are characterised by the long-term vision of the results that the group of researchers aim to achieve.

Stage 1: Scoping

Defining key challenges where the grassroots research initiatives are welcomed in the BSR. Using the challenges as the baseline aims for calls on cross border collaboration projects. In the report "Getting Started with SDGs in Universities",[46] – Monash University say that – "young people are creative, energetic, idealistic and optimistic about the future, and so want to make global, challenging and meaningful contributions to SDGs", and that "Universities can harness their unique access to large concentrations of young people for this purpose" (Kestin, 2017). Therefore the approach of using challenges and involving the young researchers is even more critical.

[45] The VIP Model, http://www.vip-consortium.org/content/vip-model
[46] Getting started with the SDGs in Universities, https://resources.unsdsn.org/getting-started-with-the-sdgs-in-universities

The Work Programme of the European Research Council in Horizon Europe are launching calls that support top researchers and their teams to pursue frontier research at different stages of their careers. The first call is expected to support young researchers across Europe who are starting their own independent research team or programme. Thus, for widening countries it is important to provide the environment where young researchers are embedded in the national research system, but at the same time are globally connected to the rest of the research community. Close functional ties in the macro-region is what the activities in the Research Consortium Accelerator will try to achieve by supporting the first steps in the research consortium creation and proof-of-concept research development.

From the international policy perspective, The Baltic 2030 Action plan[47] emphasises the focus areas - the increased partnerships and transdisciplinary collaborations finding creative solutions for regional SDGs implementation to achieve sustainable development. That can be achieved by activating the research sector – stimulating greater pan-Baltic exchange on research topics related to the focus areas and facilitating the linkages between research and private sector development at the macro-regional level. Furthermore, the activation of the science infrastructure cooperation through the LaunchPad_RI instrument has been acknowledged in individual interviews as a fine example of how the priorities of The Baltic 2030 Action[48] plan can be achieved by stimulating the cooperation between scientific infrastructures fostering research and innovation.

The CBSS and BSN Future Vision paper agenda can be used as the framework for defining more specific challenges for the open calls. Additionally, the EU Green Deal[49] aims to achieve a climate-neutral Europe by 2050. Such change can be made possible if science and research provide the evidence base with which policymakers can initiate new policies, which needs to be accepted by society at large. To achieve this, the science-policy-society interface is crucial and how and to whom science is communicated. Therefore, it is recommended to look at how science and research cooperation can contribute to a Green Deal for the BSR.

Stage 2: Scouting and Positioning

A more precise composition of the target groups is needed by taking into account the results from the evaluation in this study and the scope of the planned instrument. Hence a mapping exercise is recommended to be conducted. The lessons learned regarding the involvement of critical mass researchers from EU-13 and EU-15 countries should be considered.

It is recommended to position the Research Consortium Accelerator as the fast-track to international researcher career on meaningful topics for our planet (connection to SDGs) in the guidance of top-notch researchers and experts from the BSR. Moreover, it would be important for the Accelerator programme to provide the team the perspective and roadmap on overcoming the "valley of death" by providing the seed funding to the best teams who have passed the evaluation of their consortium.

It is recommended to consider the interdisciplinarity principles in the positioning for whom the accelerator is intended, but interdisciplinarity is not mandatory. Nevertheless, interdisciplinarity

[47] Realising the Vision: The Baltic 2030 Action Plan, https://cbss.org/wp-content/uploads/2020/06/Baltic-2030-Action-Plan.pdf

[48] "Realizing the Vision: The Baltic 2030 Action Plan" responds to the mandate, given by the CBSS member states (Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Sweden and Russia) in the Baltic 2030 Declaration of 6 June 2016, to create an action plan of cooperative and synergistic work to advance the 2030 Agenda for Sustainable Development in the Baltic Sea Region

[49] A European Green Deal: Striving to be the first climate-neutral continent, https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

is a prerequisite in the majority of the international funding calls, especially Horizon Europe RIA/IA/CSA calls. Therefore, broadening the instrument's scope to focus on the challenges with interdisciplinarity integrated from the outset rather than on the specific field of science tends to be a better way to solve everyday challenges and reach impact.

The approach on how the research consortiums will be matched is a matter to be elaborated. Nevertheless, it is important to take into account the specific character of how careful the researchers are when it comes to sharing their ideas. This aspect is recommended to be taken into account specifically in organising the matchmaking process.

Stage 4: Preparation - Implementation

To establish credibility of the solution and attract sufficient critical mass of the researchers, it is important to have an established organisation, e.g., CBSS, taking this initiative under their umbrella and run the Acceleration programme annually. Repetition would also allow improve the efficiency of the process organisation, enlarge the stakeholder group, including research infrastructure holders, who could actively contribute to the implementation of the activities.

It is of paramount importance to have a large enough critical mass of participants to organise good matchmaking and have the availability to review more ideas and choose to grade the teams based on the overall excellence of the idea. As in any programme, the implementing team should pay a lot of attention to the clarity of communication and correct way on the delivery of expectations.

Similarly as in the Young Researcher Mentoring programme, the applicants would be expected to fill a simple form about themselves using a modified researcher table introduced in the new Horizon Europe project application template, including the information on the choice of the challenge where the participant is willing to seek a solution. The consortium should consist of participants from at least three BSR countries.

After the submission of the project ideas, the best teams would be chosen to go through the Research Consortium Accelerator, where the idea implementation would start. The distribution of funding for the idea implementation could be based on the principles of Horizon Europe Third party financing scheme. The key activities where the winning teams would be engaged thereafter could be:

- 2-3 month Flexible Research Acceleration programme where teams could do their pilot research for the proof-of-concept and receive the industry stakeholder perspective on the development of the idea the newly created consortium holds. The research activities should include at least some usage of the BSR research infrastructure where it is relevant.
- For the awareness building, the Acceleration programme could end with a public Demo day where particular focus would be put on the possible collaboration of the industry and grasping the potential of the research commercialisation. The Demo day consortium presentation evaluators is recommended to be composed of the Expert Review Panel, potential investors and representatives of the policymakers and funders – the diversity is a must.

Considering the complexity of the concept implementation and the size of the potential teams, the communication flow is recommended to be organised according to the fundamental concepts of the Sociocracy.[50] Meaning, Sociocracy focuses on corporate self-governance: (1) consent as a

[50] Sociocracy at Work, https://www.sociocracyforall.org/work-2/

practical and inclusive decision-making method, and (2) organizational structure with small empowered teams, (3) a built-in practice to evolve and learn continuously.

The preparation stages are recommended to include dedicated briefing sessions with each management circle to clearly define the roles within the concept and give a crash course on all the technical aspects and tools involved in the implementation process.

FUNDING

A more complex programme as the Accelerator would require significant time and money investment to implement it on high quality. The funding mechanisms which would be relevant in the context of the accelerator and help to test the concept further before funding from BSR country resources, are Cascade Funding projects in Horizon Europe, because they offer the much needed seed money to cover the initial research expenses and also covers the cost of designing and running the acceleration programme.

The goal of the acceleration programme is not to financially support the whole research process *per se* but to focus on the coaching and mentoring the teams to position them better for successful development and further research process. The Seed money granted for the accepted teams should be available in the Research Consortium Accelerator programme for the proof-of-concept/hypothesis research activities. The newly established research teams graduate the Acceleration programme with a proof-of-concept research report and a roadmap for further continuation of the research process. CBSS as the hosting organisation for the Accelerator should be considered due to the position of the organisation that was described in earlier places of the study.

4. CONCLUSIONS

The cooperation does not happen in an empty place, especially in the European Research Area. A specific context is needed to facilitate the cooperation. The previous studies in the INTERREG BSR project “Baltic Science Network” indicate that geographical proximity between the researchers is not the driving factor that would motivate the formation of cooperation. While policymakers and macroeconomists would see the rationale for closer cooperation among the researchers and research infrastructure users in close geographical proximity, the research landscape is governed by the research excellence and funding availability that fuel the research projects. Moreover, in the COVID-19 and post-COVID-19 era, it is evident that the work, even for researchers, can and will be done more remotely. Therefore, the functional proximity will prevail more evidently than ever.

Hence, the usefulness of the transfer of the concept can be deducted to the question – what results have the pilot activities produced and how well they align with the challenges that were intended to be overcome with the help of the LaunchPad_RI tool?

The opening research question in the methodology of this study is **"Does the LaunchPad_RI support instrument as a potential widening participation measure facilitates the cooperation among participants of the research and innovation ecosystem in Baltic Sea Region (BSR) countries?".**

The evidence gathered from the surveys, interviews, group discussions, and evaluation of all the desk research information allows us to conclude that **the LaunchPad_RI support instrument**

facilitated the cooperation among participants of the research and innovation ecosystem in BSR countries. However, the second most important answer is on the efficiency and appropriateness of the chosen solution among the array of tools and instruments available to the research community. Therefore, it is recommended to restructure the LaunchPad_RI into two versions – the short term easily adaptable stand-alone version that focuses on specific aspects in mentoring young researchers or a more comprehensive solution covering initial steps in the research process with a team of researchers from various stages of their research carriers. Both programmes focus on **(1)** grassroots research ideas and Vertically Integrated project consortium development, **(2)** putting a significant effort into the mentoring of the accepted teams or individual researchers to accelerate the development of their research careers and bring a roadmap on how to access other funding opportunities, **(3)** providing the seed funding for piloting research within the scope of the support programme and accessing the research facilities in the macro-region.

POLICY RECOMMENDATIONS

- *Support the creation of a transnational Research Consortium Accelerator with baseline funding for annual open calls to support the creation of strong vertically integrated research teams and top-up funding from, e.g. the European Commission.*

- *Support the creation of the Young Researcher Mentoring programme to help accelerate their careers and better connect with other peers in the macro-region.*

Consequently, the evaluation team sought answers to additional related questions that help to evaluate and draw conclusions about the actions implemented in the project:

> **Have the actions in work package 2 (WP2) increased the capacity of research ministries funders to establish international support programmes?**

The evidence gathered in the study, and the experience of the involved personnel have increased the capacity of research ministries to conduct cooperation facilitation events but have not significantly improved the capacity to establish international support programmes. On the other hand, the activities have highlighted the main principles that drive the cooperation in ERA, including the BSR – ease of cooperation, access to funding and research excellence. If the ministries can help funders link these pillars with the rationale and reasoning of the BSR specific support programme, that would be a good step towards understanding cross-border support programmes. At the end of the implementation of the study, the evaluation team concludes that the funders' capacity has not increased during the project. However, this study might serve as a great learning instrument when designing future cooperation programmes.

POLICY RECOMMENDATIONS

- *The funding organisations should be involved on a planning / strategical level. There is no need to involve them directly in the events. However, their involvement should be directed in establishing a common understanding of how to connect the results of the events to the policy indicators that the funders need to achieve and where the project results might help them directly. A holistic framework approach can help to increase the understanding and the capacity to design international support programmes.*

> **Have the LaunchPad_RI support instrument increased the capacity of research infrastructures (RI) from EU-13 to establish true partnerships and research cooperation with RI in EU-15?**

The composition of the partnerships in the approved projects paint a picture that is not showing a significant increase in the EU-13 representatives to establish dedicated partnerships with the EU-15 counterparts. Instead, it shows that the LaunchPad_RI pilot has helped accelerate cooperation among Russian researchers and the rest of the BSR (mainly Finland, Sweden, Germany). However, speculating the cause and effect relationship in the phase of Matchmaking, the result could have been significantly different if a larger critical mass of participants from the EU-13 countries would have participated. Hence, the evaluation team concludes that the LaunchPad_RI did not increase the capacity of EU-13 research infrastructures to establish dedicated partnerships and research cooperation with RI in EU-15. However, the tool holds the potential to do so.

POLICY RECOMMENDATIONS

- *The outreach activities and the application process are crucial stages that should be prioritised and adequate resources budgeted for selecting the applicants. Furthermore, the communication activities in the national research ecosystem channels are recommended to represent a clear definition of the challenges that the LaunchPad_RI wants to tackle and inform about joint advancement of the solutions to the challenges that the researchers are tackling in the BSR and how participation in the LaunchPad_RI will help them to be a part of the solution.*

- *In order to create dedicated partnerships, the matchmaking process should be facilitated by experienced stakeholders in the research ecosystem.*

> **Have the activities in WP2 facilitated closing the gap in insufficient cooperation among larger (EU15 countries) and smaller (mainly EU13 countries) RI users in BSR in using the large RI jointly, e.g. DESY, European XFEL, MAXIV?**

The project activities did not create the environment for the gap to be narrowed. The activities in the project focused on an earlier stage of cooperation development that, in the light of COVID-19, imposed restrictions did not allow the partnership to develop to do fieldwork in any of the large RI. Moreover, the nature of the activities that could be funded through the approved research projects did not allow to fund any activities beyond travelling and event organising. That, however, is not a shortcoming of the tool but rather the inflexibility of the conditions imposed by the funders (INTERREG BSR).

POLICY RECOMMENDATIONS

- *Focus on providing dedicated mentoring to the selected teams or individuals. The aim is to have a person for each team who can guide a researcher or the particular group of researchers and help prepare a strategy that can help to accelerate the development of research ideas within the boundaries of BSR, and help them better connect with the right opportunities in the ERA at the appropriate point in time. The potential target initiatives are, e.g. Teaming, Twinning, ERA Chairs.*

- *The mentoring to young researchers in connection with the BSN mobility tool BARI is a combination that can bridge the gap between the different national research ecosystems and later result in more and better team compositions for the Research Consortium Accelerator.*

The evaluation also evaluated two different goals to be achieved by the activities of the WP2 that were not discussed in the previous research questions:

- **Enhanced institutionalised knowledge and competence.**
  Results are achieved. BSN_Powerhouse partnership has benefited from the practical learning experiences gained during the test runs of LaunchPad_RI. The involved partners developed and organised a novel and interactive online Symposium and matchmaking event – Hackathon. The project was a significant learning opportunity for all the involved stakeholders and was reported as a valuable experience that helps increase the capacity to work in an online environment.
- **Better ability to attract new financial resources.**
  Results partially achieved. The objective to increase the capacity of ministries to establish international support programmes was evaluated as fulfilled. Based on the interview results, project partners successfully tested the approach of a new regional widening support instrument and obtained experience in launching such instruments. All stakeholders consider the concept of the project to be transferable to other fields.

  However, the funding landscape for science and research is still very heterogeneous and multi-level in the Baltic Sea Region. The inability to involve transnational funding organisations and promote the research projects to the national and international funding organisations have not increased the ease of negotiating transnational funding.

CONCLUSIONS FOR THE TRANSFER OF THE CONCEPT

Although the LaunchPad_RI has been evaluated as a concept that could be applied to any other research area, in the light of this and other revelations, it is recommended to adjust the concept to enable the characteristics of interdisciplinarity and meaningful impact within the scope of the improved LaunchPad_RI model – **Young Researcher Mentoring programme** or **Research Consortium Accelerator**.

The transfer of the concept is taking into strong consideration the context of:

- The complexity of the research areas of common interest is defined in the BSR – Photon and Neutron Science, Life Sciences and Welfare State.
- The principles of research excellence centre creation
- The principles of Business acceleration programmes
- The concept of islands of research excellence
- Other initiatives already resent in the BSR, e.g. BANOS
- The aims defined in the Baltic Science Network vision paper
- Evaluation results and Gap analysis
- Best practice in establishing research mentoring programmes
- Persisting Innovation gap between the EU-13 and EU-15 countries and the efforts made to overcome that
- Challenges that arise in not having a sufficient critical mass of leading researchers in the country/region
- The method of Vertically Integrated projects.

The evaluation and research on the concept transfer have been summarized according to a several stage process.

The mentoring to young researchers in connection with the BSN mobility tool BARI is a combination that can bridge the gap between the different national research ecosystems and later

result in more and better team compositions for the Research Consortium Accelerator. This stand-alone solution is relatively easy adaptable and thus is considered more desirable for immediate implementation.

Nevertheless, according to the Vertically integrated Project methodology, the Research Consortium Accelerator holds the potential to reach the SDGs and goals set for the Baltic Science Network and the Council of Baltic Sea States at a larger scale. However, it also requires potentially more resources and coordination to implement, thus being considered a concept that demands more testing as a part of a larger Horizon capacity building project beyond the immediate scope of the Baltic Science Network.

While it is known that researchers prefer physical meetings, the trend is going in the direction of using more online tools even without the limitations imposed by the different global crises, e.g., COVID-19. Therefore, both events are expected to have the hybrid nature embedded in the implementation with physical meetings and travel dedicated as the award to the teams and researchers considered the finalists in either of the programmes.

Both programmes have a strong focus on undergraduate and graduate researchers with a mandatory involvement of established researchers to ensure the knowledge transfer and better development of the young research careers.

SUBJECT FOR FURTHER STUDY

The scope of the evaluation study did not foresee carrying out an in-depth analysis on the specific topics related to the cross-border procurement system harmonization or an in-depth investigation into the flow of communication to the target groups and the positioning of the activities to the research community. A separate study should be carried out to research these elements to understand better the reasons for the low participation of the EU-13 country representatives and the potential streamlining of the cross-border cooperation in organizing similar events.

The most significant research the evaluation team recommends to conduct is regarding creating a conceptual Research Consortium Accelerator model that is the core concept derived from the evaluation process and recommendations generated in this study. Furthermore, it is recommended to create a several phase tender procedure to prepare a final technical specification for more complex future programme models in cooperation with the qualified industry professionals who have experience in organising and running accelerator programmes.