Final Project Conclusions

BalticSatApps

Project title	Project duration
Speeding up Copernicus Innovation for the BSR Environment and Security	October 2017 - September 2020

Priority	Specific objective
Capacity for innovation	Research and innovation infrastructures

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.85 million	2.69 million		

Link to the project library	Link to the project's website
https://interreg-baltic.eu/project/balticsatapps/	http://balticsatapps.eu/

Lead partner (country)	Countries involved
University of Turku (Finland)	FI, EE, PL, RU, SE

Project summary

Teaser

The Interreg project BalticSatApps improved the usability of satellite data provided by the European Copernicus Programme and ensured its further integration in decision-making to trigger innovation in the Baltic Sea region.

The opportunity

Since 2014, the satellites and sensors of the European Copernicus programme have delivered Earth observation data free of charge to anyone. Development of scientific infrastructure as satellites, receiving stations and data centers, and Earth Observation (OB) services requested huge investments in terms of EU funds and research. Despite many efforts, a significant number of EO services was still underused as a result of infrastructure gaps and poor guaranteers on long-term service availability.

The wealth of data holds tremendous potential for new services in the environment, transport, energy and other sectors. Many commercial entities in the Baltic Sea region, especially small and medium- sized enterprises (SMEs) could offer new services or enhance their existing services if they could use Earth Observation (EO) data. The entrepreneurs needed clarity and support in developing new business models and services based on the use of EO data. This data covered air quality, the ozone layer, emissions, solar radiation, marine safety, urban planning, and forest management.

BalticSatApps intended to increase awareness about the usability of data provided by the European Copernicus Programme, improve access to EU-based satellite data, and stimulate demand and innovation through co-creation and iterative development methodologies.

Final Project Conclusions

BalticSatApps

EE	FI	PL	RU	SE
				

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Acceleration programme launched

In order to increase awareness about the data provided by the European Copernicus Programme, BalticSatApps organised a series of educational events and an acceleration programme to increase interest and facilitate the use of Earth Observation (EO) in business. Running the BalticSatApps acceleration programme has provided an excellent opportunity to network with start-ups and EO experts from the Baltic Sea region. The programme has contributed to the founding of ten new start-ups in Estonia, Finland and Poland, and supported them to commercialise the satellite data. The new start-ups operate in areas such as urban planning, agriculture, and drones.

New interface allows new possibilities

BalticSatApps developed a Russian interface for Copernicus data. The Interface integrates Copernicus and Russian satellite data sources, and it is possible for anyone to test it with the help of the instructions provided by the project. The interface contains a catalogue of remote sensing data. It helps to organise the order and access to the data provided by the European Copernicus Programme and Russian satellites. By combining Copernicus and Russian satellite data, the project provided better conditions for small and medium-sized enterprises giving services in territory monitoring and management. The operators dealing with territory monitoring and management got access to up-to-date and real-time spatial data for accurate decision-making.

The Interreg project BalticSatApps used EUR 2.69 million to improve access to valuable satellite data, unveiled the tremendous potential of Earth Observation data, provided technical and business knowledge, and supported businesses in the Baltic Sea region.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Data2Information kit

The BalticSatApps Data2Information Kit is an information package designed to improve the comprehension of Copernicus Earth Observation (EO) data and present the basics on how data users can benefit from them. The Data2Information Kit documents user needs, capabilities, offered

services and success stories demonstrating applicability of Copernicus data. Based on users' needs, valuable solutions linked to remote sensing data and free-of-charge Copernicus services are shown with open access to the users. It concludes with a step-by-step guide of transforming Copernicus data into information requested mainly by users.

https://balticsatapps.eu/accessing-and-using-earth-observation-data/data2information-kit/

Catalogue of innovative Earth Observation services

The catalogue contains a compilation of innovative services based in the Baltic Sea region, focusing mainly on Estonia, Finland, Poland, Russia, and Sweden. It presents development areas lacking in EO-based solutions on the Baltic Sea region market, but having potential. The catalogue presents various features of each service, including name of service, service provider, operational status, type of provider (public/private), cost of service, coverage, spatial resolution, contact details, usage instructions, in brief, background information, screenshots, license type, application domains, and use cases.

https://balticsatapps.eu/promoting-innovation-in-earth-observation-based-services/catalogue-of-innovative-earth-observation-services/

Cookbook of organising EO hackathons and iterative development of service ideas

The manual, a so-called "cookbook", provides guidance on how to organise innovation competitions and hackathons within the Earth Observation (EO) thematical area. The cookbook focuses on the iterative development process, based on which ideas and needs are systematically combined with skilled solution area experts and developers equipped with appropriate tools and data. It is analysed if and how reapplying the previous (i.e., iterating) outcomes can bring the result closer to an effective and self-sustained process. The publication covers items to be taken into account prior to the events, the types of events, and issues that need considering afterward. Sections refer to one another to highlight iterative dependencies and possibilities.

https://balticsatapps.eu/promoting-innovation-in-earth-observation-based-services/cookbook-of-organising-eo-hackathons-and-iterative-development-of-service-ideas/

BalticSatApps Acceleration Programme: Overview and Analysis

The report provides an overview of BalticSatApps Acceleration Programme activities in Estonia, Finland, and Poland within the BalticSatApps project. The activities were primarily carried out and led by the three science and technology parks (STPs) involved in the project: Tartu Science Park (Estonia), Turku Science Park Ltd (Finland), and Kracow Technology Park (Poland). The report gives first-hand information about essential success factors, such as application phase and selection criteria, participating teams, key mentors, Acceleration Programme implementations, and follow-up actions in Estonia, Finland, and Poland. It also makes notions on challenges encountered during the Programme, and introduces possible improvements for similar activities in the future.

Final Project Conclusions

BalticSatApps

https://balticsatapps.eu/commercialisation-of-earth-observation-based-services/balticsatapps-acceleration-programme-overview-and-analysis/

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

- BalticSatApps activities first and foremost continueed under ESABIC (European Space Association Business Incubation Centres). Turku Science Park and Tartu Science Park are ESABIC centres. ESABIC Sweden was involved in the project steering group. The Krakow Technology Park's ESABIC application has been submitted, and they are currently awaiting its approval by ESA (KTP is also a partner of the ESA BIC Poland consortium).

- BalticSatApps results will also endure in the upcoming acceleration programmes organised by the science parks partners. The results´ dissemination aims to attract other actors to use the developed materials and organise their own accelerations in Copernicus and Earth Observation.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

- The project benefited from the offered prolongation of project implementation due to the covid-19 pandemic and finalised its activities six months later, at the end of 2020.

- As part of its activities, BalticSatApps aimed to increase awareness related to the Copernicus programme and Earth Observation in Russia. To this end, the partnership successfully involved two Russian partners. In practice, the training events were arranged in Russia, with other project partners joining to provide expertise in Earth Observation and Copernicus.

Final Project Conclusions

BSUIN

Project title	Project duration
Baltic Sea Underground Innovation Network	October 2017 - March 2021

Priority	Specific objective
Capacity for innovation	Research and innovation infrastructures

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.35 million	3.00 million		

Link to the project library	Link to the project's website
https://interreg-baltic.eu/project/bsuin/	http://bsuin.eu/

Lead partner (country)	Countries involved
University of Oulu (UO) (Finland)	FI, PL, SE, DE, LT, LV, RU, EE

Project summary

Teaser

The Interreg project BSUIN tackled underutilisation of the underground laboratories serving as a business development and innovation platform for representatives of business, academia and regional development agencies across the Baltic Sea region.

The challenge

Several underground laboratories (ULs) in the Baltic Sea region remained under-utilised for many years, without taking advantage of the innovation and business potential. Unique scientific environment of these facilities was not fully exploited. Furthermore, the laboratories were operating separately, lacking specific standards for characterizing the ULs technically or in terms of quality of operations. The existing laboratories offered services primarily on a national level and targeted mostly scientific users, as they were initiated by nearby universities to support pure scientific research. Consequently, the provision of services to commercial users was not part of their initial concept. Opening up for businesses and transnational collaboration would therefore facilitate scientific technology transfer and exchange of best practices.

DE	EE	FI	LT	LV	PL	RU	SE
							

EUROPEAN REGIONAL DEVELOPMENT FUND
EUROPEAN UNION

Final Project Conclusions

BSUIN

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

The Unique transnational scientific environment created

The BSUIN project established a network of the Baltic Sea region's underground laboratories, including the Callio Lab in Pyhäsalmi mine (Finland), Äspö Hard Rock laboratory (Sweden), FLB-Research and Education Mine "Reiche Zeche" (Germany), KGHM CUPRUM R&D Centre in Wrocław (Poland), Underground Low Background Laboratory of the Khlopin Radium Institute in St. Petersburg (Russia) and Ruskeala marble mine in Karelia (Russia). The laboratories provide independent researchers, research institutes, regional development agencies as well as small and medium-sized enterprises with an easy access to unique environments for business development and innovation. The laboratories allow to exploit potential for incubating innovative businesses in various fields, e.g. mining, tunnel construction, radiation shielding systems testing, and thermal energy production.

In the context of individual underground laboratories, the activities at Callio Lab (Finland) are extending into mining and tunnelling training, while the KGHM Cuprum is planning to upgrade its conceptual laboratory design. Next, the recent establishment of the GFZ Seismic 3D laboratory at the Freiberg´s Reiche Zeche mine is a proof of the right direction that BSUIN project has taken.

BSUIN project improved visibility, operation, user experiences, and safety of six cooperating underground laboratories. The project completed the characterization of the underground laboratories, developing their service concepts, improving underground environments, and engaging in outreach activities.

Open access platform established

The partnership succeeded in the development of an open-access platform that serves as a place for the laboratories to market their services and facilities as well as share relevant information. The open innovation platform hosts the information, reports guidelines, underground laboratory business models, and service designs of the BSUIN project. It also contains site characterisation information which makes it easier for the users to identify and accommodate the most appropriate facilities in view of their needs.

A new association established

The successful collaboration of the partnership resulted in the establishment of the European Underground Laboratories association (EUL). In November 2020 seven BSUIN partner organizations and two associated organizations founded the new association. It is open to individual companies, research centers and universities on regional, national and international levels.

Final Project Conclusions

BSUIN

The EUL association coordinates the open-access platform, collaborates with the BSUIN project partners, and actively seeks for new members.

Spin-off projects initiated

The BSUIN project laid grounds for the new extension phase project EUL "Empowering Underground Laboratories Network Usage" which continues joint efforts in testing, evaluating, and improving the innovation platform. In addition, BSUIN generated a spin-off project which focuses on well-being with intelligent lighting in an underground mine. This is a joint effort between architecture (UO), medicine (UO), and industrial partners from the mining and illumination industries. The next spin-off to mention is the project NEMESIS which was initiated as a Proof of Concept study on a hypothesis: *Does cosmic radiation produce particle cascades in radiation shielding materials?*

The Interreg project BSUIN used EUR 3 million from the European Union to increase visibility and functionality of the earlier under-exploited underground laboratories as places for transnational exchange on scientific developments as well as business ideas and incubation.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Transnational BSUIN network installation

The European Underground Laboratories Association (EUL) is established under German law (Freiberg/Dresden) and its founding members are seven regular partners and two associated organisations of the BSUIN project. EUL association is a registered non-profit organization that promotes science, research, technical development, innovation, education and events. The concept of BSUIN network accommodates the interests of BSUIN organisations and other stakeholders such as facility providers, managers and utilisers. The better use and development of the underground laboratories is a common denominator for the people behind this network.

https://undergroundlabs.network/about/

Open innovation platform

The open innovation platform supports the operation of the European Underground Laboratories Association (EUL). The platform hosts the information, reports guidelines, underground laboratory business models and service designs of the BSUIN project. The underground laboratories (UL) site characterisation information helps the potential users of the laboratories to find optimal facilities for their purposes. It helps the UL operators and managers in further developing their characterisation

data to reach the common standard level. The innovation and service design information of the ULs helps the users in finding the best innovation support for their activities.

https://undergroundlabs.network/

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

- EUL project- "Empowering Underground Laboratories Network Usage" is the extension stage project of BSUIN. The association and the open innovation platform will be further tested, evaluated, and improved within the project.

- In the context of individual underground laboratories, the activities at Callio Lab (Finland) are extending into mining and tunnelling training, the KGHM Cuprum´s conceptual laboratory design is planned to be implemented, and the recent establishment of the GFZ Seismic 3D laboratory at the Freiberg´s Reiche Zeche mine are excellent marks of tackling the BSUIN project´s starting point - the underutilisation of BSR underground laboratories.

- Spin-off projects: Well-being with intelligent lighting in Underground mines is a joint effort between architecture (UO), medicine (UO) and industrial partners from the mining and illumination industries. The spin-off project NEMESIS was initiated as a Proof of Concept (PoC) study on a hypothesis: Does cosmic radiation produce particle cascades in radiation shielding materials?

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

- The project benefited from the offered prolongation of project implementation due to the covid-19 pandemic and finalised its activities 6 months later, at the end of 2020.

- One of BSUIN`s main outputs was the establishment of an association as a non-profit organisation managing the network of underground laboratories of 7 regular partners and 2 associated organisations.

- The partnership has published on the project website some articles on lessons learnt regarding international cooperation, co-creation in multi-national and multi-disciplinary teams. The articles can be found here, under “Lessons learnt” section:

http://bsuin.eu/

Final Project Conclusions

IRIS

Project title	Project duration
Improved Results in Innovation Support - transnational exchange and joint development between Innovation Infrastructure Organisations	October 2017 - March 2021

Priority	Specific objective
Capacity for innovation	Research and innovation infrastructures

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.46 million	2.2 million	x	PA Innovation

Link to the project library	Link to the project's website
https://interreg-baltic.eu/project/iris/	http://www.witeno.de/iris/de/home/

Lead partner (country)	Countries involved
Dalarna Science Park (Sweden)	SE, FI, EE, LV, LT, PL, DE, DK, RU

Project summary

Teaser

The Interreg project IRIS engaged fourteen business incubator organisations around the Baltic Sea and strengthened their management and business support skills to evolve as competitive cutting-edge incubators.

The opportunity

Business incubator organisations are crucial supporters for entrepreneurs, start-ups and small and medium-sized enterprises that drive economic growth and create jobs. Enhanced performance of incubators would result in better conditions for start-up companies and their evolvement into fully-fledged companies. Business growth and prosperity would in its turn enhance the competitiveness of the region making it a hotspot for more investments and talents. This would contribute to the further development of the Baltic Sea region as a dynamic, innovative, and business-driven region.

Aiming at turning incubators into global frontrunners, the project IRIS intended to engage the business incubator organisations and equip them with the knowledge and skills needed to address shared challenges.

DE	DK	EE	FI	LT	LV	PL	RU	SE
								

EUROPEAN REGIONAL DEVELOPMENT FUND
EUROPEAN UNION

Final Project Conclusions

IRIS

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Fourteen business incubators gathered together and gained management and business support capacities by undertaking a series of targeted actions.

Peer exchange matters

The project contributed to strengthening management capacity through joint site peer reviews, thematic workshops and practical tests. The peer review activities improved quality and management performance by providing the incubators with targeted recommendations, so-called management improvement plans. The focus was on the review of governance structures and organisational setup of the involved incubators. Connecting with other incubators, learning best practices and sharing knowledge and experiences, has proven to be a powerful way to develop their capabilities to support start-ups and small and medium-sized enterprises (SMEs).

Transnational perspective in focus

The transnational perspective in all project activities has given most partners a new and different dimension of their everyday work. The IRIS project was instrumental in boosting incubator capacity to offer better conditions and services to their target groups to survive, grow and develop in the Baltic Sea region. The results were further spread among incubators operating in the Baltic Sea region to increase the impact of their support services.

Developments to continue beyond the project

The collaboration with the female entrepreneurs resulted in the establishment of a new concept for a regular workshop. Next, the project established a new advisory board for female entrepreneurs for steering up the strategic processes and streamlining decision-making.

In addition, the partner organisations continue with the health innovation award and Digital Baltic Start-up Day that gather relevant audiences, mark achievements and provide inspiration for new businesses joining the incubator community. Beyond that, the project launched a digital online business internationalisation platform where entrepreneurs, start-ups and small and medium enterprises from different countries could find actual internationalisation offers and support services.

Final Project Conclusions

IRIS

EUR 2.2 million of support from the European Union helped to empower business incubator organisations, facilitate their management and support capacities in nurturing new skills, creating new companies, and opening up new markets across the Baltic Sea region.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Roadmap for enhanced management capacity

In the Roadmap, the peer review process is outlined and described in detail. The process aims to improve governance structure and organisational setup among incubators. The roadmap covers areas such as findings, conclusions, and results on a general level. The roadmap is intended to be used as encouragement and guidance for incubators to adapt the process, but also to serve as inspiration for policymakers to facilitate the development of the innovation support system.

https://www.witeno.de/iris/de/priority-areas/peer-review/

https://www.witeno.de/iris/fileadmin/documents/Peer_review/IRIS_WP2_Roadmap_formatted_2020.07.27.pdf

Summary of test reports

The "Summary of test reports" provides an overview of the tests performed by the involved incubators within the five focus areas of IRIS project. The focus areas are: high quality deal-flow to incubators, coaching for growth and sustainability, successful management in start-ups and SMEs, female entrepreneurship and internationalisation of SMEs business activities. The report should be seen as an inspiration for incubators on how to improve their performance and the provided services to their target groups. The partnership promoted the test results and the tested instruments to other incubators as good practices to be taken up in their daily work. The findings are of value for innovation infrastructure organisations across the Baltic Sea region.

https://www.witeno.de/iris/fileadmin/user_upload/Annex_1_IRIS_Test_results.pdf

Guideline to incubator support instruments in five priority areas

"Guideline to incubator support instruments" (Guidelines) is published as a digital tool that facilitates transferability and uptake of new supporting instruments by actors outside the partnership. The Guidelines present the addressed five focus areas and documentation of the supporting instruments as well as short and inspiring films. The guideline is created to be a tangible tool aiming at increasing

incubator support capacity and aimed at innovation support agencies and innovation infrastructure organisations in the Baltic Sea region.

http://www.witeno.de/iris/de/priority-areas/high-quality-deal-flow/

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

Some of the follow up/spin-off activities are listed below:

- The IRIS consortium was and is seriously considering continuing the cooperation as soon as any new opportunities and calls for project applications arise.
- One new regular workshop format was established out of the experiences with female entrepreneurship (HGWomen)
- One new international format was established: HIA= health innovation award
- Launch of Digital Baltic Startup Day
- Set up of an advisory board for female entrepreneurs.
- Launch of digital on-line business internationalization platform where entrepreneurs, start-ups and small and medium enterprises from different countries could find actual internationalization offers and support services.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

The project benefited from the offered prolongation of project implementation due to the covid-19 pandemic and finalised its activities 6 months later, at the end of 2020.

Final Project Conclusions

ProVaHealth

Project title	Project duration
Product Validation in Health	October 2017 - September 2020

Priority	Specific objective
Capacity for innovation	Research and innovation infrastructures

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.02 million	2.6 million	x	PA Innovation

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/provahealth-105.html	https://scanbalt.org/livinglabs/

Lead partner (country)	Countries involved
Foundation Tallinn Science Park Tehnopol (Estonia)	EE, DK, FI, DE, LV, LT, PL, SE, DK

Project summary

Teaser

The Interreg project ProVaHealth engaged 14 health laboratories, improved their access to start-ups as well as small and medium-sized enterprises, and scaled up the challenging health innovation in the Baltic Sea region.

The challenge

The key aspect of Living Labs is the co-creation and experimental testing of products in a real-life context, providing opportunity for client validation, hands-on feedback and customer input for product development. In this way, Living Labs support companies to rapidly commercialise and scale up their innovations and products to the global markets.

In the Baltic Sea region, Living Labs exist within several health and well-being areas. The majority of Living Labs in the region work locally or regionally and not in cooperation with each other. However, there is a need for Living Labs to support small and medium-sized enterprises (SMEs) in scaling up their innovations and products to global markets.

Final Project Conclusions

ProVaHealth

This task is difficult if they work only locally or regionally. A weak transnational and trans-sectoral coordination of the innovation chain in the Baltic Sea region slows down the transfer of innovative products and services.
By improving the cooperation between Living Labs and SMEs, the project aimed to facilitate the validation process. Engaging 14 Labs from the Baltic Sea region, it wanted to facilitate access to Living Labs for startups and SMEs. Besides, ProVaHealth intended to tackle the challenge of a slow market uptake of innovations as well as Living Lab infrastructures serving locally or regionally only.

Besides, the development of small-scale bioenergy plants in rural areas would gear renewable energy production and sustainable development of the bionergy market in the Baltic Sea region. Facing such challenges as investment financing, suitable business models, and steady supply of biomass feedstock, the bionergy plants are experiencing tough conditions to increase their production.

DE	DK	EE	FI	LT	LV	NO	PL	SE
								

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

From local to international

Thanks to the involvement to the project, the Living Labs have seen a shift of focus on the activities, from local to international. They can now offer testing and research services to international small and medium-sized enterprises (SMEs). The testing phase during the project helped them gain confidence and develop initial procedures and documents for future international testing.

Simplifications introduced

The project simplified the whole product/service validation process. Specifically, it means the easier identification of testing groups of patients, recruitment of a testing team, criteria set-up for the product to meet end-user needs and cooperation with SMEs. Besides, the project empowered the Living Labs and got them better prepared to face differences in business cultures and language issues.

Final Project Conclusions

ProVaHealth

New collaboration patterns established

The project established 14 collaboration pairs between one SME and one partner Living Lab. Each pair tested a specific product or service in the health sector. An example of a product validated within the project is “CoNurse” by Cognuse. It is an audio solution designed for nurses: a voice-guided tool to improve the quality of procedures and reduce medical errors and unforeseen incidents.

With EUR 2.6 million support from the European Union, the Interreg project ProVaHealth has empowered the laboratories to increase their testing offer, created a new dimension to laboratories cooperation, and contributed to an up-scale of the health innovation in the Baltic Sea region.

Main Outputs

The main outputs present the project’s main deliveries which are tangible and can be used by others outside the project.

Transnational Living Lab concept

The Transnational Living Lab concept includes business models for Transnational Living Labs. Identified and developed transnational service packages include harmonized services such as workshops and usability testing. Beyond that, the developed package contains country-specific services such as country whitepapers over health structures and systems as well as unique services that can be upscaled to the entire Baltic Sea region.

https://scanbalt.org/wp-content/uploads/2020/04/Product_validation_report.pdf

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

N/A

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

PP11 WITENO GmbH decided to withdraw from the project implementation as of 31.03.2019 due to changes in its business strategy and a lack of human capacity for the implementation of project activities. These activities were taken over by PP16 Innovation Skane AB.

Final Project Conclusions

TEST-4-SME

Project title	Project duration
Laboratory network for testing, characterisation and conformity assessment of electronic products developed by SMEs	October 2017 - September 2020

Priority	Specific objective
Capacity for innovation	Research and innovation infrastructures

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
1.76 million	1.74 million		

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/test-4-sme-107.html	

Lead partner (country)	Countries involved
University of Tartu (Estonia)	EE, LV, LT, FI, DE

Project summary

Teaser

The Interreg project TEST-4-SME helped electronics small and medium-sized enterprises to better, faster and easier demonstrate the conformity of electronic products with international standards and speed up the product development.

The opportunity

New electronic products launched on global markets need to conform to rigorous international standards. Exporting electronics products require compliance with certain requirements before the products are sold. For manufacturers, conformity with standards means extensive testing of prototypes and many adaptations of the product. Early-stage testing allows to avoid failures in later stages and can thus save costs. The testing phase can be long, difficult, and costly for small companies that do not have yet processes in place. The improvement of the quality and efficiency of testing would then help many small businesses producing electronics to speed up the process of product development.

Electronics producing small and medium-sized enterprises (SMEs) across the Baltic Sea region would need support in conformance testing/certification, standardization and entering global markets. More practical training and customized support would increase efficiency and reduce the testing time. As the Baltic Sea region has one of the most robust and competitive business environments in Europe and SMEs stand for its robustness, less costly and more optimal processes are needed.

The project TEST-4-SME aimed at tackling the challenges by engaging electronics producers in training sessions and providing them a framework for enhancing their capacities in testing and standardising.

Final Project Conclusions

TEST-4-SME

DE	EE	FI	LT	LV
				

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

The TEST-4-SME network brought together 19 easily accessible testing laboratories in the Baltic Sea region and equipped them with the necessary knowledge and procedures to support electronic SMEs. The project mapped the testing services in laboratories in Estonia, Latvia, Lithuania, Finland, and Germany, trained the laboratory staff to support SMEs guided SMEs through the complicated process of developing innovative electronic devices. The laboratories opened their facilities to offer testing services to 138 SMEs.

The project trained also the SMEs that could become customers of the networks' testing labs. Close cooperation with research institutions was established and the involved SMEs received individual consultations and had a chance to visit the TEST-4-SME network laboratories.

The project made two major investments to fill the gaps. It purchased an electrostatic discharge required for testing any kind of electronic product and a reference solar cell allowing for quantitative measurement of the output power of modules. The equipment obtained by the project was installed in Estonia. Another piece of equipment, a reference solar cell, calibrated by an accredited European entity along with a software interface was purchased and used by Protech laboratory in Lithuania. The reference solar cell and special software allow quantitative measurement of the output power of modules of any size and geometry.

The TEST-4-SME network reduced the barriers to innovation that electronics SMEs meet in the early product development and testing phases. The collaborating laboratories are working every day towards better, safer, and reliable electronic devices that will serve consumers having as priority sustainable development.

The Interreg project TEST-4-SME used EUR 1.74 million to establish an innovation support network, train the electronics SMEs, provide them with the exchange possibilities, and make the product development processes more manageable.

Final Project Conclusions

TEST-4-SME

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Training curriculum for laboratory staff

The training curriculum for laboratory staff is a document outlining the scope, schedule, duration, target groups and participants, trainers, and the content of the training. The content of the curriculum was based on practical experiences of three laboratory staff training events within TEST-4-SME project and the participants' feedback. Training and workshops were organised to improve the knowledge of international standards, and how to enhance quality and efficiency while reducing testing costs. The goal was to harmonize the level of knowledge and skills of specialists providing testing services in network laboratories.

http://www.testelectronics.eu/wp-content/uploads/2021/05/O3.4-Training-curriculum-for-laboratory-staff_v4.pdf

Best practice procedures for testing

The service provision rules are a set of principles that competence centres and other cooperating laboratories will follow to provide testing services to electronics SMEs. The rules aim at reducing bureaucracy when using the service, speeding up processes, optimising costs, and making the whole process of receiving testing services more SME-friendly. The document includes a description of testing principles and terminology and several annexes, which offer a common line for testing services within TEST-4-SME network laboratories.

http://www.testelectronics.eu/governing-rules/

http://www.testelectronics.eu/wp-content/uploads/2021/05/O4.1.-TEST-4-SME-Best-practice-procedures-for-testing-final.pdf

Sustainability strategy

The sustainability strategy explores the organizational aspects of the network, foreseen technological improvements, and potential national and international funding sources. The strategy addresses the technological advancement of the network competence centres over the next 5 years, collaboration, and funding of the network activities. The TEST-4-SME Network's sustainability strategy is planned to be used after the project as a guiding document for further collaboration activities. During the project implementation, it was agreed among the partners that the network

would continue its activities through collaborative management and seeking joint funding for projects of mutual interest.

http://www.testelectronics.eu/wp-content/uploads/2021/04/O5.3.-TEST-4-SME-Networks-Sustainability-Strategy-1.pdf

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The ownership of the network and organizational coordination is undertaken by Tartu University, facilitation of the network will be implemented as rotation and all partners will be involved in management during the prescribed period and decision making in the network. The network partner will seek for new R&D and training projects to support the constant development of new knowledge.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

- TEST-4-SME project did not take advantage of the offered prolongation of project implementation due to the Covid-19 pandemic. It concluded its activities on the initial ending date.

- The last training course in Riga was challenging because of travel restrictions due to the COVID-19 pandemic. After two and a half years, the network was strong enough to quickly respond to the changed situation and we organized it as an online event including even a virtual tour to laboratories. Both organizers and participants got valuable experience in how to plan and implement practical online exercises in the future. The competencies of network laboratories were increased.

Final Project Conclusions

GoSmart BSR

Project title	Project duration
Strengthening smart specialisation by fostering transnational cooperation	October 2017 - September 2020

Priority	Specific objective
Capacity for innovation	Smart specialisation

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
1.76 million	1.71 million		

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/gosmart-bsr-123.html	https://gosmartbsr.eu/

Lead partner (country)	Countries involved
Bialystock University of Technology (Poland)	PL, LV, EE, LT, FI, DE, DK

Project summary

Teaser

The Interreg project GoSmart BSR helped small and medium-sized enterprises (SMEs) in seven countries to get the needed support, and successfully transformed smart specialisation strategies into practical joint actions of SMEs across the Baltic Sea region.

The challenge

Smart Specialisation approaches and Strategies (S3) are multiplying across Europe and the Baltic Sea region as a way to infuse innovation and increase competitiveness through beneficial partnerships among business, research and authorities. The most critical and vulnerable group of actors dealing with S3 are SMEs, which largely fall behind other players in terms of innovation activities and investments in research and development. Even though the SMEs get support in idea generation and incubation, the analysis shows that the support funding is no longer available and some support tools need an upgrade.

The project aimed to identify gaps in the availalble support systems, understand the needs and development barriers. GoSmart BSR wanted to boost transnational cooperation among industry, the research, and development sector, and authorities in employing smart specialisation strategies in regions in the eastern parts of the Baltic Sea region. It intended to promote mutual learning, sharing best practices, and translating smart specialisation strategies into practical joint actions of SMEs.

Final Project Conclusions

GoSmart BSR

DE	DK	EE	FI	LT	LV	PL
						

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

The project studied the situation of smart specialisation in Latvia, Estonia, Lithuania, Poland, Germany, Finland and Denmark, identified common priority areas that would enhance development of the Baltic Sea region, tailored an approach for strengthening smart specialisation and developed Transnational Innovation Brokerage System (TIBS).

Valuable exchange among the partner countries

By identifying the gaps of the existing support systems for SMEs, the project GoSmart BSR developed a new transnational approach to S3 and introduced a system of improving SMEs access to international markets. The project integrated countries of low innovation potential of less developed Baltic Sea region (BSR) with countries from better-developed regions. This was achieved through mutual learning, translating S3 into practical joint actions of SMEs, sharing best practices from more developed regions.

Transnational Innovation Brokerage System (TIBS)

The project established the Transnational Innovation Brokerage System (TIBS) in Latvia, Estonia, Lithuania, Poland, Germany, Finland and Denmark that operated with the support of trained brokers. TIBS concentrated on enabling transnational cooperation activities between companies active in the sectors that were defined as most relevant for the countries (e.g. manufacturing and industry, ICT, sustainable (eco) innovation). The assisted companies received support to initiate interregional cooperation networks helping them to meet their individual business needs. The aim was to find a tailor-made solution to establish innovation-based cooperation between companies, the so-called Joint Transnational Smart Strategies (JTSS). The project reached out to 998 companies and presented TIBS possibilities, 296 of them were pre-treated according to the original TIBS methodology. By the end of the project, 44 SMEs and other entities were assisted by TIBS services towards JTSS successful development.

The Interreg project GoSmart BSR used EUR 1.71 million from the European Union to identify the shared priorities for continued development of the Baltic Sea region by applying the new transnational brokerage system and supporting SMEs to evolve as a prosperous business.

Final Project Conclusions

GoSmart BSR

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Trans-S3 methodology

The Trans-S3 methodology aims to provide a 'recipe' on how to elaborate and manage transnational smart specialisation, while it provides guidelines on how policy recommendations can be formulated. The essence of S3 is the concentration of public resources in knowledge investments on selected activities to strengthen or develop a comparative advantage. Although it was developed within the GoSmart BRS project context, the proposed Trans-S3 methodology can be widely used in any situation when multiple regions attempt to intensify their collaboration based on the smart specialisation concept. This methodology is considered to be a useful policy tool for internationalisation and innovation at the transnational level. Extended work on this approach will be continued in the extension stage project, GoSmart & Excel BSR.

http://jauna.vidzeme.lv/upload/4_Trans-S3-methdology.pdf (abbreviated version)

http://jauna.vidzeme.lv/upload/5_VPR_Political_leaflet.pdf (policy paper)

Transnational Innovation Brokerage System Concept

Transnational Innovation Brokerage System (TIBS) is a network of skilled brokers based in Lithuania, Poland, Estonia, Germany, Sweden, Denmark, Latvia, and Finland. TIBS brokers evaluate the needs of companies, provide tailored solutions and focus on innovation opportunities through building connections and partnerships with international innovators. The TIBS concept facilitated the implementation of innovations of various scopes and types by the SMEs, while it helped the SMEs to change their perceptions of working transnationally. The SMEs formed partnerships and benefitted from the consultancy support in their growth strategies.

https://gosmartbsr.eu/gosmartexcel-bsr/excel-tibscase-studies/

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

- GoSmart & Excel BSR is the extension stage project of GoSmart BSR, which will also involve some new partners from Finland, Sweden and Denmark. The goals of GoSmart & Excel BSR project will be to further improve Trans-S3 methodology and elaborate a Trans-S3 for the whole BSR while enhancing TIBS services and expanding the network.

Administrative matters

Final Project Conclusions

GoSmart BSR

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

- The project benefitted from the offered prolongation of project implementation due to covid-19 pandemic and finalised its activities 6 months later.

- GoSmart BSR project submitted 4 photos to the 'IBSR Photo Competition: 2020 edition' organized by IBSR MA/JS. The photo submitted under the category '30 (years of Interreg)' (https://www.facebook.com/InterregBSR/photos/a.3377399938947047/3377180545635653/) won the public vote with over 100 votes.

Final Project Conclusions

LARS

Project title	Project duration
Learning Among Regions on Smart Specialisation	October 2017 - September 2020

Priority	Specific objective
Capacity for innovation	Smart specialisation

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
1.65 million	1.49 million	x	PA Innovation

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/lars-93.html	https://www.lars-project.eu/home/

Lead partner (country)	Countries involved
Regional Council of Ostrobothnia (Finland)	FI, SE, DE, LT, LV, NO

Project summary

Teaser

The project LARS reinforced transnational learning in the implementation of the smart specialisation strategies and contributed to better connectivity of the regional innovation systems across the Baltic Sea region.

The challenge

The global value chains and increased sophistication of production constitute a large challenge for regional development efforts. There is a need to learn and upgrade the level of policy intervention. The regional innovation systems are different but may learn from each other through a process of transnational learning. The challenge is to identify and close gaps in regional and transnational systems of innovation. The project LARS is based on the idea that connectivity between stakeholders in regional innovation system is crucial in the entrepreneurial discovery process where companies, universities and public organisations are at the forefront. Next, a collaboration between smart specialized regions could form the base for macro regional strategies.

The project aimed to help the public sector in leading smart specialisation processes in their regions and to connect innovation networks across regions. It helped find solutions tackling the fragmentation of regional systems of innovation looking for entrepreneurial discoveries within blue growth, bio and circular economy, advanced production methods and technologies for energy efficiency.

DE	FI	LT	LV	NO	SE
					

Final Project Conclusions

LARS

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Strengthened transnational learning

For transnational learning, exchange and policy transfer, the project LARS involved organisations from Poland, Latvia, Lithuania, Germany, Norway, Sweden and Finland. Most of the partners represented authorities with experience in implementing EU regional policies, but also research institutions with a focus on innovation deliverance, as well as non-governmental organisations.

The project partners started by selecting the value chains out of the already existing that played a vital role in the process of the smart specialisation strategies (RIS3) implementation in their regions. Based on this selection, the project introduced a format for value-chain analysis applying Porter´s company-based model and elaborated a methodology to apply in transnational learning. As a case of transnational learning, the partners studied the implementation of smart specialisation strategies. Moving towards a green transformation as required by the European Green Deal was a driver for the development. The format used in the stakeholder analysis (including stakeholder motivation) based on a classification of urgency, legitimacy and power was adopted towards the Sustainable Development Goals (SDGs).

Policy transfer

The project identified potential good practices and challenges for testing possible transfers of policies. Aimed to strengthen the institutional capacity and governance of Smart Specialisation programs through transfers of good practices, the project analysed various methods. A well-developed method in so-called "translation" of best practices is a "learning history approach". This process is organised through networks between specific pairs of regions who "have something to learn from each other", covering interactions on specific policies, strategies of change and mapping of barriers. Among the participating organisations, the project primarily targeted public administrators working with the materialisation of S3. The purpose was changing their approach to more proactive in innovation system planning, specifically rather "owner-perspective" instead of a neutral "enabler-perspective". In general, the improved institutional capacities would open up new and innovative ways of combining and exploiting regional resources leading to growth and regional transformation.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Learning among regions on Smart Specialisation - LARS Policy Advice

The LARS policy advice contains both hands-on advice on how to work with a smart specialisation strategy. The document follows the structure suggested by the smart specialisation platform in

Final Project Conclusions

LARS

Seville in the six steps: 1) Analysis; 2) Vision; 3) Governance; 4) Priorities 5) Policy mix 6) Monitoring. The idea of following the proposed structure is to facilitate the benchmarking of project partner experiences with the European debate on smart specialisation. This report draws on the project experience on how to methodologically link transnational learning with smart specialisation.

https://www.lars-project.eu/assets/14/Uploads/Policy-advice-LARS-Final-12.10.pdf

Report on policy transfer

The report contains a guide for selecting the good practices, based on stakeholder interviews where gaps in the 4H innovation networks had been identified. The guidelines help examine the good practice proposed and verify that they will provide a remedy for the gaps discovered. This process includes the following steps: 1) evaluate the development challenges concerning regional connectivity between triple helix actors; 2) check the list and analysis of good practices; 3) evaluate if any of the good practices will match the identified challenges. The report will serve as a basis for research and dialogue among policymakers. Besides, the report includes a list of the selected good practices based on the discussion among regional administrators, policymakers and other relevant stakeholders.

https://www.lars-project.eu/assets/14/Uploads/WP5-report.pdf

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

N/A

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

N/A

Final Project Conclusions

RDI2CluB

Project title	Project duration
Rural RDI milieus in transition towards smart Bioeconomy Clusters and Innovation Ecosystems	October 2017 - September 2020

Priority	Specific objective
Innovation	Smart specialisation

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.66 million	2.52 million	x	PA Bioeconomy

Link to the project library	Link to the project's website
https://interreg-baltic.eu/project/rdi2club/	https://biobord.eu/

Lead partner (country)	Countries involved
JAMK University of Applied Sciences (Finland)	FI, EE, LV, NO , PL

Project summary

Teaser

RDI2Club facilitated business development in rural areas and boosted bioeconomy growth in five countries across the Baltic Sea region.

The challenge

Bioeconomy means economic activities that utilize the biological natural resources and turn them into food, energy, and other products and services providing jobs and business opportunities. The rural areas of Baltic Sea region have a great potential for bioeconomy as they have abundant natural resources. However, these regions struggle to reach their full potential due to limited human capital, business networks and clusters. So far, the small and medium-size enterprises (SMEs) in bioeconomy are mostly in traditional, resource-based industries that have not taken full advantage of latest technology and service innovations.

The rural areas across the Baltic Sea region have limitations in reaching their full bioeconomy potential. SMEs in these regions are mostly in traditional, resource-based industries. The regional knowledge exchange is generally limited and occurs mainly among local actors. Limited human capital, lack of agglomeration economies, low levels of firm clustering and a weak endowment with knowledge generation organizations are characteristic of organizationally thin regional innovation systems (RIS). Five regions identified by the project needed interregional knowledge and networking pipelines to strengthen their competitiveness in bioeconomy.

The project RDI2Club aimed to support smart, sustainable and inclusive growth of the bioeconomy in rural areas of the Baltic Sea region. It intended to help innovation actors apply EU smart specialisation approaches to their specific field and region, and create bio-business hubs to improve innovation management.

Final Project Conclusions

RDI2CluB

EE	FI	LV	NO	PL
				

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

The project is based on the Baltic Sea region's reputation as a region combining amble natural resources with technological and environmental knowledge. RDI2CluB – and its extension project Connected by BioBord – established a network of bioeconomy regions and actors around the Baltic Sea. This includes Central Finland, Inland Region (Norway), Vidzeme (Latvia), Świętokrzyskie (Poland) and Estonia. Expertise in bio-based business was connected with smart specialisation strategies that prioritise knowledge-based, sustainable bioeconomy to drive rural development.

For a better understanding of the current situation, the project mapped five regions in Estonia, Finland, Latvia, Norway and Poland to develop their bioeconomy profiles and benchmarks for bioeconomy development. Based on that, the project partners elaborated on the action plans for each region presenting the biggest potential and promising interfaces for bioeconomy products, related services and knowledge-based jobs. The collected data from mapping and action plans fed into the prototype of a web tool called the Biobord platform, the testing of which started in April 2019 and involved small and medium sized enterprises (SMEs) from all the regions. The Biobord platform is aimed for networking and supporting tools for innovating that connects bioeconomy developers.

The regions shared an aspiration to strengthen their regional innovation processes with stronger international cooperation. So-called Joint Action Plans were drawn to identify common interests in bioeconomy development and to steer cross-regional cooperation. The project established BioBord platform with a joint operating model for innovation cooperation. The platform would enable the regions to tap into a wider pool of talent and expertise. It also offered access to innovation support and networks across those bioeconomy regions.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Joint Action Plans and Regional Bioeconomy Profiles

Regional Bioeconomy Profiles is a collection of bioeconomy related statistical data of a regional area, enabling a comprehensive picture of a regions bioeconomy performance. It includes ideas on the possible development areas in bioeconomy. It is an important base for implementing S3-strategies

on a practical level. So-called Joint Action Plans combine transnational actions based on the regional bioeconomy profiles. The Plans were developed in cooperation with regional authorities, business and academy. In several regions, the planning engaged authorities working with national smart specialisation strategies in the bioeconomy. The Joint Action Plans describe the short, medium and long-term actions that the partner regions are planning to implement in transnational cooperation.

https://biobord.eu/about/

Biobord Platform

This is a digital platform for networking and supporting tools for innovating that connects bioeconomy developers around the Baltic Sea region. The Platform was tested during two piloting phases, of which the first piloting round represented a working prototype, that was later upgraded. The second piloting focused more on the user experience of the platform and gaining new users. The Biobord platform and its operation model are been developed in an iterative, user-oriented service design process. In connection to the platform, the operational model guides on the joint idea generation, sharing and assessment as well as innovation support.

https://biobord.eu

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

Former RDI2CluB partners are the members of the Biobord Network and the Biobord Board. The Biobord Network is planning to facilitate and secure Biobord's future and core idea, it will also keep the platform active and use it in their daily work. They will produce content and invite new users. The network agreement has been signed until the end of 2025. Additionally, project outputs will be further developed in an extension stage project ConnectedByBiobord from October 2020 to June 2021.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

Questions from the MA/JS were always addressed in a timely manner and with professionalism. This also holds true in the context of Covid 19. Over the implementation, the partnership had special strengths on reaching to educational and strategic actors, but could not involve business actors beyond its partnership as much as initially planned.

Final Project Conclusions

«Acronym»

Project title	Project duration
Improving smart specialisation implementation of the Baltic Sea Region through orchestrating innovation hubs	October 2017 - September 2020

Priority	Specific objective
Capacity for innovation	Smart specialisation

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.40 million	1,85 million	x	PA Innovation

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/smart-up-bsr-151.html	https://smartup-bsr.eu/

Lead partner (country)	Countries involved
Aalto University Foundation sr (Finland)	FI, DK, EE, DE, LV, LT, PL, RU

Project summary

Teaser

The Interreg project Smart-up BSR helped regions in eight countries across the Baltic Sea to implement smart specialisation strategies and develop their strengths in healthy ageing, climate change, circular economy and smart city.

The challenge

Smart specialisation is an innovative approach bringing local authorities, academia, business spheres and the civil society to enhance regional innovation. It enables regions across Europe to identify and develop their own strengths to boost growth and prosperity.

The experience has proved that by applying the smart specialisation approach, innovation and development policies in the Baltic Sea region have contributed to high performance and prosperity on varying grounds, either through science, knowledge and economy, or digitalisation, logistics and harbour developments.

However, inter-regional collaboration, economic transformation and implementing Sustainable Development Goals (SDGs), are not yet a norm in the Baltic Sea region. Many regions lack methods or institutional frameworks to implement smart specialisation successfully.

The Smart-Up BSR project studied how regions work to align their ecosystems with smart specialisation initiatives to ensure the growth of their businesses and the wellbeing of their citizens. It fostered bottom-up regional innovation through peer-to-peer learning and entrepreneurial discovery process in a series of innovation camps.

Final Project Conclusions

«Acronym»

DE	DK	EE	FI	LT	LV	PL	RU
							

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Engagement for a shared vision

Smart-Up BSR addressed the challenge of making regional research and innovation strategies (RIS3) relevant and effective to a diverse set of stakeholders. It did so by pooling the dispersed knowledge and capabilities together by engaging regional actors, universities, non-governmental organisations (NGOs), politicians, and businesses to create a shared vision of regional development and smart specialisation strategies across the Baltic Sea. Collective vision and strategy development help to create and maintain stakeholder commitment and a sense of ownership.

Innovation camps: networking for a brighter future

Smart-Up BSR organised ten innovation camps to facilitate the interaction between business, academia, civil service organisations, and other NGOs. The camps took place both virtually and onsite in Aarhus (Denmark), Palanga-Klaipeda (Lithuania), Tallinn (Estonia), Brandenburg (Germany), Helsinki-Espoo-Kotka (Finland), Gdansk-Gdynia-Sopot (Poland) and Riga (Latvia).

The concept was specifically designed to increase innovativeness and be a major learning instrument. The camps generated bottom-up and needs-driven innovation, providing an opportunity for co-creation, experimenting, and building trans-regional networks for more effective RIS3 implementation in the Baltic Sea region.

Cooperating across borders on smart solutions

During the innovation camps, participants addressed challenges for promoting regional smart specialisation put forward by cities, regions, universities, NGOs, and businesses across the Baltic Sea. Additionally, experts from the Committee of the Regions and EU Joint Research Centre advised participants on how to advance innovative solutions to those challenges.

The involved organisations developed and prototyped different pilots for each of the chosen thematic content areas: active healthy ageing, smart cities, climate change, and circular economy. Thanks to the better conditions to cooperate in innovation and entrepreneurship activities, regions across the Baltic Sea have enhanced their capacity to practice smart specialisation approaches.

For instance, the Aarhus pilot centred around establishing a regional GovTech Center for municipalities. This trans-regional initiative helped municipalities explore, test, and implement emerging technologies.

Another successful example is the pilot in Latvia. In this case, the University of Latvia initiated cooperation with the Riga City Council on the theme of a smart city. The partners developed the "Green University" concept for the horizontal environment and sustainability-related projects aiming at climate neutrality.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Click here to enter title.

Book on smart specialisation strategy implementation in the region

The book on "Sustainable Baltic Sea Region. Towards Economic Transformation by Smart Specialisation Strategies" provides an overview of how partners of the Smart-Up BSR project understood and contributed to the Smart Specialisation strategy creation and revision in their region preparing the path towards economic transformation. It outlines the processes of Smart Specialisation strategy creation and how the prioritisation of regional spearheads was achieved in the Baltic Sea region examples.

https://drive.google.com/file/d/1FSo3_F1-4DEG7QRS4YMEh5_5momeqo7-/view

Click here to enter title.

Quick Guide for Organising Innovation Camps

The quick guide targets regional decision-makers, especially those novel to the innovation camp methodology. It contains easily-to-implement instructions for innovation camps and explains why camps are effective innovation instruments for addressing both local and transregional issues, and how they can be beneficial in a variety of situations.

https://smartup-bsr.eu/wp-content/uploads/2020/06/Quick-Guide-for-Organising-Innovation-Camps_15-april.pdf

Click here to enter title.

Leaflet about the Cities as Innovation Platforms

This leaflet presents a collection of guiding concepts and frameworks to help cities reflect on how they can act as an enabler for innovation. These frameworks and concepts enable a city to reflect on possible pathways to building innovative skill sets, attitudes, strategies, policies, and initiatives. It contains examples from cities in Denmark, Estonia, Finland, Lithuania, Latvia, Poland and Russia that demonstrated some of the skills and practices described in the frameworks.

https://smartup-bsr.eu/wp-content/uploads/2020/05/CityConceptFramework-v6.pdf

Final Project Conclusions

«Acronym»

Click here to enter title.

Guidebook on Regional Pilots

The guidebook gathers and analyses thematic pilot reports conducted in Germany, Denmark, Estonia, Finland, Lithuania, Latvia, Poland, and Russia. It includes a selected group of activities around the concept of thematic piloting (active healthy aging, smart city, climate change, circular economy) as a method to increase innovativeness at the inter-regional level. The presented results function as a guide for other regions both in the Baltic Sea macro-region and elsewhere in Europe.

https://smartup-bsr.eu/wp-content/uploads/2020/12/O5.5_Regional-Pilots-Guidebook-v2.pdf

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The project has resulted in the creation of a new platform project, BSR S3 Ecosystem.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

Select a few administrative elements that are crucial to the project's successful implementation (such as reserved partners included, state aid matters, challenges in the partnership, financial issues). Include synergies with other projects that are relevant for the Programme's internal self-evaluation. Provide geo-references where possible (town, regions, country). Formulate in past tense. Avoid abbreviations. Write three to five bullet points 500-1000 characters).

Final Project Conclusions

BaltCityPrevention

Project title	Project duration
Baltic Cities tackle lifestyle related diseases – The development of an innovative model for prevention interventions targeting public health authorities in the Baltic Sea Region	October 2017 - September 2020

Priority	Specific objective
Capacity for innovation	Non-technological innovation

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.70 million	2.3 million	x	PA Health

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/baltcityprevention-100.html	https://baltcityprevention.eu/

Lead partner (country)	Countries involved
Flensburg University of Apllied Sciences (Germany)	DE, FI, LV, EE, DK, LT, PL

Project summary

Teaser

The Interreg project BaltCityPrevention helped public health authorities in the cities around the Baltic Sea to better promote healthy lifestyle, introduce eHealth technologies and strengthen cooperation between public health authorities and business.

The challenge

Strokes, obesity, and heart and lung diseases are among the health challenges in Europe. This implies a need in a new service development approach in the public health sector. Current prevention measures are often ineffective, since the methods are not tailored to the users. To improve the tailoring of interventions to the specific needs of the user group, there was a need in developing the prevention measures together with the users. A customized approach required an assessment of the end-users´ needs and better understanding of the drivers of the behavioural change. New technologies were needed in the planning, implementation and evaluation procedures.

Besides, an improved cooperation between public health authorities and small and medium-sized enterprises would facilitate generation of new ideas and introduction of new digital technologies. However, the collaboration among the mentioned actors is undeveloped as there are fundamental differences in e.g. customer approach and working modes.

The project intended to help public health authorities, e.g. health care and social departments´

Final Project Conclusions

BaltCityPrevention

The project intended to help public health authorities, e.g. health care and social departments´ representatives in municipalities to better promote healthy lifestyle by developing and testing a model that public health authorities can apply in prevention intervention planning. The project aimed at development of a new appoach by applying participatory methods in the planning, introduction of digital technologies in the planning and implementation, and improved cooperation between public health authorities and business.

DE	DK	EE	FI	LT	LV	PL
						

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Pilots showcase concrete solutions

The project developed an intervention model and toolboxes that help health professionals to better plan, implement and evaluate health promotion interventions. The model combines methods such as focus groups, motivational interviewing, eHealth applications, chatbots, and health games. The public health authorities, e.g. health professionals, school nursers, teachers, applied the new model at the pilot sites. Through the project's pilots, the involved public health authorities improved the planning of various health interventions by identifying the needs of the users (mainly children and adolescents). The use of innovative etools helped the project to reach children and adolescents and thus improve their health behaviour. For example, the Seinäjoki Social and Primary Health Care Center (Project Partner) tested a digital solution called "FUME" and developed an app ("EiNi") supporting adolescents to adopt a nicotine-free lifestyle. The pilot took place in cooperation with the enterprise "VALAKIA Interactive". Together, the health care centre and the enterprise used methods, such as focus groups or motivational interviews. The young people involved in the pilot provided their feedback during the whole process.

Improved cooperation with business

Thanks to BaltCityPrevention, public health authorities (usually responsible for initiating and implementing health promotion programs in cities or municipalities) can now better cooperate with small and medium-sized enterprises (SMEs) in the sectors of health promotion and digitalisation. The project organised hackathons to bring children and young people together with public health

authorities and SMEs, and jointly develop ideas for an eHealth solution improving children's and young people's health behaviour. The project enhanced physical activity among adolescents by creating a new eHealth app collaborating with an SME.

The Interreg project BaltCityPrevention used EUR 2.3 million to upscale health promotion, primarily among the young end-users, integrated e-Health technologies, and supported the end-users in the prevention interventions.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

The EiNi app

The EiNi app is a Finnish app to support adolescents to establish a nicotine-free lifestyle. It helps them in reducing or quitting products such as tobacco or snus. The app includes different small tasks to distract, activate or calm down the user so that the urge to smoke or take snus would pass. These small tasks are physical activities, breathing exercises, writing exercises, and a game. It also informs on the financial consequences of smoking. The app can be found on Google Play.

https://play.google.com/store/apps/details?id=fi.gambitlabs.eini&hl=en&gl=US

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

N/A

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

In October 2018, PP4 (South Ostrobothnia Health Technology Development Centre) was legally succeeded by PP5 (Seinäjoki University of Applied Sciences).

In April 2019, Baltic Region Healthy Cities Association (former PP3) was legally succeeded by City of Turku (PP16).

In October 2019 Scanbalt fmba (former PP11) was replaced by PP17 ScanBalt MTU (PP 17).

Final Project Conclusions

Baltic Game Industry

Project title	Project duration
Baltic Game Industry - Empowering a Booster for Regional Development	October 2017 - March 2021

Priority	Specific objective
Capacity for innovation	Non-technological innovation

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.50 million	3.40 million	x	PA Culture

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/baltic-game-industry-130.html	http://baltic-games.eu/171/

Lead partner (country)	Countries involved
BGZ Berlin International Cooperation Agency GmbH (Germany)	DE, FI, EE, DK, LV, SE, LT, PL

Project summary

Teaser

The Interreg project Baltic Game Industry aligned business support with concrete needs of game start-ups and succeeded in turning the Baltic Sea region into a highly recognised game hotspot.

The challenge

Need for a streamlined approach

Games are the most dynamic creative industry worldwide but business support is often unspecific. One of the challenges this sector faces is that innovation intermediaries have only limited knowledge about this creative sector and how game start-ups should be supported. Innovation intermediaries usually treat them as ICT or as media, which on one hand limits the attractiveness of the supporting programmes for the game start-ups, and on the other hand, limits the effectiveness of the support.

The game industry needs a well-balanced ecosystem, a growing market, and an accommodating environment to thrive. On one side, there are the mature industries of the Nordics with their deep insights into the mechanisms of the industry. On the other side, emerging industries from the Baltics come with brand new products, followed by Germany, Denmark, and Poland whose industries have their own characteristics.

The project aimed at a better understanding of concrete needs, existing bottlenecks that hinder gaming business prosper, and the development of tools and strategies that would tackle the identified obstacles.

Final Project Conclusions

Baltic Game Industry

DE	DK	EE	FI	LT	LV	PL	SE
							

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Enhanced and streamlined promotion of the game industry

The project updated strategies, regulations, and schemes to upgrade framework conditions for the business development of the game industry. The introduced changes are aimed at the enhanced promotion of the game industry that public authorities could use as a reference for supporting their initiatives and designing future policies. The project undertook promotional activities for the Baltic Sea region as one brand, showcasing the whole ecosystem of the Baltic Sea region game industry as a single entity. As regards industry representatives as other types of users, they got a better understanding of the processes that might constrain actions from public authorities.

Improved conditions to run businesses and attract talents

The studies on game incubation and seven newly established incubation programmes on the top of seven existing game incubators in the Baltic Sea region allowed to create favourable conditions for talents.

In addition, the project developed an online roadmap guiding prospective incubation operators to run a dedicated game incubator. The roadmap provided knowledge and offered guidance on relevant information depending on settings, interest levels, background, available financial and human resources. Thus, the project equipped the partners and their networks with the needed guidance tech/IT incubation experts who want to expand to game incubation and experts supporting start-ups with a game incubation environment.

Take-aways from cross-sectoral collaborations

Additionally, as cross-sectoral collaboration with game studios is on the upswing, the project published studies on the state of play of virtual reality (VR) and best practice catalogue. It was produced for the use of researchers, game developers, designers and other domain experts. Next, the project documented a use case for therapeutic and clinical involvement of VR to provide a deeper understanding of a cross-sectoral business case.

Final Project Conclusions

Baltic Game Industry

The project used EUR 3.4 million to map the state of play in the game industry, build a better understanding of the main players and equip them with the needed knowledge to ensure gaming business prosperity in the Baltic Sea region.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Updated strategic framework

This report documents strategies, regulations, and schemes introduced or supported by public authorities in the Baltic Sea region to shape more efficient and congruent framework conditions for business development of the game industry. The outlined change processes form the basis for continued enhancement measures for the business development of the game industry. The described change processes may also serve as examples for other regions seeking to improve the promotion of their own regional game industry. Public authorities will use it as a reference for supporting their initiatives, for designing future policies or strategies, while industry representatives will use it, among others, to get a deeper understanding of the processes that might constrain actions from the public authority side.

http://baltic-games.eu/files/bgi_output_2-4.pdf

Interactive map of the digital game industries

The interactive map illustrates the state of the art across the Baltic Sea region, comprising a SWOT analysis of the current framework in each region/country, good practices, and key policy stakeholders as well as incubation capacities. Each participating country managed to engage in a so-called innovation dialogue among representatives of gaming industry and public authorities. The exchange resulted in conclusions on joint action for harmonising framework across the Baltic Sea region, as well as in specific action plans to strengthen gaming industry in each area.

http://profile.baltic-games.eu/A108

Game incubation roadmap

The implementation roadmap for game incubation is an online tool illustrating solutions for effective game incubation to turn the Baltic Sea region into a game hotspot with a high recognition value and a bundle of competitive game companies. The project identified two main target groups: tech or IT incubation experts who want to expand to game incubation, or game experts (mostly veteran game entrepreneurs) wanting to support start-ups with a game incubation environment. There are usually three types of environments: a spin-off within the university framework, a new element of a tech park, or a stand-alone version (mostly part of a dedicated co-working space). The aim of the roadmap is to offer not only advice and knowledge but also guidance towards relevant

information depending on "setting", interest levels, background, available financial and human resources.

https://balticseagames.eu/

VR Best Practice Catalogue

is aimed at researchers, game developers, designers and other domain experts. It explains the special challenges that arise when game developers and other domain experts collaborate. The catalogue explains how good cooperation and communication can be ensured across expertise and business culture boundaries. The document provides a description of the work experience with the health sector in the framework of the project, as well as insights and experience gained. The catalogue not only covers the necessary technological and design considerations but also shows the importance of clear communication between the different professions to ensure the best results.

https://baltic-games.eu/files/bgi_output_4.6.pdf

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

An indicative list of follow up activities:

- BSGI project – "Baltic Sea Game Incubation – Piloting Network Activities to Foster Game Incubation in the BSR" is the extension stage project of Baltic Game Industry. This follow-up project will use the already developed and tested results of the regular project to enhance business support of game incubators. This aim would be achieved through strategic transnational collaboration with other game incubators in the BSR.

- Denmark: The game cluster in Grenaa and the cooperation with the Aalborg and Aarhus clusters are spin-offs of the project.

Finland: The International Talents Accelerating Growth project to attract talents to Helsinki and helping talents to integrate in Helsinki area continues until summer 2021. Helsinki Games Capital is also a spin-off. On the incubation side, LGIN is a follow-up of the pilot introduced by Metropolia as a mentoring network for game start-ups.

EE: The Gaming and film industry incubation programme, a joint venture by the Tartu SP and the Centre for Creative Industries is a spin-off. The project Baltic Explorers – Exploring New Markets for Central Baltic Games Industry, has been inspired by BGI.

Latvia: A cluster between VDC, VHTP, Ventspils University of Applied Sciences and LGDA has been formed that will follow up on the improvement and change measures for the game industry.

Final Project Conclusions

Baltic Game Industry

Lithuania: The roadmap for the Lithuanian game industry for 2020-2030 is a spin-off that has become a strategic document for the Ministry of Economy and Innovation, the Ministry of Education, Science and Sport, and the Ministry of Culture, enabling them to see a broader picture of what measures and actions need to be taken and coordinated in the next 10 years.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

- The project took advantage of the offered prolongation of project implementation due to the covid-19 pandemic and finalised its activities 6 months later, in March 2021.

Final Project Conclusions

Baltic Sea Food

Project title	Project duration
B2B distribution model supporting local food sector in Baltic Sea region rural areas	October 2017 - September 2020

Priority	Specific objective
Capacity for innovation	Non-technological innovation

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.43 million	2.36 million		

Link to the project library	Link to the project's website
https://interreg-baltic.eu/project/baltic-sea-food/	https://www.balticseaculinary.com/baltic-sea-food-project

Lead partner (country)	Countries involved
Ministry of Rural Affairs of the Republic of Estonia (Estonia)	EE, LV, DE, SE, DK, NO, RU, FI, LT, PL

Project summary

Teaser

The Interreg project Baltic Sea Food developed a new business model for business-to-business (B2B) distribution in the local food sector and helped small and medium-sized enterprises in rural areas to improve business performance.

The challenge

Small local food producers, farmers and service providers in rural areas of the Baltic Sea region are challenged by selling their products to big wholesale companies or supermarket chains. They have limited production volumes and higher prices compared with large producers. There is a need in reviewing and optimising food value chains by strengthening the farmers´ position. A short supply chain can be a solution when it is applied locally through food networks engaging small food producers, farmers, food processors, grocery stores, restaurants, cafes, tourism farms and other actors.

Besides, the market area of local food producers is usually their own home region, while established local food networks cooperate for marketing. The local food networks only have limited B2B distribution systems which hinders local food producers increase their profitability and develop as prosperous businesses. As local food networks are usually founded by family-owned micro-businesses, it is not feasible to take care of the creation of new sustainable B2B distribution solutions. The local farmers and food producers tend to sell their products to end consumers. At the same time, it is more convenient for catering businesses to buy food products from one distribution company instead of having contact with several farmers and producers.

The Interreg Baltic Sea Food project aimed to develop a sustainable business model enabling optimised short B2B distribution chains in the local food sector.

Final Project Conclusions

Baltic Sea Food

DE	DK	EE	FI	LT	LV	NO	PL	RU	SE
									

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Baltic Sea Food combines transnational strengths, experiences and ideas

Baltic Sea Food brought together 15 partners from 10 countries across the Baltic Sea region to set up a business model for local food distribution. The partners jointly developed suggestions for improvements based on the initial mapping analysis of the current situation. Local food producers got connected with business consumers from gastronomy and retail. A local speciality and the country-specific challenges were taken into consideration and incorporated into a new model for business-for-business (B2B) distribution of local food. The aim was to design a sustainable and transferable business model for B2B distribution applicable for local food nets established by local food producers and providers in rural areas. The model intends to establish shorter supply chains on local and regional level offering opportunities for growth and improved business performance.

New sales channels optimised

Additionally, the partners reviewed and developed new sales channels through small-scale local-food networks, based on cooperation and increasing value of local products in a shorter supply chain. Beyond digital channels, more traditional channels like personal calls or meetings are still a must. Other learnings included strengths of common regional brands in the products, also improving efficiency of marketing by food networks.

Dissemination efforts matter

The project has managed to reach out to an impressive number of stakeholders by using media, radio, press releases and events. Nearly 4,000 SMEs, about 330 food networks and more than 2,000 other interested received the information. Most notably, more than 800 SMEs such as local food producers and farmers, restaurants, farm shops, tourism farms etc. benefitted from capacity building events.

Final Project Conclusions

Baltic Sea Food

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

E-platforms for food distribution

The project analysed and tested local, regional or national e-platforms for food distribution in the Baltic sea region. As a starting point, an advanced e-platform was identified in Sweden and promoted further in the local networks through events as well as through public media or other channels. Based on the Swedish case and other examples of providing services to local food networks or producers (B2C or B2B), the partners from Estonia, Latvia, Lithuania, Sweden, Germany, Russia (Pskov oblast), Denmark and Norway started developing the ways to improve e-platform services to food networks/distributors for ordering, communication, accounting or diversification of offers etc. Regions like Mecklenburgische Schweiz in Germany, Hardangersmak in Norway or Pskov oblast in Russia especially succeeded in developments. The pilots focused on respective development in for example easy ordering or invoicing which enabled other food networks or individual producers to use such platforms.

https://www.balticseaculinary.com/news

Development of a regional business model

The project developed a series of regional business models which were piloted in different regions. The partners analysed the results of the piloting suggesting further updates to the initial plans based on evaluating the piloting of the model in pilot regions. Practical suggestions based on local actors' real-life experience helped to drive development. Among the main changes is the new target customer group "Business gifts and food souvenirs" as an attractive customer group in several pilot regions. New marketing and sales channel "Contact events and fairs" was identified and described, as many pilot regions highlighted its importance. As regards the sales channels, the partners concluded that digital channels cannot replace traditional channels like personal calls or meetings. Other learning included that in case the region is well-known for local products, then it is useful to use the common regional brand in the products, which enables to make more efficient marketing by the food network.

https://www.balticseaculinary.com/business-model-for-local-food-b2b-distribution-is-updated

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The Baltic Sea Food project was selected by EUBSR PA Tourism as a platform for developing new Baltic Sea Food Flagship in connection to the implementation of the EU strategy "From Farm to Fork". Additionally, almost all partners continue the cooperation in the framework of the new seed-

money project "BERT- Enhanced Rural Tourism Through Farm to Fork", which is financed by the Swedish Institute for 2021-2023. Through BERT, partners from 13 countries (10 countries of the Baltic Sea region plus Moldova, Ukraine and Belarus) aim to reach out widely to stakeholders and other partners on a national level. The aim is to initiate other project start-ups within topics around local food production and rural tourism.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

Even if there were issues and challenges to clarify, cooperation with the lead partner and its external consultant went smoothly. The challenging situation around Covid-19 and respective adaptation of project activities were handled successfully.

Final Project Conclusions

BIC

Project title	Project duration
Biomarker Commercialization	October 2017 - September 2020

Priority	Specific objective
Capacity for innovation	Non-technological innovation

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.55 million	2.29 million	x	PA Innovation

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/bic-106.html	https://biomarker.nu

Lead partner (country)	Countries involved
Ideklinikken, Aalborg University Hospital, The North Denmark Region (Denmark)	DK, EE, FI, DE, LT, PL

Project summary

Teaser

The Interreg project BIC made the commercialization of biomarkers more manageable with respect to regulatory, clinical and business aspects, and paved the way for increased market uptake of biomarkers used in diagnostics and treatment.

The challenge

Biomarkers, or markers providing information on the health status of a person, measure cellular, biochemical or molecular changes in human tissues as well as cells or fluids. They contribute to future diagnostics and treatment. The development of biomarkers is time consuming and expensive, requiring the involvement of industry from early stages to better direct the research.

Researchers lacked the knowledge on complex commercialization processes and small and medium sized enterprises (SMEs) had poor understanding on regulatory frameworks.

The BIC platform intended to facilitate knowledge and best practice exchange among business and research representatives, offering tools that support the commercialization process and maturity assessment.

DE	DK	EE	FI	LT	PL
					

EUROPEAN REGIONAL DEVELOPMENT FUND
EUROPEAN UNION

Final Project Conclusions

BIC

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Valuable tools developed

The BIC project developed the tools to help researchers, SMEs, and technology transfer officers (TTOs) to cope with complex regulations related to the commercialization processes of biomarkers. Additionally, the tools allow the users to better understand clinical and business aspects. They guide researchers and product developers, step by step, through the technology readiness levels (TRL) and remind them of what they need to think about, within each phase of the process. The partners created the "Master Tool" which allows users to access all tools online in one single portfolio and thus simplify the tools´ searchability.

Improved conditions for cooperation

BIC considerably facilitated the collaboration between the research and business sectors as well as simplified the communication with technology transfer officers by standardising the biomarker development processes. The project equipped researchers with knowledge on commercialization while SMEs received assistance to better consider regulatory frameworks. These target groups, which were well involved throughout the project, can now use a common framework and work better together.

The Interreg project BIC used EUR 2.29 million to evaluate biomarkers´ commercialisation processes, simplify its manageability. The project laid grounds for faster and easier biomarker commercialisation that is further upgraded within the project extension phase. This shall speed up the market uptake and improve diagnostics and treatment of citizens across the Baltic Sea region.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Master tool

The "Master Tool" is a functional online solution. It guides researchers and product developers, step by step, through the technology readiness levels and reminds them of what to consider within each phase of the biomarker commercialization. It has been refined through piloting activities and following the feedback of the Project Advisory Board.

https://biomarker.nu/bic-guide

Final Project Conclusions

BIC

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The project BIC outputs will be further refined, and developed in a collaboration software solution in the "BIC Bridge" extension project.

Thanks to the pilots within BIC, the extension stage project BIC Bridge was able to integrate 2 SME partners (DIANOX and LabMaster). The collaboration grew even more, with the inclusion of EATRIS (European infrastructure for transnational medicine).

The cooperation will continue, within the extension stage and beyond, which will result in faster, easier biomarker commercialization, and therefore in increased market uptake. Due to the long duration of Biomarker development, effects will not be visible right away, but the partnership will monitor the use of the Master Tool to see its effect on the commercialization of biomarkers.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

Initially, multiple tools were planned (Outputs 3.1, 3.2, 3.3, 3.4), but following the feedback of the Project Advisory Board, the partnership decided to develop one solution that would bring most of them into one single tool (the "Master Tool"). This change was accepted by the MA/JS, as it better fits the needs of the target groups.

Final Project Conclusions

Circular PP

Project title	Project duration
Using innovation procurement and capacity building to promote Circular Economy	October 2017 - September 2020

Priority	Specific objective
Capacity for innovation	Non-technological innovation

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.45 million	2.37 million		

Link to the project library	Link to the project's website
https://interreg-baltic.eu/project/circular-pp/	http://circularpp.eu/

Lead partner (country)	Countries involved
City of Aalborg (AAL) (Denmark)	DK, SE, RU, LV, PL, NL, FI

Project summary

Teaser

The Interreg project Circular PP promoted a circular procurement approach engaging public authorities, procurers, suppliers, policymakers and stimulated the development of new business models.

The challenge

Linear vs circular economy approaches

Compared to the linear economy that follows a 'take-make-dispose' pattern, a circular economy aims to keep products and materials in the value chain for a more extended period and to recover raw materials after the lifetime of the products for their next use. The principles of the circular economy model have increased maintenance, repair, reuse, refurbishment and recycling. One of the key observations from the growing European work on circular economy is the gap between opportunities identified at the transnational and national levels and common practice in public institutions.

Public procurement in the spotlight

In terms of public procurement with the circular economy approach, one should consider the way of acquiring goods and solutions tackling the whole lifecycle of products throughout the entire supply chain. In general, public authorities usually procure products and services in a linear way, following a buy-use-dispose model. However, a growing interest in a new circular approach that contributes to 'closing the loop' of product lifecycles is a fact.

Circular PP aimed to improve the current knowledge on what is needed to encourage a higher uptake of circular procurement among public institutions.

Final Project Conclusions

Circular PP

DK	FI	LV	PL	RU	SE	NL
						

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Mapping helped to develop a baseline

For setting up a baseline of circular procurement for the Baltic Sea region, the project mapped 57 calls for tender from seven countries. The partners developed country-specific action and implementation plans for each pilot area, followed by events for raising awareness of circular procurement among procurers.

Piloting experiences build a legacy

Applied to pilots, public authorities in Aalborg (Denmark), Malmö (Sweden), Smiltene and Pļaviņas (Latvia) piloted innovative approaches to buying circular goods and services. Sharing the knowledge created during pilot activities would ensure a legacy for circular procurement in those model regions as well as for other partners. The experience of the pilots and other exchanges resulted in a series of recommendations for promoting circular procurement at the local, national and European levels. The project delivered e.g. recommendations for public and private organisations on becoming more circular, e.g. through structuring the connected processes or focusing the respective communication. The close collaboration helped to share best practices of circular procurement and provide training to procurers and suppliers across different levels. All material including e.g. videos, infographics on circular public procurement, market engagement, the resource loop, circularity strategies, and circular tenders criteria was presented at 75 events, reaching over 6,000 people.

Baltic Circular Procurement Congress

The project organised the Baltic Circular Procurement Congress attracting more than 300 procurement experts, suppliers, researchers and key opinion leaders from all over Europe to share experiences and best practices of using procurement as an effective tool for the transition towards the circular economy. Purchasers within governmental entities and companies discovered the advantages of circular procurement and explored tools that can facilitate and optimise its implementation. The societal challenge of resource efficiency and search for innovative solutions from a multidimensional perspective was discussed by public authorities, research institutions, SMEs and non-profit organisations.

Final Project Conclusions

Circular PP

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Lessons learned from pilot procurements

The report focuses on providing tips to those planning to work on circular procurement in their own municipality or organisation, with a focus on practical elements. The reader can follow how procurement processes were done during the pilots and what was learned from this. Headed by an experienced forerunner, City of Malmö, all partners as well as mentors contributed to the content of the report. Based on the pilots, procuring partners share practical insights and hands-on tips. Next to general experiences, it highlights success factors like simplifications of procedures, clear communication of priorities or sub-division of procurements.

http://circularpp.eu/wp-content/uploads/2020/12/Lessons-learnt-from-the-procurement-pilots-in-the-Circular-PP.pdf

Recommendations and other supporting material for the policy framework

Beyond rather practical aspects, the project considered support to and influence on the policy framework in the Baltic Sea region, looking into the circular procurement support factors. The project developed easy-to-read brochures for the decision-makers and policy level, highlighting the best practice and recommendations. Besides, the elements like an overview on Circular Procurement in 8 steps, training kit, material for market dialogue and the case studies were developed. Additionally, the project produced an animated video on circular public procurement with an overview of the related processes. Beyond that, infographics on circular public procurement, market engagement, the resource loop, circularity strategies, and circular tenders criteria are available.

http://circularpp.eu/results/results-from-the-circular-pp-project/

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The cities involved in the project plan to continue to collaborate internationally with other governments committed to supporting the transition to a circular economy. The collaboration will be via the Procura+ Interest Group on Circular Procurement within ICLEI (Local Governments for Sustainability), which brings together over 25 public sector buyers from 12 countries.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

Final Project Conclusions

Circular PP

Starting extremely well, the project was only slightly shaken by staff changes during implementation. After a very promising start by the initial project management and some of the partners, the implementation went well. Also, challenges, e.g. with pilots in Latvia or due to Covid were solved. Overall, also based on the strong potential of the topic, the highly skilled partnership and implementation were rather exceptional.

Final Project Conclusions

DIGINNO

Project title	Project duration
Digital Innovation Network	October 2017 - September 2020

Priority	Specific objective
Capacity for innovation	Non-technological innovation

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.51 million	3.26 million	x	PA Innovation

Link to the project library	Link to the project's website
https://interreg-baltic.eu/project/diginno/	https://www.diginnobsr.eu/

Lead partner (country)	Countries involved
Ministry of Economic Affairs And Communications of Estonia	EE, FI, PL, LV, LT, SE, DK, NO, RU

Project summary

Teaser

Through faster and more efficient uptake of digital solutions in public and private sectors, the project DIGINNO helped to accelerate the Baltic Sea region's transition to a single digital market.

The challenge

As the digital economy and a digital single market are seen as drivers of innovation, competitiveness and growth, there is a need to accelerate the integration of ICT solutions. Even if the countries across the Baltic Sea region are frontrunners in many aspects of digital economy, more needs to be done in terms of enhancing and balancing digital economy development in the region.

To address the challenge, the project DIGINNO focused on facilitating digital single market related to policy discussions. The aim was to develop a strong cross-sectoral industry digitalisation community and engage associations, universities, public authorities and sectors to better understand each-others challenges and find common solutions. The project hads chosen a government-to-business approach and focused on how governments and their policy approach can support more digitalisation.

The project aimed to increase the capacity of policymakers, industry associations and industrial SMEs to enable faster and more efficient uptake of digital solutions both in public and private sector. The point of departure was that the challenges can be tackled through strengthening the macro-regional knowledge base, exchange of experience and peer-to-peer learning, designing and piloting transnational digital solutions and conducting policy and regulatory dialogue.

Final Project Conclusions

DIGINNO

DK	EE	FI	LT	LV	NO	PL	RU	SE
								

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Mapping the status on digitalisation potential in the region

The project DIGINNO focused on common challenges in the Baltic Sea region in the context of digitalisation, such as uptake of ICT in the business sector, the innovation of public services and cooperation of digital policies on the macro-regional level. The partners analysed digital potential and mapped sector activities for industry digitalisation. The project partners from 10 countries and additional external stakeholders established an informal digital policy network. The project addressed policy aspects as an integrated part of developing concrete tools, e.g. how policies may turn into challenges for the target groups but also enable new solutions across borders. The analysis covered the need for concrete policy solutions to enable well-functioning digital transformation for SMEs and smooth cross-border transactions. Such support included for example further development regarding data interchange, know-your-customer-approach and e-receipts.

Aligning digital approaches

The toolkit starts from digitalisation examples. It refers to challenges, country-specific information and a self-assessment tool to evaluate the level of digitalisation and to support identifying gaps. Beyond developing tools, the cooperation in working groups, seminars or other means of exchange has contributed to an increased institutional capacity of partners and external stakeholders on industry and government levels. A more harmonised digital policy mindset and increased awareness of the potential of aligning digital approaches across the Baltic Sea region have grown. The collaboration process itself has shaped the network as a source for developing ideas and engaging partners for future joint initiatives.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Digitalisation toolkits

The toolkits focus on the digital transformation of SMEs. With the help of the online toolkit, SMEs can evaluate their level of adopting digital technology and where they need to improve. Additionally, the toolkit provides guidance to SMEs on what they need to consider when they decide to digitise

operational processes. The digitalisation toolkit improved SME innovation capacity in the context of industry 4.0 readiness.

https://www.diginnotool.eu/

Cross-border e-services

As a part of developing four cross-border e-services, the project issued feasibility studies and roadmaps. Cross-border e-government services, namely eCMR, cross-border Know-Your-Customer utility, cross-border Business registration and cross-border e-receipt services were in the spotlight. The feasibility studies and the roadmaps were developed in consultation with the relevant public services involved in the delivery of such services. For example, for eCMR , KYC and e-receipt, the relevant public agencies were part of the working groups working on these initiatives in the Baltic states. For e-government business registration, the consulted public agencies were business registrars in the Nordic countries and Norway.

https://www.diginnobsr.eu/wp-3-2-outcomes

Overview of policy-related ideas and recommendations

The project elaborated policy inputs and summarised them in a so-called “Policy White Paper”. It compiles policy-related ideas and recommendations on how EU and national policies can support transnational digital collaboration and address challenges for SMEs. It is meant to inspire policymakers to be creative and “cross-border minded” when developing new policy initiatives. The paper is also considered to inspire industry associations in their work with influencing national digital policies.

https://www.diginnobsr.eu/_files/ugd/8cf6e6_9979ad80392246fabfe04dce8c0a33a0.pdf

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

Especially the outcomes in connection to digitalisation aspects and respective transfer towards the industry level are planned to be promoted during the DINNOCAP project. When it comes to political commitments and business support for further actions, the Real Time economy flagship of the EUSBSR PA Innovation project was prepared by the Lead Partner. It takes the four showcases as a good practice example for further implementation.

Administrative matters

Final Project Conclusions

DIGINNO

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

Based on the special Covid situation, many planned activities were transformed from physical to online meetings. In particular, those events that aimed at distilling outputs and aligning results across WPs into cross-cutting and comprehensive results. Replacing the planned focus on intense face-to-face discussions was handled mostly successfully. At the same time, in some elements there was a slight focus on some countries, especially Estonia – also based on the country's forerunner role in digitalisation aspects. Otherwise, there were partly longer clarification rounds based e.g. on misunderstandings or incomplete answers from different partners.

Final Project Conclusions

INBETS BSR

Project title	Project duration
Innovative Business Transfer Models for SMEs in the BSR	October 2017 - September 2020

Priority	Specific objective
Capacity for innovation	Non-technological innovation

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.46 million	2.46 million	x	PA Innovation

Link to the project library	Link to the project's website
https//interreg-baltic.eu/project/inbets/	http://inbets.eu/

Lead partner (country)	Countries involved
Baltic Sea Academy (Germany)	DE, PL, LT, LV, EE, RU, SE, DK, FI

Project summary

Teaser

The project INBETS BSR enabled business support organisations to improve consultations in business transfer and ensure continuity in complex handover processes.

The challenge

A handover of small and medium-sized enterprises (SMEs) and change of ownership is a complex process. Many SMEs face a challenge when the business gets transferred due to various reasons. The observed tendency is that the failed business transfer causes more job loss than creation of new jobs in start-ups. The failed business transfer implies also loss of business running skills, market share, goodwill and more. This triggers the need in improving the conditions for business transfers and support of the potential successors. The observed situation is especially tricky for the eastern countries in the Baltic Sea region such as Estonia, Latvia, Lithuania, Poland and Russia. Most private companies established their businesses in the early 1990s, which means that the business transfer is in the near future. The focus of business support in those countries was to create new companies, supporting growth and maybe export – but so far not on transfer.

Such factors as lack of suitable successors, appropriate funding schemes, know-how deficits, lack of expertise and support from business organisations that could assist business transferees and successors have been identified. The understanding of these inefficiencies provides a framework for targeted measures that need to be taken to boost small businesses in their survival and prosperity.

The projects INBETS BSR wanted to strengthen the capacity of the existing SME business support organisations for business transfers and contribute to a smoother business handover processes.

Final Project Conclusions

INBETS BSR

DE	DK	EE	FI	LT	LV	PL	RU	SE
								

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Business transfer better understood

INBETS BSR initially developed a self-assessment tool that allows to evaluate suitability of an entrepreneur to take over a business, and introduced six innovative business transfer models. The models are foreseen for business support organisations that would need tailored assistance to the potential business successors. The targeted business support organisations were challenged by the project to embrace the entire transfer process, from the initial identification of the handover need, the dialogue between owner and successor, overall evaluation of a firm, consultations on transfer models and available funding schemes.

Transnational patterns and collaboration

Thanks to INBETS BSR, business support organisations and training facilities are now better equipped to support SMEs in their business transfers. For countries like Lithuania, Latvia, Estonia, Poland and Russia, these support structures were new. In other involved countries, such as Germany, Denmark, Finland and Sweden, the project improved the existing structures like some initial support for businesses. In any case, this is the first time for the region that a transnational exchange has taken place in the field of business transfers. The nine participating countries in the region shared best practices and created concrete solutions such as tools and trainings for SMEs and support organisations. Together, they have improved the qualifications of the transfer coaches and developed missing funding instruments. They also ran individual consultations with companies, in which the trained project partners prepared these companies for an upcoming change or accompanied them in an ongoing change.

Upscaling business transfer challenge to a political level

Besides, the project developed political support programs and shared them with decision-makers. The recommendations include specific actions to support "women-successors" and to support the inclusion of migrants as much as possible, but also guidelines when choosing existing employees as successors or specialists who have migrated abroad. These recommendations triggered lively exchange at the political level, for example at the strategic planning forum of the regions and cities of Russia in 2020 or during the project's final conference in 2021.

Final Project Conclusions

INBETS BSR

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Valuation Tool

The valuation tool is particularly helpful for the owners and potential successors to estimate the company's value before starting negotiations or asking for a loan if needed. With this tool, especially small companies and possible successors can create the first analysis of their financial needs, which can help them to finance the succession.

https://inbets.eu/business-evaluation-tool/

Train the Trainer Program

The project developed, tested, evaluated and finalised a program to train the consultants of business support organisations and other institutions. The aim of the training was to familiarise the trainees with consulting and promotion of business transfers. This approach would improve the skills needed to become permanent qualified business transfer coaches. For example, these new coaches are now able to run consultations with SMEs.

https://inbets.eu/train-the-trainer/

Entrepreneurship Training

The project developed a 562 hours comprehensive training course for entrepreneurship students and potential business successors (buyers, sellers, heirs). The course is structured in 3 modules, which makes it easier to exchange, and lasts about 18 hours. All modules focus on the development of skills and competencies needed for a successful business transfer process, as well as learning the basics of business transfer and practical solution scenarios. The training covers individual modules that were adopted and incorporated into the existing courses. Module 1 is about determining the competitiveness of companies and developing strategies, module 2 is on the legal environment and business transfer logistics, and module 3 contains the financial optimisation in business transfers.

https://inbets.eu/business-successors-training/

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

In the extension stage project INBETS +, partners are running further consultations with companies and creating an online course. This online course will take a targeted approach to guide both SME

owners and interested successors or chamber staff step by step through the benefits of the measures developed. Another Train-the-trainer programme will increase the number of qualified staff at chambers and business support organisations in the Baltic Sea region. Chambers and business support organisations can thus promote the generation change in the SMEs in the next years. Finally, the policy strategy program developed is to be communicated more strongly to decision-makers.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

- PP12 (Lithuanian University of Educational Sciences) ceased to exist and was thus replaced by its legal successor (Vytautas Magnus University).
- PP9 (International Business Academy) dropped out and was replaced by the IBC (International Business College), which became PP15.
- PP14 (University of Skövde) dropped out and its tasks were taken over by the Lead Partner.

Final Project Conclusions

SmartUp Accelerator

Project title	Project duration
SmartUp Accelerator - Innovation Ecosystem to foster consumer cleantech markets in the Baltic Sea Region	October 2017 - September 2020

Priority	Specific objective
Capacity for innovation	Non-technological innovation

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.22 million	2.03 million	x	PA Innovation

Link to the project library	Link to the project's website
https:// projects.interreg-baltic.eu/projects/smartup-accelerator-117.html	https:// www.smartupaccelerator.eu

Lead partner (country)	Countries involved
Innovatum AB (Sweden)	EE, FI, DE, LV, PL, SE, RU

Project summary

Teaser

The Interreg project SmartUp Accelerator improved conditions for business ideas in consumer cleantech sector and supported start-ups, intermediaries and investors across the Baltic Sea region.

The opportunity

Cleantech traditionally springs from innovations in the industry sector. Cleantech start-ups began to emerge in the consumer market. The growth logic of cleantech companies is changing: more and more companies start addressing the challenges and opportunities posed by resource scarcity, rising energy and fuel costs, digitalisation, automatisation and user-centred design. This is called consumer cleantech. As housing, mobility and food consumption stand for approximately 70% of the natural resource consumption of households, there is a potential for increasing sustainability by replacing current non-efficient practices and products with resource efficient solutions that consumers also find attractive.

The innovation intermediaries would benefit by strengthening their transnational networking and accelerator skills and open up for new business possibilities. Small national markets and fragmented organizational landscape trigger the need in engaging in transnational ecosystems. Due to costly and sometimes unfamiliar to the users, acceleration opportunities stay unused or underutilized.

Aimed to strengthen innovation capacity in consumer cleantech the project SmartUp Accelerator intended to help innovation organisations to identify ideas and establish new businesses. By using testbeds, or transnational training programmes and supporting activities, the project supported small and medium sized enterprises and start-ups.

Final Project Conclusions

SmartUp Accelerator

DE	EE	FI	LV	PL	RU	SE
						

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

New knowledge gained through trainings

To help intermediaries gain knowledge about consumer cleantech and support so-called "smartups" (a term coined by the consortium to describe a 'smart' or digitalised startup), the project developed training program using a foresight method. The method would enable intermediaries to identify opportunities and challenges, as well as apply digital tools (Slack, online conferencing). Through the training program the partners got introduction to foresight methods and inspiration to designing new concepts and business models. The project partners shared their best practices integrated in methods used for bootcamp and acceleration phases, e.g. scoring cards to guide smartups in choosing a new market. Another example is learning how smartups can attract funding via mentorship from investors/crowd-funding expert during bootcamps. Smartups and intermediaries jointly looked into new funding opportunities and applied to open calls.

Smartups get support when entering new markets

The project supported smartups on their journey towards a new market entry in the Baltic Sea region. By spreading knowledge about consumer cleantech, matching smartups with relevant stakeholders and supporting intermediaries to learn more about how to support consumer cleantech companies, the project enhanced the knowledge among the target groups. Among the themes, the project identified business support, sustainable consumption, distribution of new innovations internationally.

Building transnational consumer cleantech innovation actor ecosystem

The project reinforced the idea that internationalisation of innovation processes creates opportunities and challenges, as well as the perception that companies with a greater diversity of international partners tend to innovate more and introduce more radical innovations. In transnational innovation ecosystems companies and other innovation actors have strengthened opportunities to access complementary knowledge located in other countries and to respond to new market needs through collaboration with international partners. Smartup Accelerator project has

gathered together the intermediaries on the field in order to jointly identify, stimulate and brand the innovation actors across the region.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

SmartUp Accelerator network platform

The project developed a platform to host the SmartUp Accelerator network (SMA network) driven by mostly intermediaries, smartups, investors and big companies. The network has a database of knowledge consisting of the project reports. The website serves both as a hub for public information about the consumer cleantech business, and as a member portal where members can find other sources of information. The following organisations can serve as examples of who benefits form joining the network: Dalarna Science Park (SE), Inclusive Business Sweden (SE), Sunrise Valley Science and Technology Park (LT), Saint-Petersburg Cleantech Cluster for Urban Environment (RU), Cleantech ForEst (EE), Business Angels Union (RU).

https://www.smartupacceleratornetwork.net

SmartUp Accelerator Model

The report creates a long term/self-sustaining model for growing consumer cleantech innovation ecosystems capacity in the Baltic Sea region. The SmartUp Accelerator Model enables impact and capacity building in the emerging consumer cleantech, providing innovation support tools. The SmartUp Accelerator interactive platform provides the necessary connections between startups, intermediaries, investors and other stakeholders involved in the consumer cleantech field. In essence, the SmartUp Accelerator model is about establishing an innovation community for smart and clean consumer business.

https://www.smartupaccelerator.eu/wp-content/uploads/2020/08/the-smartup-accelerator-model-wp-5152.pdf

SmartUp Accelerator Testsbeds

This report guides smartups, intermediaries and investors in a virtual form that can be regularly updated with new cases and information, and feed into the ongoing SmartUpAccelerator Model. Using this guidance, the smartups can find key learnings from successful efforts to achieve a new market entry and testbeds. Similarily, intermediaries can learn what the best practice is, allowing them to shape their support efforts for smartups. As regards corporations or investors, they can better understand the aspects and strategies relevant to smartups in the Baltic Sea region, which can be valuable for increasing knowledge as investments in smartups or collaborations is something smartups often look for.

https://www.smartupaccelerator.eu/wp-content/uploads/2020/12/35-smartup-accelerator-proof-of-concepttestbeds-wp-35final.pdf

Final Project Conclusions

SmartUp Accelerator

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

N/A

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

N/A

Final Project Conclusions

SNowMan

Project title	Project duration
Supporting Non-technological Innovation in Owner-managed Manufacturing SMEs through increased capacity of business intermediaries	October 2017 - March 2021

Priority	Specific objective
Capacity for innovation	Non-technological innovation

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.1 million	1.9 million	x	PA Innovation

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/snowman-86.htm	http://snowman-ibsr.eu/

Lead partner (country)	Countries involved
VIA University College (Denmark)	DK, PL, FI, LT, DE

Project summary

Teaser

In the Interreg project SNOwMan business intermediaries, owner-managers and universities jointly developed and applied innovative tools and methods for business counselling tailored for owner-managers of small and medium-sized enterprises.

The challenge

There is a difference in counselling owner-managed, or family-driven, small and medium-sized enterprises compared to ones run by employed managers. Owner-managers of SMEs tend to be driven by different considerations than SMEs run by employed managers. This includes owner-managers´ own family's well-being, the employees' situations, and lack of time for developing their own managerial skills. In owner-managed companies, the counselling processes are characterised by lack of trustful dialogue with the intermediary. Based on the observations and surveys, many owner-managers have a sceptical attitude to counselling from business intermediaries and academics.

On the other hand, business intermediaries tend to experience difficulties in establishing a transparent and rational counselling environment. Thus, owner-managers felt a lack of trust, common language, values and culture, while business intermediaries expressed difficulties in counselling owner-managers as they often had strong commitment and responsibility for the company.

In order to make counselling process easier, more transparent and well-going, the project gathered together business intermediaries, owner-managers and universities to jointly improve counselling.

DE	DK	FI	LT	PL
				

Final Project Conclusions

SNowMan

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Thirteen project partners and eight associated organisations cooperated across borders to improve the counselling process for SME owner-managers.

A tailored 6-steps counselling process established

Seventy-four SME owner-managers from Poland, Lithuania, Denmark, and Finland were interviewed about their preferences for counselling and the main challenges of this process. Based on the collected feedback, the partners developed a new counselling toolbox tailored to the needs of SMEs with five to fifty employees, which are both owned and managed by the same person. The main element of the toolbox is a 6-step process that contains the introduction, vision, identification of challenges and needs, strategy and action plan, operationalisation, measuring, and evaluating outputs. The process allowed the owner-manager and the intermediary to find the main challenges of the company and put the most pressing challenges in focus.

New tools and guidelines developed

Sixty-three owners of companies participated in the two-round tests of the new counselling tools. Based on the test results and the feedback received from four countries, the project developed the guidelines available on the online portal. Furthermore, the project elaborated train-the-trainer curricula in order to present the training methods for business intermediaries in using the 6-step counselling process.

The Interreg project SNOwMan used EUR 1.9 million to improve counselling of owner-managed manufacturing SMEs and align expectations between owner-managers and business intermediaries.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Counselling toolbox and guidelines

The toolbox integrates facilitation tools leading through the 6-step counselling process (introduction, vision, identification of challenges and needs, strategy and action plan, operationalisation, measuring and evaluation outputs). The process is built on trust, openness and dialogue. The counselling process aims to find a common ground through a more personalised and trust-oriented approach. To look closely at the specificity of each stage of the 6-step process and to recommend possible advice and tools for facilitation purposes, the project developed counselling guidelines for the 6-step process. The new facilitation tools help business intermediaries establish during counselling a respectful and trustful relationship with owner-managers in unleashing the full potential of their SMEs.

http://snowman-ibsr.eu/the-activities

6-steps for innovation: online portal

All elements of the new counselling toolbox along with the supporting guidelines and tutorials were made operational and launched on the online portal. Users either can work directly on the portal or download all tutorials and available materials to their company's network. The portal offers a protected data storage box. Users can also find contact data to business intermediaries from Poland, Lithuania, Denmark and Finland offering a counselling support.

https://www.6stepsforinnovation.com/

6-steps for innovation: Inspirational catalogue

The catalogue presents success stories from Poland, Lithuania, Denmark and Finland, with the purpose of showing the real outcome and value of working with the newly developed counselling toolbox. The catalogue also provides an in-depth analysis of a well-working counselling when using the 6-step process. Moreover, the publication presents recommendations and advice for using the counselling toolbox in order to achieve the best possible results.

https://www.6stepsforinnovation.com/en/about/best-practices

Train-the-trainer curricula

The train-the-trainer curricula present a proposed structure for the training for business intermediaries that offer a counselling support to SME owner-managers. The curricula highlight the 6-step counselling process and introduce guidelines on how to use the newly developed tools for facilitation purposes. The importance of trust-building is spotted as an essential part of step 1 of the 6-step counselling process. Different techniques for training in small groups are presented to support the trainers. The KAIN Method (Knowledge Acquisition according to Individual Needs) is described. The curricula for the train-the-trainer programme are based on the view that owner-managed companies are a heterogeneous group that requires attention on their individual needs to exploit the full innovation potential of their SMEs. The curricula also include templates to collect the feedback.

http://snowman-ibsr.eu/the-activities

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The project partners representing the academia sector will continue to offer the train-the-trainer course for business intermediaries as part of their curricula. This will ensure the use of the newly developed toolbox by intermediaries in their daily work and support the actual implementation of the 6-step counselling process. The new toolbox, and the 6-step counselling process in particular, will also be part of the VET (vocational education and training) for students. This will develop a better

understanding of SME owner-managers needs and encourage the development of new methods of counselling processes based on common values and trust-building.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

The project partners developed an impressive cooperation network with SME owner-managers resulting in sixty-three owners of companies being involved in the two-round tests of the new counselling tools.

Covid-19 has caused some challenges in the implementation of the project, especially when it comes to the involvement of SME owner-managers in the second testing round of the newly developed counselling toolbox. However, the project partners managed to come up with alternative proposals to run the second run of tests still ensuring the active involvement of owner-managers.

Due to Covid-19 pandemic lots of activities had to be moved into online environment.

The project received a prolongation of its duration of 6 months to mitigate the impact of the Covid-19 pandemic on the project activities.

Final Project Conclusions

BEST

Project title	Project duration
Better Efficiency for Industrial Sewage Treatment	October 2017 - September 2020

Priority	Specific objective
Management of natural resources	Clear waters

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.40 million	3.04 million	x	PA Nutri

Link to the project library	Link to the project's website
https://interreg-baltic.eu/project/best/	https://bestbalticproject.eu/

Lead partner (country)	Countries involved
City of Helsinki Environment Services (Finland)	EE, FI, LV, PL, RU

Project summary

Teaser

The project BEST enhanced collaboration among local water utilities, wastewater treatment plants, industrial companies, and local environmental authorities to ensure more efficient management of industrial sewage in the Baltic Sea region and ultimately protect the environment.

The challenge

Industrial wastewaters are a considerable challenge for municipal wastewater treatment plants (WWTPs) as they require special treatment and management. Industrial wastewater differs from domestic wastewater due to factors such as its high solid contents, hazardous substances, and higher and fluctuating volumes. Municipal WWTPs were originally designed to treat only domestic sewage and not water with abnormal contents, such as industrial wastewater. Therefore, industrial wastewater could seriously harm the treatment process and its efficiency if it is not handled correctly.

Such a discharge could cause capacity and safety problems at WWTPs, inhibition of the biological treatment process steps, and the pollution of wastewater sludge, which prevents recycling and further use. Even modern and efficiently functioning domestic wastewater management at municipal WWTPs may be endangered by uncontrollable industrial wastewater discharges. Ultimately, such problems can lead to higher discharges of nutrients and harmful substances into the natural environment.

BEST – Better Efficiency for Industrial Sewage worked to improve the treatment of industrial wastewaters across the Baltic Sea region and consequently reduce a load of nutrients and hazardous substances entering the Baltic Sea.

Final Project Conclusions

BEST

EE	FI	LV	PL	RU
				

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Assessing industrial wastewater management in the region

Currently, data and information regarding the treatment of industrial effluents entering municipal WWTPs are scattered in different countries and organisations across the Baltic Sea region. There is not any comprehensive and comparative analysis of the available data.

Thus, the BEST project has created an overview of the situation in the Baltic Sea region on the EU level and national legislation regulating indirect wastewater discharges from industries, identifying the main polluting sectors in each country, and their possible impacts on the treatment processes at the municipal WWTPs.

The partners collected information about national legislation by interviewing experts in countries across the Baltic Sea. Furthermore, in Estonia, Latvia, Lithuania, Poland and Russia, project partners identified 2 to 3 industrial sectors of specific concern and interviewed both individual companies and associations in these industrial sectors (the food, dairy, brewery, mining, petroleum, chemicals, surface treatment and waste handling).

These interviews gave information about the regulation of industrial wastewater and cooperation between the industrial facility and the municipal wastewater treatment plant receiving the effluents.

Joining forces for better treatment of industrial effluents

Good cooperation ensures the timely exchange of information and quick response to malfunction situations. The BEST project demonstrated how regular communication results in better process control and co-treatment of industrial effluents and reduces the loading of nutrients and hazardous substances to the Baltic Sea.

Project partners developed local cooperation models to improve the management of wastewater and collaboration between WWTP, industries, and supervising authorities. They arranged local planning meetings, mutual learning, and information exchange sessions as well as on-site visits.

International capacity development events were used as a platform to plan, report, evaluate and develop these local practices.

Final Project Conclusions

BEST

Examples of successful cooperation models

For instance, project partners in Adaži municipality (Latvia) created cooperation models between the local wastewater treatment plant and its industrial customers representing mainly the food industry. The result was the development of a communication model and WWTP process management scheme, including a risk assessment procedure.

In Poland, project partners carried out an analysis of industries conveying wastewater to the Municipal Water and Sewerage Company (MPWiK) WWTPs by combining various data sources. The on-site inspections and wastewater sampling by MPWiK worked well as a preventive measure. However, the actual stream of industrial liquid waste transported to septage receiving stations with vacuum trucks caused concerns. MPWiK was advised to provide more information on the procedure of connecting industrial wastewater suppliers and make industrial wastewater suppliers more aware of their duties associated with discharging this type of wastewater to the MPWiK sewage system.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Assessment report: management of industrial wastewaters in the region

The assessment report compiles the existing situation on industrial wastewater management in Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden. It shows the current technical practices used, describes the legislation in the different countries (EU level, national implementation and HELCOM recommendations), demonstrates various co-operation models among the water utility, the industry and the environmental authority, and also spotlights the overall and national bottlenecks.

https://bestbalticproject.eu/wp-content/uploads/2020/09/WP2_Assessment-of-current-situation_FINAL.pdf

Guidelines for the management of industrial wastewaters and the Policy Brief

The document provides guidance to legislative, permitting and supervising authorities, and water utilities affected by industrial wastewaters as well as industrial operators conveying industrial wastewater to the sewer. It also identifies the most important obstacles for the successful implementation of existing legislation and best practices, as well as the possible solutions to overcome these obstacles. The document includes national key recommendations separately for Russia, Estonia, Latvia, Lithuania, Poland and Finland.

In addition, the Policy Brief gives a summary of the guidelines with targeted actions for industrial operators, environmental authorities, wastewater treatment plants and policymakers.

https://bestbalticproject.eu/wp-content/uploads/2020/09/BEST_Guidelines_for_Management_of_Industrial_Wastewaters.pdf

Final Project Conclusions

BEST

https://bestbalticproject.eu/wp-content/uploads/2020/09/BEST_policy_brief_ENGLISH_FOR_WEB.pdf

Report on local cooperation models

This report summarises the development process in selecting models for testing. It presents how Leszno water utility (Poland), Doruchow Commune (Poland), Latvijas Piens dairy company (Latvia), E-Piim dairy company (Estonia), and Põltsamaa water utility (Estonia) developed their wastewater management in dialogue and cooperation with municipal water utility staff, industrial companies discharging effluents to the municipal WWTP, or local/regional permitting and monitoring authorities.

https://bestbalticproject.eu/wp-content/uploads/2021/04/BEST-Developing_local_management_models.pdf

Toolbox of best practices in industrial wastewater management

Toolbox gathers best practices concerning industrial wastewater management and consists of six subject areas: automation and monitoring, cooperation, education and training, phosphorus recovery, pre-treatment practices and methods for industries and utilisation of sludge. The toolbox presents a learning package for organisations involved in wastewater management, including wastewater treatment plants, industries, non-governmental organisations, consultants and environmental authorities around the Baltic Sea region. It guides on how to improve the management of industrial wastewaters in the organisations´ daily operations.

https://bestbalticproject.eu/outputs/toolbox/

Technologies to improve treatment of industrial wastewater

The project piloted fermentation installation at the wastewater treatment plant in **Leszno** (Poland). The knowledge gained through piloting can be applied in other sewage treatment plants in the Baltic Sea region to identify the contents of industrial effluents, their impact on sludge treatment and energy production. The technology helps to identify the optimal capacity and strategy for wastewater treatment plants to receive industrial effluents and sludge.

https://bestbalticproject.eu/about/pilots-at-wwtps-and-industries-wp4/wwtp-henrykowo-leszno-poland/

Another technology piloted in **Doruchów** (Poland) is phosphorus filtering system for nutrient recovery. The technology investment has proved a significant reduction of phosphorus in wastewater and possibilities for re-use of the recovered phosphorus in agriculture.

https://bestbalticproject.eu/about/pilots-at-wwtps-and-industries-wp4/wwtp-doruchow-poland/

Besides, a new balancing tank was built for a dairy factory in **Põltsamaa (Estonia)** to stabilise and improve the treatment results. Together with the monitoring device installed and positioned where

the plant discharges its industrial wastewater, the technologies helped to regulate the industrial load from E-Piim to the wastewater treatment plant. The technology investments demonstrate promising collaboration opportunities for industrial wastewater suppliers and the wastewater treatment plants.

https://bestbalticproject.eu/about/pilots-at-wwtps-and-industries-wp4/epiim/

The pre-treatment installation dairy company in **Jelgava (Latvia)** enabled to reduce nutrient load to the wastewater. The technology ensures a significant reduction in pollution of groundwater, local water bodies, and the Baltic Sea. The tested technology can be relatively simply adjusted to the majority of dairy factories to improve the water quality in the region.

https://bestbalticproject.eu/about/pilots-at-wwtps-and-industries-wp4/latvijas-piens/

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The partnership has worked well and the project will continue to contribute to positive change in industrial wastewater treatment in the Baltic Sea region.

The wish to continue improving wastewater treatment was evident during the final seminars. Both organisers and participants were interested in potential future collaboration. Stakeholders attending the Latvian final seminar wished to continue to increase knowledge on industrial wastewater treatment and work on legislative developments. In the Estonian final seminar, industries and WWTPs showed interest in changing their present treatment technologies. Several WWTPs beyond the partnership expressed interest in future piloting.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

N/A

Final Project Conclusions

CWPharma

Project title	Project duration
Clear waters from pharmaceuticals	October 2017 - September 2020

Priority	Specific objective
Management of natural resources	Clear waters

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.72 million	3.65 million	x	PA Hazards

Link to the project library	Link to the project's website
https://interreg-baltic.eu/project/cwpharma/	http://www.cwpharma.fi/en-US

Lead partner (country)	Countries involved
Finnish Environmental Institute (SYKE) (Finalnd)	FI, SE, EE, DE, DK, PL, LV

Project summary

Teaser

Seven countries across the region joined CWPharma to reduce pharmaceutical emissions released to waters of the Baltic Sea and improve water quality and biodiversity in the marine space.

The challenge

Residues of the active pharmaceutical ingredients cause concerns

Residues of the active pharmaceutical ingredients (APIs) like hormones, anti-inflammatory, analgesics or antibiotics, contaminate waters of the Baltic Sea and negatively affect the marine space. The residues that risk contaminating a large catchment area of the Baltic Sea have been identified but their impact on the environment requires an in-depth analysis. There are regulations on the EU level that require the countries to set up take-back schemes and disposal of unused medicine. However, on the national level, there is not always a unified approach or strictly obliging regulations that would accelerate actions on tackling the challenge. As an example, consumption data of veterinary APIs in agriculture and aquaculture is limited from Finland and Germany (only antimicrobial drugs) and totally missing from other countries in the Baltic Sea region.

A need for reliable data and knowledge

With the HELCOM status report on pharmaceuticals as a starting point, the project CWPharma intended to mobilise the countries across the Baltic Sea and provide adequate and reliable data and knowledge. Thus, transnational cooperation and best practice exchange would raise awareness on

Final Project Conclusions

CWPharma

Evaluation of various API emission reduction measures such as advanced wastewater treatment, upgraded take-back schemes, disposal of unused medicines, sharing environmental data on pharmaceuticals and their impact would provide a better understanding of the challenge and how to make measures more targeted.

The knowledge and data would enable a multitude of stakeholders, from municipal organisations, supervisory and permitting authorities, operators of waste disposal sites and waste water treatment plants to pharmaceutical industry and research, to make decisions in tackling pharmaceutical emissions.

DE	DK	EE	FI	LV	PL	SE
						

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

The project CWPharma gathered 15 partners from Finland, Sweden, Denmark, Germany, Poland, Latvia and Estonia to develop tools and recommendations for policymakers, national and regional authorities, municipalities and the pharma industry to enable reduction of the emissions to the Baltic Sea.

Data and knowledge collection

CWPharma mapped the current situation and compiled data on pharmaceutical sales, concentrations of APIs in e.g. Poland, Latvia and Estonia, removal rates as well as changed patterns in wastewater ecotoxicity during advanced wastewater treatment, like optimising advanced wastewater treatment techniques aimed to remove pharmaceuticals. Optimised treatment was piloted in Kalundborg (Germany), Linköping (Sweden) and Helsinki (Finland). The partners collected the data by sampling in each participating country´s catchment areas and by other testing, with e.g. ozonation and post-treatment. The data allowed to develop a model that would estimate the exiting API emissions and coastal concentrations in the Baltic Sea and assessed the impact of emissions reduction measures. As regards the emission reduction and management measures, the partners tested additional wastewater treatment, optimised compilation of data on disposal of

pharmaceutical waste, as well as spread the accumulated knowledge, including APIs environmental classification.

Pilots

The project piloted different API removal technologies, and summarised the main findings as well as a compilation of relevant practical aspects for planning, implementation and operation in the guidelines. The piloting included implementation and operation of advanced wastewater treatment for API elimination at three ozonation plants (full-scale in Kalundborg (DK) and Linköping (SE), pilot-scale in Berlin/DE) as well as retention of powdered activated carbon at pilot-scale in Helsinki (FI). The results show that APIs can be efficiently reduced by ozonation and integration of such technologies into existing WWTPs, and this is technically and economically feasible. The reports about pilots are available for public use.

Targeted discussions and training

For reaching the targets and ensuring the viability of the findings, the CWPharma partners involved responsible authorities, the pharma industry, wastewater treatment utilities, interest groups, pharmacists, doctors, veterinarians with whom they discussed the key findings, searched for feasible solutions and jointly disseminated the data. Thus, the project strengthened the skills of wastewater plants and municipal authorities by sharing and discussing the guidelines and arranging workshop training. The updated knowledge and skills will enable the plants operators and municipal workers to manage advanced wastewater treatment in a more cost-efficient way.

For a better streamline of the results, the project partners developed an Action plan where they complied prioritisation and suggestions on policy orientated measures to enable reduction of API emissions to the Baltic Sea.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Current emissions of active pharmaceutical ingredients (APIs) into the Baltic Sea

The report presents a calculation model for estimation of pharmaceutical emissions into the Baltic Sea, the calculation results received by applying the model, and a web-based map application. Specifically, the report contains information about loads of eight pharmaceuticals and their concentrations in selected river mouths and coastal waters within the Baltic Sea drainage basin. Thanks to the map application, it is possible to detect the areas emitting and receiving pharmaceutical emissions with the highest concentration. Besides, the report demonstrates the flows of pharmaceuticals for the entire Baltic Sea drainage basin as Sankey charts, which allows defining where emission reduction measures would be most effective for each pharmaceutical. Researchers, authorities in planning regional and national campaigns, pharma industry can make use of the tools and results compiled in the report.

https://helda.helsinki.fi/handle/10138/321722

Web map application:
https://syke.maps.arcgis.com/apps/MapSeries/index.html?appid=85d441bdc8e04354bdd7c7257b211b9f

Guideline for advanced API removal

The guideline provides benefits and drawbacks of ozonation, activated carbon treatment both granulated and powdered as well as biofilm treatments for API removal from wastewater. It refers to API removal, maturity, process complexity, reaction by-products (from the water matrix) as well as reaction products (from the APIs), costs, energy consumption, carbon footprint, space requirement and suitability for use in combination with sludge use on agricultural fields for nutrient recycling. For reference, the guideline presents a list of wastewater treatment plants that integrate advanced API removal. The guidelines are for water utilities that consider API removal, municipalities searching possibilities to encourage their utilities to apply API removal, and regional authorities responsible for water quality.

https://zenodo.org/record/5069819#.YiiT09hKjIV

Action plan for API emission reduction

The Action Plan compiles findings and recommendations on emission reduction of APIs in the Baltic Sea, including emission management, treatment and reduction measures. Recommendations are structured in three political actions to prevent API release, five actions to reduce API discharges from wastewater treatment plants and finally four actions to upgrade knowledge emissions, environmental concentrations and ecotoxicity of APIs. Besides, the plan defines the functions of regulatory agencies, administrative bodies, national water networks, research and other organisations. The Action Plan is for the use of utilities, municipalities, environmental authorities in Denmark, Finland, Sweden, Germany to improve treatment of wastewater.

https://www.cwpharma.fi/en-US/Publications

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The project´s results were taken up by the partners of the extension project CWPharma 2. The outcomes of the CWPharma will be used by other projects with a particular focus on the

management of pharmaceutical emissions (MEDWwater) as well as the promotion of safe water reuse in agriculture (FlexTreat).

Besides, the Swedish Toxicological Council will further explore the use of sewage sludge and wastewater effluents on farmland. As regards the educational aspect, concentration and risk assessment results achieved by CWPharma will be integrated into lectures on water pollution and protection as well as wastewater post-treatment methods at TTK University of Applied Sciences and TalTech.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

N/A

Final Project Conclusions

HAZBREF

Project title	Project duration
Hazardous industrial chemicals in the IED BREFs	October 2017 - September 2020

Priority	Specific objective
Management of natural resources	Clear waters

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
1.99 million	1.96 million	x	PA Hazards

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/hazbref-95.html	https://www.syke.fi/projects/hazbref

Lead partner (country)	Countries involved
Finnish Environment Institute (Finland)	FI, PL, DE, SE, EE

Project summary

Teaser

The Interreg project HAZBREF provided valuable recommendations and paved the way for legally binding commitments on the use and risk management of hazardous substances and chemicals to prevent their release into the Baltic Sea.

The opportunity

The Industrial Emissions Directive is the main instrument on the EU level to control hazardous substances that are released from industrial sites. However, its reference documents, or BREFs, currently lack specific information on certain hazardous substances.

The project aimed at closing this knowledge gap so that industry and authorities could manage hazardous substances being released into the Baltic Sea better. The project strived for narrowing the gap experienced by both operators of installations and environmental authorities. Both target groups do not always know which substances are environmentally most relevant to address and by which management measures the releases can be reduced.

Furthermore, the project sought to enhance the institutional capacity of environmental permitting and supervision authorities as well as industrial installations on use and risk management of hazardous chemicals in industries in the participating countries Finland, Sweden, Germany, Poland and Estonia and even broader in the Baltic Sea region and throughout Europe.

Final Project Conclusions

HAZBREF

DE	EE	FI	PL	SE
				

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Timely recommendations delivered

Against the backdrop of recent policy initiatives by the European Commission and the review of the Industrial Emissions Directive (IED), the recommendations and findings of the project came in a timely manner. Project recommendations and results have been well received by EU Member State representatives and non-governmental organisations (NGOs) contributing to the ongoing EU IED review work. HAZBREF results have been useful during the review of BREFs related to the use and release of chemicals. For example, the review of BREF for the textile sector is the first in which recommendations and findings of HAZBREF have been taken up in Best Available Technique conclusions. Once they are published, the implementation of these conclusions will be legally binding throughout the EU, including coastal Member States that discharge into the Baltic Sea. This will result in a real improvement in the quality of the Baltic Sea.

Benefits of strengthened cooperation

HAZBREF's recommendation to use all available information on hazardous substances and chemicals in the BREF processes was taken up and led to improving cooperation between the European Integrated Pollution Prevention and Control Bureau (EIPPCB), establishing the BREFs, with the European Integrated Chemicals Agency (ECHA).

Sectoral guidance provided

Additionally, the project issued sectoral guidance based on case studies, interviews with authorities, expert judgement, and input from stakeholders. The guidance includes good practices in chemical management for installations and involved authorities. Based on this, measures recommended by HAZBREF to curb the pollution by hazardous substances have been taken-up by HELCOM in their review of the Baltic Sea Action Plan. The positive impact of the HAZBREF project could also continue beyond the Baltic Sea and EU borders. Its results have been presented at the OECD and have been integrated into its work on circular economy.

Final Project Conclusions

HAZBREF

The Interreg project HAZBREF used EUR 1.96 mill from the European Union to improve existing tools to control hazardous substances released from industrial sites. The project covered such industries as the textile industry, chemical industry and ferrous metals processing by improving the quality of the information on best available techniques in hazardous substances and chemicals management. Thus the project contributed to the prevention of hazardous substances and chemicals released into the Baltic Sea.

Main Outputs

The main outputs present the project's main deliveries, which are tangible and can be used by others outside the project.

Method to include information on hazardous and other substances of concern more systematically into BREFs

The HAZBREF project's input to the ongoing EU Industrial Emissions Directive (IED) revision work on improving chemical management issues in the BREF process can be found in this report. It investigated how the process of BREF reviews and BAT conclusions could be systematised and improved in the use and release of substances of concern and hazardous substances. Particular emphasis was given to possibilities to better use available and relevant data generated in the context of other pertinent EU legislation at the right time during this process. The report not only proposed general measures for improving the BAT information exchange but also focused on what has to be improved, by which means, and how it could be done. It is targeted at environmental and chemical authorities and experts across the EU, specifically the EIPPCB and ECHA, but also at sectoral industrial organisations.

HAZBREF 3.2 Report final (4).pdf

HAZBREF circular economy report

How are Circular Economy (CE) issues currently dealt with in the BREF process? What are the legislative barriers to better integration of CE within BREFs? How can the generation of non-toxic material circles be addressed in BREFs? These are some of the questions that the report sought answers to. The report is intended for industry organisations, industrial installations, public authorities, or experts working on environmental permitting and supervision. The report on "Promoting non-toxic material cycles in the preparation of Best Available Technique Reference Documents (BREFs)" focused on enabling the progress of Circular Economy (CE) by promoting clean, non-toxic material cycles through the BREF process. It focused specifically on three industrial sectors: polymers and fertilisers from the chemical sector, the textile sector and the surface treatment of metals and plastics.

Promoting non-toxic material cycles in the preparation of Best Available Technique Reference Documents (BREFs) (helsinki.fi)

Final Project Conclusions

HAZBREF

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The recommendations of HAZBREF on how to better address hazardous substances and chemicals in the BREF reviews have been well received by authorities and experts in this area. Some influence could already be seen in the draft BREFs, for e.g. textile industry, chemical industry and ferrous metals processing, where chemical management the best available technologies are included. The HAZBREF project partners will continue cooperation in the forthcoming BREF preparations using the HAZBREF results.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

The effectiveness of the project in reaching its goals of influencing the IED/BREF policy process was certainly supported by the strong set-up of partners and associated organisations representing relevant national public authorities and agencies also outside the Baltic Sea region.

HAZBREF was involved in the Nonhazcity2 final conference, a networking event with other INTERREG projects addressing water quality and hazardous substance management.

HAZBREF cooperated with other EUSBSR flagship projects BEST and CWPharma. Joint meetings were held. HAZBREF, BEST and CWPharma submitted a joint proposal for a session EUSBSR strategy event (Annual Forum) in Turku, but due to COVID-19, the event was cancelled. Jukka Mehtonen from SYKE, a representative in EUSBSR PA Hazards, was an active member of the HAZBREF project, ensuring close communication during the project.

Final Project Conclusions

MANURE STANDARDS

Project title	Project duration
Advanced manure standards for sustainable nutrient management and reduced emissions	October 2017 - December 2019

Priority	Specific objective
Efficient management of natural resources	Clear waters

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
EUR 2.87 million	EUR 2.39 million	x	PA Bioeconomy

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/manure-standards-92.html	https://www.luke.fi/manurestandards/en/

Lead partner (country)	Countries involved
Natural Resources Institute Finland Luke (Finland)	FI, PL, SE, LT, EE, DE, DK, LV, RU

Project summary

Teaser

The Interreg project Manure Standards equipped farmers, their advisors, and authorities with practical tools to get more precise data on manure quantity and its nutrient content to better plan manure fertilisation and reduce the nutrient inflow in the Baltic Sea at the same time.

The challenge

Animal manure as a source of nutrients

Agriculture releases large quantities of nutrients into the Baltic Sea, with a significant amount of emissions from animal manure. This contributes to increasing of the euthrophication processes in the sea waters. The actual figures, however, are difficult to assess due to incomparable measuring methods and different ways of collecting data across the Baltic Sea region countries.

Lack of standards

Smart nutrient management in agriculture is one of the most efficient agri-environmental measures to reduce input of nutrients into the Baltic Sea. Currently, most manure is spread on fields as fertiliser without processing. If the manure is used in precision, the nutrient inflow from manure into the Baltic Sea could instantly be reduced. In order to achieve that, farmers and advisers need tools for proper nutrient bookkeeping, along with efficient fertilisation plans and nutrient balances. Equally important is to develop measuring methods that are transparent and harmonised, and applied at all levels: from farms up to the regional and national level across the Baltic Sea region.

DE DK EE FI LT LV PL RU SE

EUROPEAN REGIONAL DEVELOPMENT FUND
EUROPEAN UNION

Final Project Conclusions

MANURE STANDARDS

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Tools for better handling manure

The partners helped farmers and their advisors use manure as a resource more wisely and efficiently on almost 100 farms in Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden. Thanks to research, comparing samples and calculating manure content across the farms, the partners developed tools that can universally be applied in the region. Now, farmers and their advisors have the means to collect more precise manure data. Based on the data, they can better plan the fertilisation processes with manure on their farms, use the correct amount of the manure as a fertiliser and – in this way – cut costs on buying mineral fertilisers and reduce emissions into the environment. For example, thanks to a manure properties calculation tool, farmers in Estonia can now implement efficient fertilisation with manure and ensure adequate capacity for manure storage.

Harmonanisation on the national level

The partners also helped agricultural and environmental authorities keep national and regional manure data updated. The data help shape manure-related policies and authoritative measures developed by the authorities in their daily work.

Thanks to the project, in Sweden, it was agreed to use the new calculation tool developed by the project partners. In Latvia, national authorities decided to update sampling and analysis methodology to get more precise data on manure composition, including nutrient content. In Finland, the Finnish Food Authority and the authorities responsible for environmental permitting of animal farms started using the project tools as guidelines to improve the permitting and surveillance processes. The authorities in Estonia plan to change the regulation on manure data generation and turn the farm-level calculation tool into an official tool for measuring manure nutrients and emissions on farms.

From local to pan-Baltic results

In the pan-Baltic context, based on the project results, the Baltic Marine Environment Protection Commission (HELCOM) developed and adopted the recommendations on the use of national manure standards. These recommendations guide the Baltic Sea region countries to improve manure data by establishing as well as reviewing and updating the national standard values for manure. HELCOM also uses the project results in preparing a Baltic Sea Regional Nutrient Recycling Strategy.

Thanks to the EUR 1.91 million support from the EU, the Interreg project Manure Standards delivered practical tools for effective manure management on a farm, regional, national and pan-Baltic levels. Researchers together with farmers and agricultural advisors from nine countries proved that manure management should be based on up-to-date data on manure quantity and composition. This is the way to maximise benefits manure brings as a valuable fertiliser and to minimise losses to the environment.

Final Project Conclusions

MANURE STANDARDS

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Recommendations for manure data generation and use

These recommendations present how to generate manure data and how to use it. In particular, farmers get information on why manure data is needed and how it may affect farm practices as well as how to make better use of manure due to more accurate manure data. They get instructions how to measure manure quantity and properties. Advisors get information how they can support farmers in making the most of manure, how and why to use more accurate manure data in their own tools. Public authorities in relevant ministries on agricultural, environmental and food safety issues get information why it is important to use updated and accurate national manure data in policy measures, methods to generate the data and who should do it, where manure data can be used, how the data support in reaching the national and international targets for circular economy and emission reductions.

Link: https://projects.interreg-baltic.eu/projects/manure-standards-92.html#output-109

Handbook "How to make the most of manure?"

This handbook guides farmers and agricultural advisories through good manure management practices. It talks about manure as a valuable resource that should be managed efficiently to make use of its valuable nutrients. It explains how to minimise losses and reduce nutrient loading from agriculture. It highlights the importance of assessing the content of manure and presents two tools useful in the assessment:: manure sampling for chemical analysis and a farm level calculation tool.

Link: https://projects.interreg-baltic.eu/projects/manure-standards-92.html#output-110

Guidelines for manure sampling and analysis

The partners developed the guidelines for farmers, national advisors as well as laboratory personnel who take manure samples on farms for analysis. Using these guidelines, farmers and their advisors get more precise information on the nutrient content of manure that is necessary to develop an effective and comprehensive nutrient management plan on farms. These guidelines are a step forward in harmonising sampling methods used across the Baltic Sea region. In addition, a quick guide for manure sampling and a video of manure sampling accompany the instructions.

Link: https://www.luke.fi/manurestandards/en/results/

Calculation tools for the quantity and composition of livestock manure

Two manure calculation tools apply to the farm level and the regional level. The farm-level calculation tool helps calculate manure quantity, properties and relevant emissions throughout the whole production chain (on animal, housing and manure storage levels) on an individual farm. On farms, advisors may first support farmers in making the calculations. With the regional-level tool, expert organisations responsible for generating national manure data can calculate the annual livestock manure production and properties. The tool supports estimation of regional emission and enables calculation of nitrogen losses based on the production technologies. Both tools are accompanied by manuals.

Link: https://www.luke.fi/manurestandards/en/results/

Final Project Conclusions

MANURE STANDARDS

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The SUMANU platform makes use of the recommendations developed by the partners in the Manure Standards project, for example, on effective manure management on farms and on the manure management on the regional level. When compiled and structured by SUMANU, these recommendations together with results from other projects feed into the updating of the Baltic Marine Environment Protection Commission (HELCOM) Baltic Sea Action Plan and developing of the HELCOM Nutrient Recycling Strategy.

In the Baltic Sea region countries, the project results are further considered. For example, in Estonia, the authorities plan to change the regulation on manure data generation. They plan to take the farm-level calculation tool developed in the project into an official tool for measuring manure nutrients and emissions on farms. In Finland, the authorities concluded that its manure data generation was in line with the project results. They also concluded that a regular procedure to maintain the manure data updated and in line with the manure management practices on farms needed permanent resources. The responsible ministries and research organisations planned to discuss further this issue.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

The project cooperated actively with organisations outside the formal partnership (i.e. partners receiving funding from the Programme). The partners worked with 92 pilot farms in nine Baltic Sea countries to develop, test and compare manure data tools. Ministries and other public authorities from the project countries attended actively national events to discuss current practices and needs for revision.

The project involved three partners organisations from Russia. They actively contributed to the project implementation, despite the later start of their own activities. Due to this, though, the ENI/RU funding spending rate reached only 51%.

Final Project Conclusions

Baltic ForBio

Project title	Project duration
Accelerating production of forest bioenergy in the Baltic Sea Region	October 2017 - March 2021

Priority	Specific objective
Management of natural resources	Renewable energy

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.55 million	2.15 million		

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/baltic-forbio-127.html	www.slu.se/en/departments/forest-economics/forskning/research-projects/baltic-forbio/

Lead partner (country)	Countries involved
Swedish University of Agricultural Sciences (Sweden)	SE, EE, FI, DE, LV, LT

Project summary

Teaser

The Interreg project Baltic ForBio increased production of renewable energy by using forest biomass in Finland, Sweden, Estonia, Latvia and Lithuania, and triggered new business models for small-scale forest bioenergy plants across the Baltic Sea region.

The opportunity

There is a growing demand for forest biomass from by-products of the wood industry to be used as a source of renewable energy. Targeted harvesting of wood biomass and evaluation of its bioenergy would trigger new business ideas for renewable energy production. The full utilisation of logging residues and small trees would increase production possibilities. Better collaboration between research and technology developers would lead to aligned approaches and concrete solutions in the field of forest bioenergy.

Besides, the development of small-scale bioenergy plants in rural areas would gear renewable energy production and sustainable development of the bionergy market in the Baltic Sea region. Facing such challenges as investment financing, suitable business models, and steady supply of biomass feedstock, the bionergy plants are experiencing tough conditions to increase their production.

The project intended to exploit logging residues, which are usually discarded after forest harvests, and small trees that are cut during forest thinning. Along with guidelines for using new technology, the project aimed to compile information on wood energy potential to shape innovative business models.

Final Project Conclusions

Baltic ForBio

DE	EE	FI	LT	LV	SE
					

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

All in all, more than a hundred of enterprises and public authorities from the six partner countries learnt about cost-effective and sustainable methods to harvest wood biomass, how to identify suitable areas for harvesting, as well as estimate bioenergy potential of wood biomass. This knowledge should stimulate new business ideas for the production of renewable energy from local forest biomass.

Forest biomass as a source of renewable energy

The partners investigated the potential of local forest biomass for the production of renewable energy. They developed a forest energy atlas. It is a Geographic Information Systems (GIS) platform, combined with the biomass database, that enables spatial analysis and visualisation of biomass hotspots and attractive locations for investments in forest-based bioenergy production. The platform covers five Baltic Sea region countries Finland, Sweden, Estonia, Latvia, and Lithuania. This information is especially helpful for local and regional authorities as well as private companies that are interested in the availability of energy wood for bioenergy development projects. During the project, companies, forest management enterprises, as well as local and regional authorities from the project countries learnt how to use the platform for planning business decisions.

A user-friendly decision support tool developed

In addition, the partners developed and tested a user-friendly decision support tool for planning the harvest of logging residues and biomass recovery at early thinning. This tool helps forest agencies, forest owners' organisations, and forest advisory organisations. The tools are valuable while consulting forest owners to identify suitable areas for the harvest of logging residues and small trees, and to produce profitable and environment-friendly harvest plans conditional on site-specific circumstances.

A new business model for small-scale bioenergy plants introduced

The project developed a business model for sustainable development of small-scale bionenergy plants. The model included securing supply of wood chips with required quality from local sources and financial and organisational aspects of establishing small-scale bionenergy plants. The project

recommended to establish small-scale bionenergy plants as co-operative firms of local residents. Besides, the partners carried out a case study in German Altlandsberg, The case study showcased that co-operative ownership of infrastructure and technology within the supply chain, long term agreements between partners and choice of partners in the immediate neighbourhood seemed promising. The partners continued to use this knowledge e.g. for helping municipalities with heat supply and energy and climate plans.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Decision support tool for harvest of logging forest residues as energy

The decision support tool enables the user to produce assessment of the profitability of harvesting forest biomass, and identify the most profitable harvest options. Using this tool forest agencies and advisory organisations can help companies plan the harvest of logging residues and biomass recovery at early thinning. The decision support tool also enables large forest companies with their own forest management planning capacity to improve their capacity to harvest and plan logistics. Generally, the tool estimates forest residues production costs in two steps. In the first step, the total amount of residues is estimated for the forest stand that is planned for final felling, pre-commercial thinning, or commercial thinning by using stand-level or individual tree biomass functions. In the second step, various costs along the residue production chain are calculated, including costs for harvesting, forwarding, chipping, and transporting.

https://www.slu.se/en/departments/forest-economics/forskning/research-projects/baltic-forbio/wp-3/

Forest energy atlas

Forest energy atlas is a GIS platform that enables users to explore spatially-explicit energy wood potential. It collects the harvesting potential of energy wood in Finland, Sweden, Estonia, Latvia and Lithuania. This information is especially helpful for stakeholders that are interested in availability of energy wood for bioenergy development projects. In the forest energy atlas the user can first choose the assortment the user wants to know about, and then define the area where the harvesting potential information is needed from. Different countries have different assortments where to choose from since the background data available varies from one country to another.

https://forest-energy-atlas.luke.fi/

Training programme "Energy wood harvest in the forest management process"

The training programme is developed for private forest owners, societies and associations, forestry companies or enterprises, as well as those employed in the forest sector. It provides a broader insight into the role and potential of energy wood and educates forest owners and entrepreneurs on the use of felling residues and small wood in energy production.

https://www.slu.se/en/departments/forest-economics/forskning/research-projects/baltic-forbio/wp-3/wp3_trainingprogram/

Final Project Conclusions

Baltic ForBio

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

n/a

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

n/a

Final Project Conclusions

«Acronym»

Project title	Project duration
Co-producing and co-financing renewable community energy projects	October 2017 - September 2020

Priority	Specific objective
Management of natural resources	Renewable energy

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.15 million	2,95 million		

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/co2mmunity-91.html	http://co2mmunity.eu/

Lead partner (country)	Countries involved
Kiel University (Germany)	DE, DK, EE, FI, LV, LT, PL, SE

Project summary

Teaser

The Interreg project Co2mmunity helped municipalities, regional energy planning agencies and citizens' associations across the Baltic Sea region to implement community energy projects and ultimately move towards renewable energy sources.

The challenge

Community energy puts citizens at the heart of the energy production system. Local communities play an active role in the production of renewable energies from local sources such as wind, solar, biomass, hydropower, or geothermal. Together, citizens co-finance, co-develop, and co-operate renewable energy plants, and foster sustainable energy distribution, like local heating networks or biogas filling stations. Through active communication, transparent decision-making, and local benefit sharing community energy projects have high social acceptance. Consequently, fostering community energy projects is highly promising for increasing the share of renewable energies in the Baltic Sea region. This also contributes to the European Union's vision of providing Clean Energy for all Europeans.

There is currently a knowledge gap concerning community energy (CE) in the Baltic Sea region. Co2mmunity worked to fill this gap by providing a solid and substantial knowledge base for CE stakeholders across the Baltic Sea. Thanks to the shared experience from the project partners, the project enhanceed the institutional capacities of municipalities, institutions responsible for regional energy planning, political decision-makers, and energy and citizen's associations for facilitating community energy projects.

Final Project Conclusions

«Acronym»

DE	DK	EE	FI	LT	LV	PL	SE
							

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Transnational exchange to foster community energy

The Co2mmunity partners organised Renewable Energy Co-operative Partnerships (RENCOPs) in their respective home countries. These local networks are comprised of communities, coordinators, and experts, which include citizens, authorities, businesses, and academia. Every RENCOP is different, but they all worked to implement renewable energy projects which would be unmanageable by one person or group alone. They could learn about the opportunities and pitfalls of cooperative renewable energy project development.

The project partners have initiated and managed nine RENCOPs in total in Estonia, Denmark, Finland (two), Germany, Latvia, Lithuania, Poland, and Sweden. Depending on conditions in the specific region, the RENCOPs have used different strategies and focus areas. Examples of this are solar panels for housing cooperatives developed in Sweden and Estonia as well as the jointly purchased heat pumps in Denmark.

The pilot projects are instructive examples for the participatory mobilisation process according to RENCOP and for profitable renewable energy on a community level. Thanks to RENCOPs, citizens can ultimately have access to knowledge that allows them to take the energy transition into their own hands.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Click here to enter title.

Roadmap on how to increase community energy using the RENCOP model

The transnational exchange of experiences with local RENCOPs triggered development of a transferable RENCOP roadmap. This will guide and encourage organisations in the Baltic Sea region to stimulate a higher production of renewable energies through energy-cooperative models and approaches, by setting up structures such as a RENCOP. It contains general and country-specific steps, in order to develop community energy in regions and municipalities across the Baltic Sea and beyond.

http://co2mmunity.eu/wp-content/uploads/2020/08/Co2mmunity-Roadmap.pdf

Click here to enter title.

White Paper: policy recommendations to support community energy

This White Paper informs policymakers and decision-makers from local to regional and transnational levels (i.e ministry and public officers responsible for energy issues as well as government agencies and regional authorities) in the Baltic Sea region about key conclusions of the project. It contains suggestions and recommendations to stimulate, support, and promote community energy projects.

http://co2mmunity.eu/wp-content/uploads/2020/08/Final_O4.2_Co2mmunity_White-Paper_policy-recommendations_final.pdf

Click here to enter title.

Policy Paper for energy stakeholders in the Baltic Sea region

This document includes general information about Community Energy, its benefits as well as its status in the Baltic Sea region. It also contains a set of ten policy proposals that can help policymakers in removing barriers to community energy. Some of these policy proposals apply only to some countries or regions, it is then up to the local situation, which of these proposals should be considered. The document was developed through the research literature, practical experiences of projects and broad consultation with experts and stakeholders in the Baltic Sea region.

http://co2mmunity.eu/wp-content/uploads/2020/08/Policy_Paper_EN.pdf

Click here to enter title.

Guidelines for participatory mobilisation process to set up a RENCOP and CE Partner Agreement

The guidelines describe key steps to be taken to develop a strategy for building a mobilisation process to initiate and establish a RENCOP. They provide the do's and don'ts of RENCOP work, and some of the experiences gathered during the project while using the guidelines.

As regards the CE Partner Agreement, it gives an overview of how to further develop RENCOPs to carve out tandem systems between frontrunners and followers forming transnational CE-partner agreements in the field of community energy. The special focus is on having a look at the specific challenges and conditions in the partner regions (SWOT analysis) as a base to identify suitable partners for community energy (CE) projects and develop suitable tandems.

http://co2mmunity.eu/wp-content/uploads/2020/08/Guidelines_Co2mmunity_040820.pdf

http://co2mmunity.eu/wp-content/uploads/2020/03/co2mmunity-working-paper-No.-3.3-v1.1.pdf

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

During the prolongation stage project Energize Co2mmunity, the eight partners will put to life the two main outputs developed in the regular Co2mmunity project, namely "Guidelines for

participatory mobilization process to set up Renewable Energy Cooperatives (RENCOP)" and the "Transnational CE partner agreement."

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

N/A

Final Project Conclusions

Act Now

Project title	Project duration
Act Now: Action for Energy Efficiency in Baltic Cities	October 2017 - March 2021

Priority	Specific objective
Management of natural resources	Energy efficiency

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.58 million	3.4 million	x	PA Energy

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/act-now-149.html	https://actnow-baltic.eu/

Lead partner (country)	Countries involved
Magistrate of the City of Bremerhaven (Germany)	DE, SE PL, FI, DK, LT, LV, EE, RU

Project summary

Teaser

The Interreg project Act Now tackled energy efficiency in the existing building stock in cities across the Baltic Sea region and applied self-assessment and customisation of capacities in energy management to ensure increase in energy efficiency.

The challenge

Europe's biggest energy resource is energy efficiency. Reduction in energy consumption to heat buildings is a precondition for an increase in energy efficiency. Energy efficiency measures in the existing building stock compared to newly constructed buildings are vital for reaching the energy efficiency targets. The decentralised heat supply is highly inefficient in parallel with the extensive energy consumption caused primarily by private households. In addition, 70% of the heating installations are outdated while investments in heating systems are delayed.

Above that, insufficient resources, undeveloped structures and limited knowledge, especially vulnerable in smaller municipalities, deteriorate the situation. The existing strategic energy action plans (SEAPs) and concepts for climate protection proposed by many municipalities are still not enough.

For reaching the energy saving objectives, municipalities need a holistic approach in increasing energy efficiency as well as targeted solutions. They need new knowledge and tools to turn their SEAPs into action. Especially smaller local authorities suffer from insufficient capacities related to resources, structures and knowledge. They do not have sufficient information about the most effective measures and investments related to energy saving due to poor monitoring data and insufficient energy management systems. Smaller local authorities lack capacities to initiate and plan investments to increase energy efficiency among the involved staff of municipalities and cooperating institutions, for example housing companies and utilities.

Final Project Conclusions

Act Now

DE	DK	EE	FI	LT	LV	PL	RU	SE
								

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Valuable tools developed

Aimed at increasing energy efficiency in municipalities, the project introduced a new approach for assessment and customisation of existing capacities in energy management. By analysing commitment and management, energy planning, implementation, available resources, infrastructure and home-owner segment, the municipalities got a better understanding of concrete gaps. Once completed, the self-assessment tool suggests what aspects in energy management and capacity building should be improved, for instance in policy, communications, human resources, monitoring or documentation.

Furthermore, a learning platform on energy efficiency in the building stock developed by the project, provided municipalities with the needed tools in enhancing capacity building. With hands-on guidance on establishing working groups and setting up the process, the platform enabled to ensure a holistic approach to gathering, accessing and applying information to tackle concrete gaps. The platform collected all the knowledge the project has developed and tested in participating municipalities. Furthermore, to inform other municipalities about the collected knowledge the partners arranged several national and reginal workshops for municipalities in nine countries across the Baltic Sea region.

Municipalities tested the new approach

Nine municipalities participating in the project, Bremerhaven (Germany), Elva (Estonia), Gdynia (Poland), Gulbene (Latvia), Kaliningrad (Russia), Mönsterås (Sweden), Sievi and Ylivieska sub-region (Finland), Šilutė (Lithuania), and Sonderborg (Denmark) succeeded in setting up local energy efficiency groups (LEEG) by involving representatives of municipalities, public organisations like schools, transport agencies as well as businesses, home owners and residents. The LEEGs enabled to coordinate and streamline knowledge scattered across different municipal departments and other organisations.

Thanks to the project, the participating municipalities started the revision of their sustainable energy action plans by including the climate dimension. In some cases, the LEEGs were expanded by involving political representatives and setting energy efficiency on the political agenda.

Final Project Conclusions

Act Now

With EUR 3.4 million invested by the European Union, the Interreg project Act Now has strengthened capacity building in municipalities, streamlined the scattered knowledge and invested in improved monitoring. New approaches in self-assessment and monitoring have been put into practice by piloting in the participating municipalities. To continue the successful work even more investments for a minimum of seven million euros after the project ends are foreseen.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Manual: from the sustainable energy action plan to investment

This manual helps municipalities act now to increase energy efficiency. It explains how to assess the existing capacities in municipalities and other organisations, and guides what still needs to be done. It describes the idea of local energy efficiency workgroups (LEEGs): a network of local stakeholders aggregating the knowledge, perspectives and capacities for effective and sustained implementation of energy efficiency measures.

ACT_NOW_Manual_From-SEAP_to_Investment_web.pdf (actnow-baltic.eu)

Capacity self-assessment tool for municipalities

This tool helps municipalities assess the exact needs for capacity building in energy management and increase of energy efficiency. It includes assessment of the following aspects: commitment and management, energy planning, implementation, resources, infrastructure, and home-owner segment. Once completed, the tool suggests what aspects in energy management and capacity building should be improved and strengthened: for example, policy, communication and engagement, human resources, monitoring or documentation.

Learning Platform – Act Now! (actnow-baltic.eu)

Learning platform on energy efficiency in the building stock

The online learning platform offers municipalities hands-on guidance on planning and implementing energy efficiency projects in their building stock. This guidance is useful for municipality staff directly involved in energy topics (urban planners, staff of construction departments, collaborators from property management and financial departments, energy management and local development) as well housing companies, utilities, energy service companies, engineering companies. The platform includes guidance how to create local energy efficiency groups (LEEG), customise capacity building of municipal staff, set up a strategy for municipal buildings and pick up energy efficiency measures, find out appropriate financing and engage the private sector.

https://actnow-baltic.eu/learning/

Final Project Conclusions

Act Now

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The partners City of Bremerhaven from Germany and ProjectZero from Denmark joined an application “Stronghouse” to Interreg North Sea Region under the leadership of the Province of Drenthe from the Netherlands. The Stronghouse project got funding and it works to stimulate renovations of buildings by private owners. It offers an excellent opportunity to apply the knowledge gained in Act Now. In Stronghouse, Bremerhaven is implementing the project "Klimameile Alte Bürger" (Climate Mile, Alte Bürger is a street's name), developed as one of the Future Invests measures in Act Now.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

N/A

Final Project Conclusions

AREA 21

Project title	Project duration
Baltic Smart City Areas for the 21st century	October 2017 - September 2020

Priority	Specific objective
Management of natural resources	Energy efficiency

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.55 million	2.17 million	x	PA Energy

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/area-21-129.html	https://area21-project.eu/

Lead partner (country)	Countries involved
HafenCity University Hamburg (Germany)	DE, FI, RU, EE, SE, PL

Project summary

Teaser

The Interreg project AREA21 involved local and regional public authorities, energy providers, public property owners and citizens from six countries and improved cooperative planning processes by applying ICT-based tools for visualisation of energy consumption and upscaling good practices in energy saving to a district level.

The challenge

A collaborative approach is needed in saving energy and thereby decreasing CO2 emissions in the Baltic Sea region. A radical change in behaviour of property users in increasing energy efficiency and engagement of citizens in energy planning and consumption are preconditions for energy saving.

Besides structural, technical and organisational inefficiencies, there is a lack in integrating the behavioural perspective into the holistic approach. More efforts are needed to identify incentives for a behavioural change of energy consumers as 20% of energy savings can be reached by targeting individual behaviour, according to European Environment Agency, 2013.

As key players in reaching European energy efficiency targets, cities are facing challenges to reach a greenhouse gas emission reduction. Modernisation of urban structures, infrastructures, ownership which represent the majority of the existing settlement patterns in the Baltic Sea region and entire EU represents an unveiled potential. Sectoral fragmentation as well as lack of cooperative integrated approach between public authorities, energy utilities and property owners are obstacles to overcome.

DE	EE	FI	PL	RU	SE
					

EUROPEAN REGIONAL DEVELOPMENT FUND
EUROPEAN UNION

Final Project Conclusions

AREA 21

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

The project established Energy Improvement Districts (EID) in Hamburg, Helsingborg, Tamprere Tartu, Kohtla-Järve, St. Petersburg and Lublin where local and regional public authorities, energy utilities, public property owners and users worked together. The stakeholders applied the collaborative approach to property users' behavioural change to increase energy efficiency. The partners used upgraded ICT-based tools for visualization of energy consumption and thus providing incentives for the property owners to lower their energy consumption.

AREA 21 partners succeeded in upscaling energy efficiency in buildings from the level of a single house up to the level of entire city districts. In addition, the partners introduced new policy recommendations and guidelines on collaborative processes in strategic planning.

New Guidance for Cooperative Energy Planning

The project developed a holistic guideline that helps understand and follow the process of planning and establishing an Energy Improvement District. The guideline contains information on setting up a context-specific concept, developing a strategy, as well as implementing the EID. It addresses local, regional and national actors in energy planning aimed at reduction of CO2 emissions and increase of energy efficiency at the district level. Clearly defined features of the EID concept can be transferred to other context-specific cases. Such features as initiation of an EID, area identification, definition of boundaries, understanding of cooperative formats, financing and incentives are concrete steps to be taken into consideration.

Energy consumers empowered in energy planning

Three different ICT tools were developed and tested in seven piloting regions. The tools can monitor energy (electricity and heating) and water consumption in buildings as well as single apartments. Thus, the web-based tools helped the owners of apartments and buildings to display the energy consumption of single housing units and measure saving potentials. Similarly, the tools could be applied at the district level in order to quantify smart energy solutions with a reduced cost and climate footprint. Thus, these tools were tested in the Helsingborg Hospital Area in Sweden and indicated an annual saving potential of EUR 18,700 and 160 tons of CO2 emissions.

Continued efforts in a new format

The lessons learnt within the partnership have been taken further in a new format of the project AREA 21+ action which introduces measures from the selected EIDs and demonstrates the potential of the EID concept of supporting integrated energy planning and emission reductions. Furthermore, a continued transfer of ICT tools to other cities and regions in the Baltic Sea region is planned.

Final Project Conclusions

AREA 21

The project AREA 21 used EUR 2.17 million and improved planning processes by bringing together local and regional public authorities, energy utilities, public property owners and users. The new holistic approach enabled to upscale energy efficiency in buildings from the level of a single house up to the level of entire city districts.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Energy Improvement Districts – Conceptual and Technical Guidance for Implementing Cooperative Energy Planning

This document is a holistic guideline that helps understand and follow the process of planning and establishing an Energy Improvement District from the starting point, via the set-up of a context-specific concept and strategy, to the implementation of the EID in practice. It addresses local, regional and national actors in energy planning that are searching for instruments to reduce CO2 emissions and increase energy efficiency at the district level. The main EID concept features are defined and condensed to form the central pillars of the concept that can be easily transferred to other cases. The pillars are (1) initiation of an EID, (2) area identification and definition of boundaries, (3) organisation and cooperative formats, (4) financing and incentives and (5) the time frame.

https://area21-project.eu/wp-content/uploads/AREA21-Energy-Improvement-Districts-Book.pdf

ICT-based tools for involving citizens and property users in energy planning

It is a set of ICT tools that help can monitor energy (electricity and heating) and water consumption in single buildings as well as single apartments. Thus, the dwellers and owners of apartments and buildings can get a better overview of the energy consumption of single housing units. This allows them to conclude on saving potentials. One of the tools can be applied at district level and quantify smart energy solutions with a reduced cost and climate footprint. These tools were tested in the Helsingborg Hospital Area (SE) and indicated an annual saving potential of EUR 18,700 and 160 tons of CO2 emissions.

https://area21-project.eu/wp-content/uploads/Report-Energy-Improvement-Circle-tool-Executive-summary_V2.pdf

Final Project Conclusions

AREA 21

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The project successfully applied for an extension under the Baltic Sea Region Programme. AREA 21 + action provides the frame in which first measures from selected EIDs can be implemented and the potential of the EID concept to contribute meaningfully to both integrated energy planning and emissions reductions can be demonstrated.

Further, the ICT tools have been tested and transferred to other cities and regions in the Baltic Sea region.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

There are no particular administrative matters to be mentioned. The project had no State aid relevant activities. The implementation went smoothly without any larger challenges. The progress reports were submitted in time and were of good quality. The main outputs were delivered in the shape and quality as indicated in the application form.

Final Project Conclusions

EFFECT4buildings

Project title	Project duration
Effective Financing Tools for implementing Energy Efficiency in Buildings	October 2017 - September 2020

Priority	Specific objective
Management of natural resources	Energy efficiency

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.72 million	2.66 million	x	PA Energy, HA Climate

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/effect4buildings-114.html	http://www.effect4buildings.se/en/Pages/default.aspx

Lead partner (country)	Countries involved
County board of Dalarna (Sweden)	SE, FI, NO, LV, DK, EE, PL

Project summary

Teaser

The Interreg project EFFECT4buildings enabled public building managers in eight countries around the Baltic Sea to better plan renovation projects to unlock investments and implement retrofitting, upgrading and deep renovation and, by this, to save energy.

The Challenge

Public authorities play a crucial role in the renovation of existing public buildings and in reaching satisfying energy efficiency targets in buildings. However, they often lack tools supporting their decision-making to actually move ahead with implementing energy efficiency measures.

A need to make investments profitable

Energy efficiency projects are not typical investments because they rarely result in direct revenue. In addition, a lack of knowledge and records of successful experiences increases the anticipated risks of undertaking such projects. Finding convincing investors that see energy efficiency measures as promising investments is, therefore, a challenge. These challenges which public building managers face do not differ much from the challenges concerning privately owned buildings and, to a large extent, also industry-owned buildings.

Other obstacles to overcome

Additionally, technology providers often seek a bigger market and a clear picture of the demand. Furthermore, existing legal and structural frameworks hinder the possibility for building owners to become energy producers. Last but not least, in order to convince financial managers public authorities need a better understanding of energy calculations and profitabilities.

In order to address these challenges, EFFECT4buildings developed a decision support toolbox for the calculation and planning of renovation projects in the most feasible and profitable way.

Final Project Conclusions

EFFECT4buildings

DK	EE	FI	LT	LV	NO	PL	SE
							

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Real-life cases organised

The project EFFECT4buildings organised about 60 trainings and seminars reaching out to about 2600 people, mainly building managers from eight Baltic Sea region countries. The project partners applied retrofitting, upgrading, and deep renovation as energy efficiency measures. The project involved the trained building managers in 120 real-life cases to develop and adjust 9 tools for spreading knowledge and supporting the use of measures. These 120 cases amount to around EUR 9,157,828 of investment in energy efficiency and to up 5.700.000 kWh/year of energy savings.

Useful tools developed

The project developed an online toolbox that includes tools on technological solutions, calculations, and funding. Thanks to the catalogue on technology solutions, building managers could better understand the profitability, performance, and how to make the most out of solutions, while providers received an entry point to a bigger market for their solutions.

As regards financial calculations, the project enabled to predict the profitability of an investment which is critical for building managers, energy auditors and other investors to make decisions on energy efficiency measures. Next, on funding the project compiled a comprehensive list with the funding possibilities in the public sector (EU and national funds from Denmark, Norway, Estonia, Latvia, Poland, Finland, Sweden), as well as from international and national non-public sources and mechanisms.

The project made available the toolbox in English, Finnish, Polish and Latvian and ensured its searchability making it available at the project portal and as featured in the European Portal for Energy Efficiency in Buildings.

Inspired by the project

As concrete examples on the municipal level, Aurskog-Høland municipality (NO) started the process of implementing Energy Performance Contracting (EPC) which stands for a provision of energy services with a guaranteed outcome. One of the main principles is that investment financing is performed by using accumulated savings. Next, Hamar municipality (NO) set the commitment to include an EPC project in the municipality´s Sustainable Energy Action Plan.

Furthermore, GreenEst Summit started as a project event and continues to be organised annually as the conference on innovations in the energy sector. The County Board of Dalarna (SE) initiated a new stakeholder cooperation forum with all energy companies in the Dalarna region to work together on power loads and grid capacity for solar energy.

With EUR 2.66 million support from the European Union, the Interreg project EFFECT4buildings improved the capacity of public building managers to unlock investments, lower risks, and implement energy efficiency measures in publicly-owned buildings.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Technological solutions toolbox

This toolbox includes a catalogue of technology solutions for energy efficiency in buildings and aimed at building managers. The catalogue is complemented by a compilation of experiences about energy solutions from building managers, including evaluations on installed and tested solutions; guidelines and templates for procurement of solutions and their maintenance. The toolbox makes the link between market technology solution providers and building managers: building managers better understand the profitability, performance and how to make the most out of solutions while providers have an entry point to a bigger market for their solutions.

https://www.effect4buildings.se/toolbox/technological-solutions/

Financial calculations toolbox

The financial calculation toolbox helps building managers, energy auditors and other investors to make decisions on energy efficiency measures. It enables to predict the profitability of an investment. It contains a collection of financial calculation methods and related explanations. It also contains handy tools for energy efficiency investments with detailed instructions on how to use them.

https://www.effect4buildings.se/toolbox/financial-calculations/

Funding toolbox

The funding tool helps municipalities and building managers find finances for implementing energy efficiency measures. It compiles a comprehensive list of the funding possibilities in the public sector (EU funds and national from Denmark, Norway, Estonia, Latvia, Poland, Finland, Sweden) as well as the funding possibilities from international and national non-public sources and mechanisms, for financing energy efficiency investments in publicly owned buildings.

https://www.effect4buildings.se/toolbox/funding/

Final Project Conclusions

EFFECT4buildings

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

- Aurskog-Høland municipality (NO) started the process of implementing Energy Performance Contracting, using the EPC tool developed by the project. Hamar municipality (NO) set the commitment to start an EPC project in the municipality Sustainable Energy Action Plan.
- GreenEst Summit started as a project event and will continue to be organised annually, as conference dedicated to innovations in the energy sector. The County Board of Dalarna (SE) initiated a new stakeholder cooperation forum with all energy companies in the Dalarna region to work together on power loads and grid capacity for solar energy.
- 94% of the respondents evaluating one of the project tools reported to have real plans for implementation of energy efficiency activities in the near future, by making use of one or several of the project tools.
- 37% of respondents with prior knowledge about one or more of the project tools reported to be planning trainings, workshops, or seminars featuring the tools.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

- The technology solutions were the most challenging activity. The challenge mainly consisted of the comparability of data: all project partners were involved in calculating different solutions using the financial calculation tools from the project, but measures were not categorized in a systematic way and calculated with the same components. Therefore, the profitability of measures could not be compared correctly.
- The prolongation of the project, which the MA/JS granted, was necessary in order to complete the training activities, which were postponed because of Covid19.

Final Project Conclusions

LowTEMP

Project title	Project duration
Low Temperature District Heating for the Baltic Sea Region	October 2017 – June 2021

Priority	Specific objective
Management of natural resources	Energy efficiency

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.77 million	3.45 million		

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/lowtemp-112.html	http://www.lowtemp.eu/

Lead partner (country)	Countries involved
Istitute of Fluid Flow Machinery, Polish Academy of Sciences (IMPPAN) (Poland)	PL, DE, DK, SE, FI, EE, LV, LT, RU

Project summary

Teaser

The Interreg project LowTEMP brought together 19 partners from nine countries and 30 associated organisations to improve strategic tools on planning, financing, installing and managing Low Temperature District Heating systems allowing to significantly decrease heat loss.

The challenge

Modernisation of district heating systems (DHS) is in full swing in the Baltic Sea region, but more needs to be done. The potential in using low temperature district heating systems with a significant decrease in heat loss by using renewable energy and waste as heat sources is not fully unveiled. District heating systems are somehow widesread in the Baltic Sea region, but the current generation of heating grids and technologies is outdated. Furthermore, they often do not comply with latest energy efficiency standards, both in renovated or newly constructed buildings. This leads to pressing challenges such as heat energy losses, hydraulic problems and economic disadvantages.

Need for an upgrade

Therefore district heating systems and technologies need to be adapted and upgraded in order to decrease grid heat losses and exploit synergies. The optimisation of district heating grids can be done using low temperature heat distribution. This means that supply and return temperatures should be as low as possible.

The installation of low temperature grids or its integration into existing district heating systems is a challenge, in particular for economic and technical planning: investments require high upfront costs, while construction works on the pipeline system require the coordination of experts and public authorities.

Final Project Conclusions

LowTEMP

DE	DK	EE	FI	LT	LV	NO	PL	RU	SE
									

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

19 partners from nine countries and 30 associated organisations gathered together in order to provide district heating stakeholders with know-how and strategic tools on planning, financing, installing and managing Low Temperature District Heating systems (LTDH). The project involved municipal, regional and national authorities, DH suppliers, energy agencies, associations, business support organisations, as well as research institutions.

Boosting implementation with new methodology and training

LowTEMP developed a methodology for strategies to increase energy efficiency in existing and new district heating networks. The methodology provides specific step-by-step guideline on how to develop energy strategy and apply it at municipal level. It contains area analysis, stocks evaluations, analysis of increasing energy efficiency potential, technical preconditions and requirements of district heating, profitability assessment, CO2 balance and monitoring methods.

With 26 modules containing information on strategies and concepts to the best practices, the project provided valuable training material as a basis for training on different possibilities of heating supply, technical and financing issues, as well as corporate development of energy strategies and business models.

Local pilots inspire

The tailored solutions based on the current type of the district heating supply infrastructures, the existing problems and potential for improvement were tested in pilots across the Baltic Sea region. For instance, in Aluksne (Latvia) energy efficiency measures were introduced in a kindergarten in order to prepare for future LTDH system. In Holbaek (Denmark) the pilot implemented a LTDH subnet in a conventional DH network; in Halmstad (Sweden) a low-temperature district heating grid was installed in a completely new residential area; in Gulbene (Latvia) an existing heating network was converted to a low temperature concept, with low temperature heating system, with more efficient wood pellet boiler house and newly constructed heat pipes being provided to some municipal buildings. More about the pilot measures can be found here.

Improved calculations on economic efficiency and business modelling

LowTEMP developed a calculation method, which helps understand the profitability and funding gap of a given district heating project. It is based on the evaluation of the internal rate of return and net present value of an investment over a period of 20 years. It includes an excel based calculation tool,

a manual and an analysis for more background information on financial framework and funding gaps. The tool allows to calculate investments for grid and/or generating plants.

Additionally, publishing the Study on Business Models and Innovative Funding Structures the project presented a business model on tools based on low temperature district heating. It provides examples of innovative pricing models, new value chains, business opportunities, as well as innovative funding structures. A toolbox and a template of a business model canvas complement the study. The material is developed for district heating companies and municipalities, who want to examine new business opportunities and understand how they could change their business model and funding structure for district heating in a low temperature district heating scenario.

The project wanted not only to prove that district heating upgrades are a necessity to counteract the inefficiency of outdated systems, but also that upgrades are financially profitable for end-users and operators. So further initiatives and investments in smart and sustainable district heating systems should be triggered. LowTemp tools help exactly in this, as they are ready-for-use means to take steps towards improving district heating systems. This is a way on which the pilot municipalities already made steps forward.

The Interreg project LowTEMP used EUR 3.45 million from the European Union to enable the implementation of low temperature district heating. Besides the introduction of new technical and financial strategies, the project has additionally succeeded in strengthening cooperation with H2020 project Cool DH, Halmstad University, HafenCity University, Euroheat & Power which paved the way for new collaborations in district heating.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Methodology for strategies to implement Low Temperature District Heating (LTDH)

This methodology provides a step-by-step guideline on how to compile an energy strategy and apply it at municipal level to increase energy efficiency in existing and new district heating networks. It delves into area analysis, stocks evaluations, potentials for increasing energy efficiency and diminishing consumption, technical preconditions and requirements of district heating, profitability assessment, CO2 balance and monitoring methods. The methodology is useful in particular municipal departments in charge of district heating systems, public authorities dealing with energy issues and urban development, heat suppliers and operators of district heating networks, as well as energy agencies/planners.

https://www.lowtemp.eu/wp-content/uploads/2021/09/Methodology-for-strategies-to-implement-LTHD.pdf

Training toolkit

The training package contains 26 modules that cover different aspects of planning and applying low-temperature district heating, from background information to strategies and concepts, from

technical aspects to best practices. For each module, a powerpoint presentation and a handout are available. The training material is mainly for the use of energy agencies responsible for strategic development and implementation of low carbon strategies and measures, cluster agencies and business hubs related to a green economy, municipal representatives responsible for climate issues. The material can be used as a basis for different training formats, for instance, seminars on different possibilities of heating supply, as well as technical and financing issues, but also workshops for the corporate development of energy strategies and business models.

https://www.lowtemp.eu/training/

Calculation method on economic efficiency and funding gaps

This calculation method helps understand the profitability and funding gap of a given District Heating project. It is based on the evaluation of the internal rate of return and net present value of an investment over a period of 20 years. It includes an excel based calculation tool, a manual and an analysis for more background information on financial framework and funding gaps. The tool allows to calculate investments for grid and/or generating plants. The method and tool are targeted at district heating operators, investors and funding authorities.

https://www.lowtemp.eu/what-we-do/

Business models and innovative funding structures

The Study on Business Models and Innovative Funding Structures is mainly directed to district heating companies, municipalities and regional and national government. The study presents business model developing tools as adapted to low temperature district heating; it provides examples of innovative pricing models, new value chains, business opportunities and new professions, as well as examples of innovative funding structures. A toolbox and a template of a business model canvas complement the study. The target groups for the material are district heating companies and municipalities who want to examine new business opportunities and understand how they could change their business model and funding structure for district heating in a low temperature district heating scenario.

http://www.lowtemp.eu/wp-content/uploads/2020/08/LowTEMP_economic-efficiency-and-funding-gaps-LTDH_V0-9.xlsx

LowTEMP_Manual-for-determining-economic-efficiency-and-funding-gaps-of-LTDH-projects.pdf

LowTEMP_Financing_Schemes_and_Business_Models_Analysis-of-financial-framework-and-funding-gaps-1.pdf

Final Project Conclusions

LowTEMP

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

- LowTEMP contributed to Tartu city energy and climate action plan for 2030 ("Tartu Energia 2030") for the chapter which sets the goals for district heating in Tartu by 2030, including pilots and use of LTDH when feasible.
- With the extension stage project LowTEMP 2.0, the training material will be further evaluated via testing sessions and involvement of target groups, translated into local languages and adjusted to national conditions; it will be used for the development of an e-learning programme. It will also be disseminated during national training seminars.
- The municipalities of Gulbene (Latvia), Ilmajoki and Kurikka (Finland), Tartu and Karlova (Estonia) will continue making use of LowTEMP Pilot Energy strategies.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

- A challenge in the partnership consisted of two project partners dropping out shortly after the project had started. Consequently, the project management had to search and find replacements: Kalundborg Municipality (Denmark) and Halmstad Energy and Environment (HEM), a Swedish district heating provider. These were successfully involved in the project LowTEMP, especially the involvement of HEM proved to be very valuable due to the innovative pilot activity.

- The prolongation, due to Covid-19, was crucial for the project partners to finalise all project activities and outputs successfully.

- Within the framework of the mid-term and the final conferences, intensified cooperation with other projects, initiatives and institutions was initiated. Among these are the H2020 project Cool DH, Halmstad University, HafenCity University, Euroheat & Power.

Final Project Conclusions

BalticRIM

Project title	Project duration
Baltic Sea Region Integrated Maritime Cultural Heritage Management	October 2017 - September 2020

Priority	Specific objective
Management of natural resources	Resource-efficient blue growth

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
2.62 million	2.44 million	x	PA Culture

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/balticrim-133.html	https://www.submariner-network.eu/balticrim

Lead partner (country)	Countries involved
State Archaeological Department of Schleswig-Holstein (Germany)	DE, FI, EE, LT, PL, RU, DK

Project summary

Teaser

The Interreg project BalticRIM contributed to integration of coastal and underwater cultural heritage such as ship wrecks and archaeological sites into maritime spatial planning by bringing heritage managers together with spatial planners and designating maritime cultural heritage.

The opportunity

In the waters of the Baltic Sea there is an impressive cultural heritage such as shipwrecks and archaeological sites. Currently, such heritage sites are not systematically included in maritime spatial plans across the Baltic Sea. The coastal and underwater heritage has the potential in strengthening brands of cities and regions, attracting talents and fostering tourism.

There is a need to standardise tools between Maritime Cultural Heritage (MCH) and Maritime Spatial Planning (MSP) practitioners to enable exchange and dialogue. Maritime spatial planning processes offer an opportunity for better protection of maritime cultural heritage if it is properly considered in these processes. Closer collaboration between these two areas can generate change in public awareness about Maritime Cultural Heritage and bring tangible economic benefits from properly protected and curated Maritime Cultural Heritage.

Final Project Conclusions

BalticRIM

DE	DK	EE	FI	LT	PL	RU
						

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Better integration ensured

The BalticRIM project fostered a new communication format between Maritime Cultural Heritage agencies and Maritime Spatial Planning experts from the municipal to the transnational level. Possible bottlenecks and concrete solutions to better integration of both areas were addressed by engaging planning agencies, municipalities, scientists, policymakers as well as fishermen, and NGOs. Next, tourism boards, diver associations, and entrepreneurs were invited into the collaboration in order to investigate the potential of Maritime Cultural Heritage for the blue economy.

Thanks to the continuous communication efforts with planning authorities, BalticRIM partners succeeded in shaping the national 2021 Maritime Spatial Planning development process, especially in Finland and Poland. The strengthened cooperation between Maritime Spatial Planning authorities and Maritime Cultural Heritage experts led to the development of joint recommendations on the protection of Maritime Cultural Heritage in the Environmental Impact Assessment of the Maritime Spatial Planning.

New recommendations released

Based on case studies the project partners published recommendations that address both groups of experts separately but also jointly. Practical recommendations are provided to improve cooperation during the MSP process. The importance of land-sea interactions is also stressed by insisting that not only underwater cultural heritage be considered in planning but maritime cultural heritage as a whole. In addition, an overview of the legal and administrative issues in integrating Maritime Cultural Heritage and Maritime Spatial Planning was provided. The overview contained a list of practices on the management of Cultural Heritage in the context of Maritime Spatial Planning across the Baltic Sea region countries. This covered the national processes of Maritime Spatial Planning development during 2017-2020 as well as the role of Maritime Cultural Heritage in the current blue economy initiatives, mainly in tourism.

Final Project Conclusions

BalticRIM

BalticRIM Data Portal available

The BalticRIM Data Portal enables to create new Maritime Spatial Planning (MSP) approaches for the integration of Maritime Cultural Heritage (MCH). Established to facilitate collaboration within an MCH-MSP community, the portal supports shared digital geodata infrastructure in identifying cross-border cultural heritage phenomena. It is designed for the transnational exchange of information, experiences, and know-how between Maritime Spatial Planning and Maritime Cultural Heritage practitioners as well as offers access to spatial information on Maritime Cultural Heritage sites in the Baltic Sea region.

Next steps

With new modes of communications, better dialogue among the relevant stakeholders, recommendations to improve planning processes and a new data portal the project has also managed to identify **the HELCOM-VASAB working group on MSP** as a forum for a continued dialogue on the integration of Maritime Cultural Heritage needs in Maritime Spatial Planning processes.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Final report: Integrating Cultural Heritage into Maritime Spatial Planning in the BSR

This publication presents recommendations based on the cases studies. They address separately cultural heritage agencies and Maritime Spatial Planning experts. The publication also provides an overview of the legal and administrative situation and of existing practices on the management of Cultural Heritage in the context of Maritime Spatial Planning across the Baltic Sea region countries. In addition, the publication considers the role of MCH in current blue economy initiatives, mainly in tourism.

balticRIM_Final_report.pdf (schleswig-holstein.de)

BalticRIM DataPortal

The BalticRIM Data Portal integrates the Maritime Cultural Heritage into the Maritime Spatial Planning. It includes a shared digital geodata infrastructure that enables to identify cross-border cultural heritage phenomena. It is designed for the transnational exchange of information, experiences, and know-how between MSP and MCH practitioners. It also offers access to spatial information on MCH sites in the Baltic Sea region gathered during the project.

balticRIM_Final_report.pdf (schleswig-holstein.de)

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The way to continued cooperation with Maritime Spatial Planning (MSP) authorities was paved by identifying the existing **HELCOM-VASAB working group on MSP** (ensuring coherent regional MSP processes in the Baltic Sea) as a promising forum for a permanent dialogue on the integration of Maritime Cultural Heritage (MCH) needs in MSP processes. It has been agreed that the MCH will be considered more strongly in the working group's work plan and MSP Roadmap, in particular through bi-annual debates on MCH.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

Several BalticRIM partners were engaged in the Blue Platform and Capacity4MSP platform projects. The main focus of collaboration with Capacity4MSP was on how data infrastructure such as BASEMAPS, developed in the BalticRIM DataPortal, can contribute to decision support and stakeholder involvement in MSP. Agencies or ministries competent in the area of MSP in all 9 Baltic Sea region countries were approached in different meetings. Organisations such as the HELCOM-VASAB working group on MSP, the EUSBSR PA Culture Coordinators and the Council of the Baltic Sea State Secretariat participated in the meetings and events.

Final Project Conclusions

RETROUT

Project title	Project duration
Development, promotion and sustainable management of the Baltic Sea Region as a coastal fishing tourism destination.	October 2017 - September 2020

Priority	Specific objective
Management of natural resources	Resource-efficient blue growth

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.13 million	3.07 million	x	PA Bioeconomy

Link to the project library	Link to the project's website
https://interreg-baltic.eu/project/retrout/	https://retrout.org

Lead partner (country)	Countries involved
County Administrative Board in Stockholm (Sweden)	SE, EE, LV, LT, FI, PL

Project summary

Teaser

An eco-brand developed by the Interreg RETROUT project enabled to promote the Baltic Sea as a destination for ethical and sustainable coastal fishing tourism.

The opportunity

Sustainable coastal fishing

Coastal fishing has steadily increased over the recent decades. The growing demand for coastal fishing triggers economic growth and provides the incentive to prolong the tourism season. The coastal fishing tourism sector in the Baltic Sea region has great potential for sustainable jobs and diversification of the fishery sector. However, the sector is highly dependent on ecosystem services which, in turn, are dependent on a good environmental status of marine and coastal areas. The RETROUT project aims to enable this sector to develop and promote sustainable coastal fishing tourism.

Sea trout as a key species in recreational fishing

One of the factors that affect growth in coastal fishing tourism is a balance in sea trout stocks, which are dependent on the environment and restoration measures. Sea trout is a key species in fishing tourism, and the economic value of a sea trout caught is high. Therefore, there is a need for a better understanding of how to ensure sustainable management of sea trout stocks. Sea trout can be found in the Baltic Sea, but it reproduces in rivers. It means that reproduction conditions such as free passages in rivers and nursery areas are crucial to secure the steady growth of sea trout populations.

Final Project Conclusions

RETROUT

Human interventions (e.g. mills or dams constructions) trigger obstacles for an increase in sea trout stocks. Thus, improvement and sustainable management of river habitats is an important measure to help the sea trout populations to thrive.

EE	FI	LT	LV	PL	SE
					

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

The RETROUT project is characterised by a truly sustainable and holistic approach to the development of touristic services.

Destination development programme

The project has worked to strengthen the stocks of sea trout by improving river habitats in the Baltic Sea region. Only sustainable stocks can support the sustainable use of fish as a natural resource. This in turn serves as the basis to create and market the Baltic Sea region as a sustainable recreational fishing destination. Following this approach, the partners from six countries across the Baltic Sea region rolled out a destination development programme. They developed 5 pilot sites in Stockholm archipelago (Sweden), Lahemaa (Estonia), Kurzeme (Latvia), Klaipeda (Lithuania), and Gulf of Gdansk(Poland). The pilots imply the development of touristic destinations where sustainable fishing trips and packages can be booked.

Joint activities help to tackle the transnational challenge

The project brought together sportfishing service providers, fishing guides and their associations, regional authorities, coastal municipalities and tourist boards. Transnational networking and peer learning resulted in the creation of a common eco-label and a platform to access fishing tourism-related services: Baltic Sea Fishing (BSF). For example, the BSF fishing guides support measures to improve the natural production of coastal and migratory fish by earmarking funds derived from fishing tourism to local fish conservation measures.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

River restoration in the BSR: best practices and recommendations for successful projects

The report, presents summary results, best practices, and recommendations for successful river restoration projects in the Baltic Sea region. It focuses on river restorations aimed at improving migratory fish populations, especially sea trout. The report describes the best practices for the entire river restoration project process, from the initial identification of the problem to the phase of impact and success evaluation. It is based both on a study evaluating factors of success and failure from nearly 100 past restoration projects in the BSR, and on 16 concrete river restoration projects comprising fishways installations, habitat restorations, water quality improvement, and dam removal plans. The Baltic Marine Environment Protection Commission (HELCOM), one of the project partners, is a publisher of the report.

https://helcom.fi/wp-content/uploads/2021/10/River-restoration-in-the-Baltic-Sea-region-BSEP177.pdf

See also:

"Success or failure or river restoration projects" - A multi-factorial analysis in the BSR
https://retrout.org/wp-content/uploads/2021/08/Sucess%20or%20failure%20of%20river%20restoration%20projects.pdf?_t=1630271143

"Sea trout populations and rivers in the Baltic Sea"

https://helcom.fi/wp-content/uploads/2022/03/Sea-trout-populations-and-rivers-in-the-Baltic-Sea.pdf

Eco-brand "BalticSeaFishing" and ethical code of conduct

The development of an eco-brand "BalticSeaFishing", is key to the RETROUT approach to destination development and marketing of sustainable tourism activities. It is based on an ethical code of conduct for fishing guides and sport fishing service providers and destinations. Ethical fishing is the Unique Selling Point of "BalticSeaFishing", and it is used in the marketing of fishing trips. The ethical code of conduct applies to all fishing performed under the "BalticSeaFishing" label. It includes commitments such as rules for handling the fish, giving back to Baltic Sea fish populations, reducing

environmental impact and improving knowledge about fish stocks. The eco-branding concept is beautifully described and demonstrated in a 30 minutes project documentary "Blue Change".

BalticSeaFishing web platform

The BalticSeaFishing platform was created for marketing fishing trips under the project's eco-brand and promoting the Baltic Sea as a destination for ethical and sustainable fishing tourism. It is a gateway through which anglers can find a presentation of all participating destinations, the fishing guides and their fishing trip packages, information about the ethical code and Baltic sea fish species. Customers can find information about the services offered and reserve trips through a trip reservation plug-in.

https://balticseafishing.com/

River restoration

18 river restoration projects in 11 rivers in Sweden, Estonia, Latvia, Lithuania and Poland were fully or partly performed during the course of the project. The restoration activities included interventions such as fish passes, biotope restorations, water quality improvement, anti-poaching campaigns, and dam removal plans. The network of restoration workers in the participating countries will continue to exchange experiences after the project. Dissemination to local river restoration workers has spread knowledge on restoration practices. For example, the habitat improvement activities in Smeltalė river, Lithuania, was the first habitat improvement performed in Lithuania. Inspired by its results, several other projects have been planned, including a dam removal.

https://retrout.org/activities/assessment-of-status-and-management-of-seatrout-rivers-and-stocks/#toggle-id-2

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The Association of Swedish fishing guides took over the management of the BalticSeaFishing platform and of the eco-brand and continues cooperation with the other partner destination management organisations. The destination development programme and the peer-learning network for fishing tourism started transnational cooperation that continued after the project. Fishing guides realised the benefits of transnational cooperation and raise awareness for the fishing guide guild as skilled professionals whose knowledge and competence needs to be considered when discussing management plans for the Baltic Sea fish stocks.

The habitat improvement activities in Smeltalė river, Lithuania, was the first habitat improvement project performed in Lithuania. Inspired by the positive results from this activity, several other projects are planned, including dam removal, of which one has already been completed.

Final Project Conclusions

RETROUT

Monitoring programmes have been set up for all restoration activities performed within the project in order to follow-up the effect of the river restoration activities on the production of young sea trout.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

- RETROUT had a good partnership, especially in the river restoration area and could count on HELCOM as a partner to publish the reports covering the ecological part of the project (river restoration and fish stock status assessment)
- The involvement and networking of local actors and stakeholders was also quite successful, with some destinations being more developed than others and seemingly more active.
- RETROUT was a charismatic project but experienced a lot of setbacks because of the covid pandemic and its effects on the tourism sector, which is central to the project. Many activities (site visits and marketing, participation in tourism fairs) had to be canceled and the project was not very resilient in trying to find marketing alternatives.
- The scope of some outputs was reduced over the course and in the final phase of the project.

Final Project Conclusions

MAMBA

Project title	Project duration
Maximised Mobility and Accessibility of Services in Regions Affected by Demographic Change	October 2017 - September 2020

Priority	Specific objective
Sustainable Transport	Accessibility of remote areas and areas affected by demographic change

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.54 million	3.17 million		

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/mamba-118.html	https://www.mambaproject.eu/

Lead partner (country)	Countries involved
Diaconie of Schleswig-Holstein (Germany)	DE, SE, LV, FI, DK, PL

Project summary

Teaser

The Interreg project MAMBA introduced innovative mobility solutions making public transport, welfare services and goods delivery more convenient and accessible in rural areas across the Baltic Sea region.

The challenge

The Baltic Sea region is facing demographic change with significantly decreasing and aging populations in rural areas. The concentration of employment possibilities and social activities primarily in urban areas triggers travelling from remote areas, while the supply of services covering public transport, logistics (home deliveries) and welfare (home care) is decreasing. As regards so called "people-to-service" mobility, the decline of possibilities to access goods and services in rural areas is significant, especially for vulnerable groups like older and disabled people, or low-income families for whom access to well-functioning mobility infrastructure is crucial for a good quality of life.

As concerns "service-to-people" mobility, when authorities and service providers try to reach out to inhabitants, the tendency is unfortunately the same: a decline in provision of services due to the decreased number of service users and more costly options to offer.

Besides, the decreasing number of inhabitants in rural areas has led to increasing mergers or even closure of vital institutions like hospitals, banks, post-officers, kindergartens, schools, etc. This implies that the inhabitants who still prefer to stay in rural areas, risk getting disconnected.

Final Project Conclusions

MAMBA

Lead partner (country)

The MAMBA project aimed to promote “people-to-service” and “service-to-people” mobility solutions in rural areas. The project wanted to introduce innovative mobility solutions such as mobility as a service systems (MaaS), transport on demand (ToD), care sharing and ride-sharing applications to overcome the existing mobility challenges.

DE	DK	FI	LV	PL	SE
					

Project’s highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Learning together

The MAMBA project gathered 15 partners from 6 countries across the Baltic Sea region to integrate the existing mobility infrastructure with the new innovative mobility solutions. The project targeted local and regional public authorities with limited transport budgets and insufficient knowledge needed for the integration of mobility options. Besides, the project approached public transport and welfare providers interested in more flexible approaches, better financial support schemes, and business cases. For better integration of civil society, the local interest groups and non-governmental organisations joined the project activities.

Mobility Centers established

The project developed nine Mobility Centres (MC), physical and digital, which aim to provide information and services around different mobility solutions. The Mobility Centers demonstrated that substantial cost savings can be generated by integrating different mobility solutions and pooling mobility resources of public and private transport operators. Next, the Mobility Centers served as drivers of interdepartmental and interinstitutional cooperation generating new concepts and ideas in traditional transport planning, such as ride-sharing, flexible demand-responsive modes of transport, or even avoidance of transport through schemes to increase the accessibility of services.

The transnational cooperation proved that the focus should not be on mere financial costs and benefits, but a wider socio-economic value generated through approaches beyond traditional public transport schemes. Thus, bringing together the different stakeholders and breaking the “silos” during the development of the Mobility Centers enabled the involved parties to learn and jointly develop the optimal mobility solutions.

Final Project Conclusions

MAMBA

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Digital Mobility Centers

Digital Mobility Centre in North Karelia, Finland

The Mobility Centre in North Karelia combines all the relevant transport and mobility data and brings together different forms of public transport in one user-friendly digital platform – a public transport portal called POJO, launched in February 2020, and a smartphone application. The portal shows the timetables and routes of regional buses, long-distance buses, trains, and transport-on-demand services. It contains information about airport coach transfers, taxi services and carpooling groups. The main users of POJO are local inhabitants and tourists.

https:// pojo.pohjois-karjala.fi/

The Mobility Centre in Plön, Germany

The Mobility Centre in Plön, Germany is a digital solution with the main objective of gathering, structuring and providing easily accessible, reliable information about mobility offers. The aim is to make trip planning simple and accessible. In addition to traditional public transport routes, it will continuously integrate the ever-emerging market of new, innovative mobility services in the region. The system is planned to be integrated with tourist offices as part of a digital-physical Mobility Centre network.

https://ploen-mobil.de/

The Mobility Centre in Vejle, Denmark

The Mobility Center in Vejle is a digital solution combining an app for a highly innovative rural ride-sharing scheme with a travel planner connected to the national public transport database. The integration of information about available ride-sharing services and traditional public transport solutions on the selected route offers convenience in mobility planning for the users. Besides, it encourages multi-modality in the countryside, where travel options are scarce. In addition, an agreement with the municipality makes it possible to use public bus stops to pick up and drop off passengers. This way, both transport modes can be easily combined.

https://nabogo.com/partnerskaber/

Transport-on-Demand service in Vidzeme Region, Latvia

Transport-on-Demand (ToD) is a unique rural mobility solution. It is an alternative to public transport to increase mobility in remote rural areas, where public transport is poor or non-existent. ToD means that a small bus or a typical passenger car can be ordered by telephone. A Mobility Coordination Centre then bundles the demand for rides into a specific route on a specific timetable, so that several travellers can be conveyed on one trip. ToD vehicles adjust their routes based on demand, rather than

sticking to a fixed route or timetable. Passengers can also order return rides - a service the users rate particularly highly.

https://www.mambaproject.eu/rural-mobility-solutions/

Rural Car-Sharing and Mobility Centre Cuxhaven, Germany

In Cuxhaven, Germany the municipality has opened a Mobility Centre and gradually rolled out an ambitious concept linking the multitude of conventional and new mobility solutions. The Centre provides information and services about all regular public transport provisions as well as Transport-on-Demand and shared mobility solutions such as the rural car-sharing service in Neuenwalde. A single hotline combining the scattered Transport-on-Demand services in the county has been provided. At the moment, trips can be planned from initial to final destinations, including booking.

https://www.mambaproject.eu/rural-mobility-solutions/

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The rural mobility seminar series has featured different topics on mobility and accessibility of services in rural areas and provided input from experts within and outside the project. The dissemination and exchange with the audiences ranging from several dozens to more than one hundred at the final event (the final web conference series) has increased institutional knowledge and capacities. The collaboration has gone beyond mere presentation of results. Thus, one of the examples is an integration of three MAMBA pilots within the in-depth evaluation component of the SMARTA project (initiated by the European Parliament, implemented by DG Regio).

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

N/A

Final Project Conclusions

R-Mode Baltic

Project title	Project duration
Ranging Mode for the Baltic Sea	October 2017 - September 2020

Priority	Specific objective
Sustainable Transport	Maritime safety

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.43 million	3.1 million	x	PA Safe

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/r-mode-baltic-90.html	

Lead partner (country)	Countries involved
German Aerospace Center (DLR) (Germany)	DE, PL, SE, NO

Project summary

Teaser

The Interreg project R-Mode Baltic launched a technical system for a safer ship navigation, and placed the Baltic Sea as a first operational navigation test area for maritime terrestrial navigation on the global map.

The challenge

As Baltic Sea is known for frequent shipping accidents like groundings, collisions and other types of accidents, the challenge was to prevent and minimise the accidents´ frequency. The causes of the accidents are partly related to human-driven failures and partly to technical inefficiencies. The maritime users expressed their needs in more optimal solutions to ensure more accurate positioning, navigation and time information.

While navigating, the ships need to ensure safety when the established Global Navigation Satellite Systems (GNSS) fail due to interference or jamming. A technical system that would allow for safe ship navigation under these conditions was lacking. Signal disturbances would cause wrong positioning or temporary outages of the GNSS positioning equipment.

The project R-Mode Baltic intended to tackle the challenges related to disturbances and develop a new independent of GNSS system that would allow a safe and more accurate positioning.

Final Project Conclusions

R-Mode Baltic

DE	DK	EE	FI	LT	LV	NO	PL	RU	SE
									

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

The R-Mode Baltic project as a forerunner

The R-Mode Baltic project became a forerunner for the implementation of the maritime terrestrial navigation system. The system is called R(anging)-Mode and enables to increase the safety of maritime transport. The project brought together research institutions, national maritime service providers and industry partners. The partners further developed the R-Mode technology and verified R-Mode as a suitable approach for coastal navigation.

Furthermore, the project started the standardisation process of R-Mode for maritime infrastructure. The first guideline for R-Mode on very high frequencies was finished. Further guidelines, recommendations and performance standards are under development. Additionally, the project introduced ship and shore site R-Mode prototypes.

The first worldwide large-scale R-Mode testbed introduced

The project set up the first worldwide large-scale R-Mode testbed. With its transnational character, the testbed brings Germany, Poland, Sweden, and Denmark together in their efforts to protect the environment and prosperity of the Baltic Sea region by reducing the threat of shipping accidents. The testbed provided a platform for a variety of tests and further development of the navigational system. Furthermore, it can be used for training, demonstration and gathering experience from system operation

Supporting material developed

Besides the R-Mode system applied in the southern Baltic, the project generated the material which includes R-Mode signal design for two communication systems, the approaches for digital signal processing and methods for positioning with the help of R-Mode signals. The Interreg project R-Mode Baltic used EUR 3.1 million from the European Union to improve maritime safety, prevent the increasing number of shipping accidents, to test the alternative technical solutions, and make available the documented work for broader use.

Final Project Conclusions

R-Mode Baltic

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Ranging-Mode technology developments

The project developed the R-Mode technology for the implementation into two types of broadcast signals widely available for maritime shore infrastructure. The documented work covers the results of R-Mode signal design for two communication systems, the approaches for digital signal processing and methods for positioning with the help of R-Mode signals. Furthermore, it displays the results of successful R-Mode tests in the port of Gdynia, at the Baltic Sea and in Germany. These documents address challenges and solutions for R-Mode and provide guidance to maritime service providers, manufacturers of navigation equipment, ship owners, pilots, and nautical staff.

https://www.r-mode-baltic.eu/publications/

R-Mode Baltic testbed

Eight maritime radio beacons were upgraded in order to transmit synchronised R-Mode signals. They span a transnational network which enables terrestrial navigation in coastal waters in the southern Baltic Sea. The project prepared four additional sites for the deployment of R-Mode ready base stations of the very high frequency data exchange system which were developed as prototypes. The testbed opened a variety of tests and further development of the navigational system and could be used for training, demonstration and gathering experience from system operation. The testbed addresses especially national maritime service providers and standardisation organisations to develop R-Mode as a world-wide accepted terrestrial navigation system.

https://www.r-mode-baltic.eu/

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The project consortium started the standardisation process of R-Mode in the organisation for maritime infrastructure. The first guideline for R-Mode on very high frequencies was finished. Further guidelines, recommendations and performance standards are under development or planned. The testbed will give valuable input to these activities.

Final Project Conclusions

R-Mode Baltic

The project R-Mode Baltic 2 will implement long-term evaluations of the R-Mode performance and new R-Mode concepts in the Baltic testbed. Furthermore, the testbed will be extended by increased monitoring capabilities.

The R-Mode Baltic testbed is open to be used by other organisations and projects. The project partners are able to support actives at shore and ship sites. This could be the testing of new R-Mode concepts and equipment.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

Safe shipping is in the interest of all Baltic Sea states. For R-Mode Baltic it was important to include national maritime service providers of riparian states of a larger region in the project consortium. Furthermore, the goal to set up an operational R-Mode test system required in addition the expertise of different research institutions and the know-how of prototype development. The BSR Programme was perfect to bring all experts together and to enable the successful and sustainable implementation of our ideas.

R-Mode Baltic was an implementation project which was strongly affected by the Covid-19 pandemic. Successful completion was only possible after project extension and using flexibilities offered by the BSR Programme (budget flexibility, reallocation of budget).

Final Project Conclusions

COMPLETE

Project title	Project duration
Completing management options in the Baltic Sea Region to reduce risk of invasive species introduction by shipping	October 2017 - September 2020

Priority	Specific objective
Sustainable Transport	Environmentally friendly shipping

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.23 million	3.12 million	x	PA Ship

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/complete-113.html	https://www.balticcomplete.com/

Lead partner (country)	Countries involved
Kotka Maritime Research Associatino (KMRA) (Finland)	FI, LT, PL, SE, DE, EE, LV

Project summary

Teaser

The Interreg project COMPLETE contributed to the reduction of the uncontrolled introduction of invasive species in the region by introducing a unified approach to monitoring and operational risk assessment on a national level.

The challenge

Shipping contributes to the uncontrolled introduction of invasive species to the Baltic Sea, which has severe environmental and economic consequences. Such concrete challenges as loss of native species, habitat change, reduced landings of coastal fisheries, damage to aquaculture, threatened biodiversity and natural ecosystems of the Baltic Sea are to mention a few. Invasive species introduction and spreading of alien species can be reduced by introducing harmonized solutions shared on a regional level.

Monitoring of new introductions and assessment of the main introduction vectors are needed to optimise management and to be able to meet the targets of the Baltic Sea Action Plan (no new introductions of invasive species) and the EU Marine Strategy Framework Directive (non-indigenous species introduced by human activities at levels that do not adversely alter the ecosystems).

For the harmonised implementation of the International Maritime Organization Ballast Water Management Convention better tools and guidance would be needed. On this background, the project came with the proposal for a regional biofouling management roadmap for the Baltic Sea region and a monitoring programme of non-indigenous species (NIS) for the Baltic Sea.

Final Project Conclusions

COMPLETE

DE	DK	EE	FI	LT	LV	NO	PL	RU	SE
									

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

The COMPLETE project developed practical tools and proposals for preventing the introduction of alien species to the Baltic Sea.

Streamlined actions

For preventing the spread of harmful invasive species and potentially pathogens, the project developed the tools for harmonised implementation of the IMO Ballast Water Management Convention. By updating the AquaNIS information system, which is a multipurpose data provider on non-indigenous species, the project equipped the public authorities and shipping companies with useful tools in assessment, selection of Target Species and storage of port baseline data. New approaches to the storage of metadata on molecular markers of harmful aquatic organisms and pathogens as well as selection of likely biofouling organisms ensured a more aligned, holistic and reliable way of addressing the challenges.

Biofouling Management mapped

Based on best practices on biofouling management, the project additionally elaborated a proposal for Regional Baltic Biofouling Management Roadmap which serves as a recommendation for policy makers to implement sustainable biofouling management strategies in shipping and boating. By integrating the contents of the Roadmap into official HELCOM documentation in the project extension phase, the project paved the way for positioning the Roadmap strategically and created value added for the implementation of the coming HELCOM Baltic Sea Action Plan. The upgraded Risk Assessment tool under the HELCOM-OSPAR Joint Harmonised Procedure equipped authorities and shipping companies with needed knowledge. Evaluation of non-indigenous species appearance risks between two ports in the OSPAR and HELCOM areas has become feasible.

Non-indigenous species better monitored

Thanks to the project, non-indigenous species (NIS) in the Baltic Sea can be monitored in a coordinated and consolidated way by the HELCOM countries. The upgraded monitoring programme will facilitate reaching the targets of the Baltic Sea Actions Plan (no introductions of alien species

from ships) and the EU Marine Strategy Framework Directive (non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems).

Thanks to EUR 3.12 million of support from the European Union, the Interreg project COMPLETE ensured the reduction of the uncontrolled introduction of invasive species and introduced a unified approach to monitoring and operational risk assessment to streamline the national actions across the Baltic Sea region.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Proposal for a Regional Baltic Biofouling Management Roadmap

Proposal for a Regional Baltic Biofouling Management Roadmap serves as a recommendation for policy makers to implement harmonised biofouling management strategies for the entire Baltic Sea region. The document combines the findings in the COMPLETE project outputs and deliverables related to biofouling management in the Baltic Sea region. It delivers concrete recommendations for a sustainable biofouling management in the region for the shipping and boating sector.

As a part of the proposal for a Regional Baltic Biofouling Management Roadmap, the Guide on best practices on biofouling management provides information and guidance for effective biofouling management strategies suitable for the Baltic Sea region.

https://balticcomplete.com/publications/project-reports/320-proposal-for-a-regional-baltic-biofouling-management-roadmap

Guide on best practices on biofouling management

https://balticcomplete.com/publications/project-reports/321-guide-on-best-practices-of-biofouling-management-in-the-baltic-sea

The upgraded Risk Assessment tool under the HELCOM-OSPAR Joint Harmonised Procedure

The upgraded Risk Assessment tool under the HELCOM-OSPAR Joint Harmonised Procedure allows authorities as well as shipping companies to quickly evaluate the risk of non-indigenous species introduction between two ports in the OSPAR and HELCOM areas when applying and granting exemptions for ballast water management under certain low-risk conditions of the IMO Ballast Water Management Convention. In addition, the Risk Assessment tool hosts an extensive database of species observations and environmental data publicly accessible for research institutions.

https://maps.helcom.fi/website/ra_tool/

Final Project Conclusions

COMPLETE

Monitoring programme of non-indigenous species (NIS)

The monitoring programme of NIS proposed by the COMPLETE project is an important tool for all HELCOM countries in conducting monitoring in the Baltic Sea. This makes NIS monitoring of utmost importance as its description has been updated to fulfil the requirements of present legislation.

Monitoring of new introductions and assessment of the main introduction vectors are needed to optimise management and to be able to meet the targets of the Baltic Sea Action Plan (no new introductions) and the EU Marine Strategy Framework Directive (non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems). Monitoring programme on NIS will be part of the official monitoring programme of HELCOM and used by all Contracting Parties as part of their national monitoring programmes.

https://portal.helcom.fi/meetings/STATE%20-%20CONSERVATION%2014-2021-824/MeetingDocuments/3MA-2%20Draft%20HELCOM%20monitoring%20programme%20on%20NIS.pdf

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

Monitoring programme on non-indigenous species will be part of the official monitoring programme of HELCOM and used by all Contracting Parties as part of their national monitoring programmes depending on the resources.

The upgraded risk assessment tool under the Joint Harmonized Procedure will allow authorities as well as shipping companies to evaluate the risk of alien species introduction between two ports in the OSPAR and HELCOM areas when applying and granting exemptions under regulation A-4 of the IMO BWMC.

The Proposal for a Biofouling Management Roadmap delivered concrete recommendations for a sustainable biofouling management in the Baltic Sea region. It will be of high value for the implementation of the coming Baltic Sea Action Plan. The roadmap will serve as one source of information for the review of the IMO Biofouling Guidelines as well as for their regional implementation.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

In the COMPLETE project, scientists and experts from seven Baltic Sea states cooperated with the competent authorities dealing with environmental and maritime issues to find solutions for managing the risks of alien species transported by shipping. This cooperation was carried out together with shipowners and other relevant stakeholders. Involvement of the stakeholders and target groups in the project activities has been key for the good results in COMPLETE. Various means

of engagement were applied: workshops, interviews, questionnaires and conferences. The overarching role of HELCOM was invaluable, as the joint decisions on these issues are to be taken among the HELCOM countries to achieve regionally harmonized decisions.

Final Project Conclusions

ECOPRODIGI

Project title	Project duration
Eco-efficiency to maritime industry processes in the Baltic Sea Region through digitalisation	October 2017 - March 2021

Priority	Specific objective
Transport	Clean shipping

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
4.24 million	3.81 million	x	

Link to the project library	Link to the project's website
https://interreg-baltic.eu/project/ecoprodigi/	https://ecoprodigi.eu

Lead partner (country)	Countries involved
University of Turku (Finland)	FI, DK, SE, NO, LT

Project summary

Teaser

The project ECOPRODIGI made the processes in the maritime industry more eco-efficient and sustainable by introducing cutting-edge digital solutions.

The challenge

Multifaceted challenges in the shipping industry

The shipping industry is increasingly challenged by the pressure on environmental performance, fierce global competition and emerging digital technologies in the market. Compliance with the new regulations and demands on reduced emissions are viewed as one of the largest challenges for the shipping industry in the future. In parallel, the shipping industry is facing increasing competition from the countries in Asia, which triggers a new way of running a business. It implies cuts of costs in shipping, in shipbuilding as well as the overall supply chain. In other words, there is a need to produce more value with less resources and less pollution. Finally, the uptake of the emerging digital technologies, e.g. big data, sensors, cloud services, virtual and augmented reality, 3D scanning, internet-of-things-based solutions, etc., would optimise many complex processes and ensure eco-efficiency. A purchase and integration of different technologies would require new decisions and investments.

New perspectives in tackling the challenges

The challenges are not new to the public authorities and policymakers, but there is still a lack of the tools to communicate the need for targeted actions to the end-users. The focus while solving the problems is primarily on fuel alternatives and consumption, and less attention is dedicated to the fact that a considerable share of the ecological footprint of ships is generated in the choices made in the operations and processes along the whole vessel life-cycle. The whole value chain of design, building, stowage, usage, maintenance, and conversion processes should be smartly streamlined in terms of eco-efficiency.

Final Project Conclusions

ECOPRODIGI

Thus, there is a need in building capacity of the shipping industry to upgrade eco-efficiency in operations through training and designing a digitalisation road map for increasing eco-efficiency.

The project ECOPRODIGY intended to enable the shipping industry end-users to apply new tools and capacities to increase eco-efficiency and competitiveness by introducing digital solutions.

DK	FI	LT	NO	SE
				

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

The project ECOPRODIGI brought together 21 partners from Finland, Sweden, Denmark, Norway and Lithuania to jointly develop digital solutions to ensure eco-efficiency in the shipping industry processes. It addressed shipping companies, ports, shipyards and their suppliers, studied the existing eco-inefficiencies in their processes and piloted digital technologies.

Tailored solutions in targeted technological cases

The partners mapped the process eco-inefficiencies in three dimensions, specifically in digital performance monitoring, cargo stowage optimization and process optimization at shipyards. The mapping was a point of departure for the development of digital solutions that would save money, human resources, time and the environment. As an example, Swedish and Danish partners analysed vessel performance by testing eco-efficiency assessment tools on four ferry routes in Denmark, and on larger vessels on-route between Denmark and Sweden. The participating vessels received recommendations on how to optimise their route and reduce fuel consumption. The partners analysed methods and processes of cargo stowage and mapped the vessels´ stay in harbour. Another example is a cooperation between Finnish and Lithuanian shipyards which revealed the key eco-inefficiencies in internal processes at the Finish shipyard.

Equipped through pilots

The partners piloted digital tools and concepts with a focus on three technological cases and allowed the users to mitigate critical eco-inefficiencies in processes being assisted and advised by the project partners. Among the concrete actions, the users tested to change their working processes, integrate

the digital technologies in their systems, or train their staff. Such aspects as education and training were embraced by the partners who developed two training programmes on shipyard processes and stowage operations. The aim of the training was to spread the knowledge about the new digital solutions, encourage the users to apply them in planning and operating. The solutions were summarized in 3 story maps and 5 videos.

Ensured outreach to a policy level

To ensure adaptability and viability of the results, the project partners developed policy briefs that contained the main findings, implications and recommendations of each technological dimension. The focus was on concrete actions from the policymakers´ side on how to support the industry digitalisation. The outcome of these targeted actions would be more eco-efficient and sustainable shipbuilding and ship operations.

Thus, the project ECOPRODIGI used EUR 3.81 million to introduce digital solutions and make the processes in shipping and maritime industries more eco-efficient.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Digitalisation roadmaps for increasing eco-efficiency

Two roadmaps "Maritime in the 21st Century" (Ro-Ro shipping) and "Road to Shipyard 4.0" (shipyard processes) serve as a guiding document for industry to better prepare for digitalisation. The roadmaps contain a brief history of maritime developments, current state analysis, and the future technology roadmap. The visualisation on a timeline allows to get information about the digital solution, what is the current way of operating, what benefits does the solution bring, what is needed for the technology to become a standard way of operating, and a need of policy actions. The roadmaps are for policymakers, industry, technology developers and researchers.

https://ecoprodigi.eu/wp-content/uploads/2020/11/Maritime-in-the-21st-century.pdf

https://ecoprodigi.eu/wp-content/uploads/2020/11/Road-to-Shipyard-4.0.pdf

Training programs

Two training programs include one module for shipyard eco-systems with focus on the optimisation of shipbuilding processes at shipyards, while another module is for shipping and port activities. The first training programme aims to equip shipyards and their suppliers with needed competences in training their staff in using digital tools in yard process optimisation. The other training programme is for shipping companies and ports to enable RO-RO shipping companies, terminals, and clients to ensure fuel savings, improved RO-RO vessel utilisation and reduced waiting times for clients. The focus is on the integration of IT systems, developing and testing advanced RO-RO cargo stowage or

load planning tools, and facilitating the design of more efficient new work procedures on terminals / ships.

https://ecoprodigi.eu/wp-content/uploads/2020/12/Providing-piloting-and-training-for-shipyard-ecosystems_Pilot-training-results.pdf

https://ecoprodigi.eu/wp-content/uploads/2021/01/Providing-training-for-shipping-and-ports-activities-in-the-Baltic-Sea-Region.pdf

Policy briefs

Policy briefs focus on three technological dimensions such as digital performance monitoring, cargo stowage optimization and process optimization at shipyards. The briefs contain the key findings of each technological dimension as well as practical recommendations on how to strengthen digitalisation and eco-efficiency in the identified areas. Policymakers on international, EU, national and regional levels as well as the maritime industry and interest groups can find inspiration and concrete guidelines in the policy briefs.

https://ecoprodigi.eu/publications

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

Shipping companies from Denmark, Finland and Sweden as well as some shipyards from Finland and Lithuania are planning the implementation of the piloted solutions in an extended number of vessels and processes. Besides, one of the participating in the project SME from Finland will test and integrate the process management tools in the construction industry, thus extending the sectoral application. In addition, the web-based application on improving welding processes will be further developed and tested on new processes in the maritime industry.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

N/A

Final Project Conclusions

BSR electric

Project title	Project duration
BSR electric - Fostering e-mobility solutions in urban areas in the Baltic Sea Region	October 2017 - September 2020

Priority	Specific objective
Sustainable Transport	Environmentally friendly urban mobility

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.83 million	3,66 million		

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/bsr-electric-121.html	https://www.bsr-electric.eu/

Lead partner (country)	Countries involved
Hamburg University of Applied Sciences (Germany)	DE, DK, SE, NO, FI, EE, LV, PL

Project summary

Teaser

The Interreg project BSR electric fostered and integrated e-mobility solutions such as e-logistics, e-bikes, e-buses, e-scooters, and e-ferries, in urban transport systems in eight countries across the Baltic Sea region.

The opportunity

The cities in the Baltic Sea region are growing and driving economic development. At the same time, the cities are big polluters, being responsible for the CO2 and other greenhouse gas emissions. The more extensive use of various electric mobility solutions e.g. e-logistics, e-bikes, e-buses, e-scooters, and e-ferries, would help the cities to tackle the challenges and contribute to a greener region.

However, as the know-how in the application of the electric mobility solutions among urban transport planners and decisionmakers is still limited and fragmented, more needs to be done to improve the situation. More insights into how to strengthen institutional capacities concerning electrification of urban transport are needed.

The project aimed to enhance the use of electric vehicles in city transport systems such as public sector fleets, public transport and bike sharing in order to reduce CO2 emissions and pollution. The
public authorities, business, academia and NGOs from eight countries across the Baltic Sea region wanted to explore the potential of e-bikes, e-buses, e-ferries and other e-vehicles, as well as how to integrate e-mobility into urban transport strategies.

Final Project Conclusions

BSR electric

DE	DK	EE	FI	LV	NO	PL	SE
							

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work

The gained knowledge matters

The project BSR electric has increased the knowledge of decision-makers concerning the potential of e-mobility solutions in urban transport systems. The knowledge gained has been further diversified in various ways in the participating institutions and their networks. The project targeted public administrations, public and private fleet managers, municipal companies, public and private transport operators, and other stakeholders interested in sustainable technological options and feasible solutions to integrate e-mobility into the urban transport system.

A variety of activities

The project´s pilot activities (seven use cases) have outlined how different e-mobility applications can be implemented in urban areas. The use cases provided model solutions, i.e. convincing evidence, for fostering the implementation, replication, and upscaling of the selected electric transport solutions. The lessons learned not only guided public authorities, companies, planners, and transport providers in the process of integrating the solutions into urban transport strategies but also contributed to transnational networking and learning. The project summarised all the achievements in an intuitive interactive manner on the results page, https://www.bsr-electric.eu/results. The interactive city map, being featured on the page, resembles a part of the "Baltic Sea Region Roadmap for Urban E-Mobility" and embeds the project's use cases in the context of the urban transport system of a Baltic Sea region city. The project BSR electric inspired and raised awareness of feasible solutions to transform cities into more liveable places.

Stimulating investments in electric vehicles and charging infrastructure

Besides, the project BSR electric strengthened the ability to attract new financial resources, i.e. stimulating investments into urban electric transport solutions. The project closely collaborated with the decision-makers on a set of means and ways to finance urban e-mobility solutions.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Final Project Conclusions

BSR electric

Theme specific recommendations

The hands-on recommendations are produced to guide public institutions and private businesses in taking the "right" informed decisions. The recommendations serve as a helpful means to fostering decisions to step up on e-mobility in urban and municipal settings:

E-Vans and e-Logistics - Action Checklist for Municipalities, local and national Politicians

https://www.bsr-electric.eu/content/7-results/bsr-electric-checklist-e-vans-and-e-logistics_final_june-11-2020.pdf

E-Buses - Action Checklist for Municipalities and Public Transport Providers

https://www.bsr-electric.eu/content/7-results/bsr-electric-checklist-e-buses_final_june-11-2020.pdf

E-Bikes - Action Checklist for Municipalities and Companies

https://www.bsr-electric.eu/content/7-results/bsr-electric-checklist-e-bikes_final_june-11-2020.pdf

E-Scooters - Action Checklist for Municipalities and Organizations

https://www.bsr-electric.eu/content/7-results/bsr-electric-checklist-e-scooters_final_june-11-2020.pdf

E-Ferries - Action Checklist for Municipalities

https://www.bsr-electric.eu/content/7-results/bsr-electric-checklist-e-ferries_final_june-11-2020.pdf

Online learning module on urban e-mobility applications

A set of submodules covers various formats (text, pictures, video, audio, interactive (quiz) features) to reach out to the heterogeneous group of e-mobility stakeholders. This online guidance is for decision- and policymakers in public authorities as well as urban transport actors who are challenged to implement sustainable urban mobility solutions in their cities. Next, the decision-makers of tomorrow, i.e. master students in related fields of studies, will find the relevant information, for example, as input for master theses or further research.

The virtual learning arrangement has been promoted worldwide to academia, public and private actors. Due to its unique open-access design and placement on an open-access learning platform owned by PP01 HAW Hamburg, it can be accessed by all interested stakeholders.

https://dl4sd.org/course/index.php?categoryid=4/

Baltic Sea Region Roadmap for Urban E-Mobility

The Baltic Sea Region Roadmap for Urban E-Mobility compiles targets urban transport planners, municipal and regional decision-makers and civil servants, researchers, executives of city-owned companies, and public transport providers in cities of the Baltic Sea region. The Roadmap is disseminated via a nested 4-layer approach. The four different formats vary in their information depth and content and thus cater to specific target groups. The aim is to introduce to the key factors shaping the decision-making on investments into e-mobility solutions and the development of

sustainable and cost-effective operation concepts. Against this background, this roadmap is divided into four parts: 1) Introduction to the thematic of e-mobility solutions in urban areas and sustainable mobility concepts in times of climate change; 2) Presentation and analysis of potential e-mobility applications tested within the BSR electric project; 3) Showcasing inspiring sustainable mobility projects; and 4) Conclusions on e-mobility solutions in urban areas in the Baltic Sea region.

www.bsr-electric.eu/news/roadmap-now-online

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

Partners continue, for example, to be integrated in further expert stakeholder networks based on the successful project work. In Hamburg, the work on e-buses continues and HAW is a part of a local expert group of the INTERREG Europe project e-Bussed that aims to foster the upscaling of e-bus operations in the city.

The Hoeje Taastrup project group provided an infrastructure strategy paper and market analysis to the local politicians. The aim was to create funding and to enhance the infrastructure and deployment of charge spots in the municipality. As a special recommendation and strategy paper, it has been discussed and reviewed by the Lord Mayer of Hoeje Taastrup and the City Council. At the same time, a framework for fleet conversion of all diesel and petrol cars in the municipal fleet has been developed. This implies that the implementation and accelerated deployment of charge spots can be initiated.

The team in Gdansk provided valuable forward-looking insights for those stakeholders who are planning to implement evolving technological approaches, or who consider integrating e-bikes into classic non-electric 4th generation bicycle schemes.

In addition, the contribution and vast networking is done by partner ATI Küste have positively influenced the decision of the city of Rostock to produce an electric ferry for the urban commute.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

- A trustful working atmosphere and collaborative interdisciplinary partnership, composed of cities, transport stakeholders, and academic partners, paired with creativity to overcome obstacles, was crucial to timely delivery and project success. For example, despite the COVID-19 pandemic and related difficulties for practical implementation, our partnership managed to fulfill all deliverables and close the project without delay.
- Experiencing sustainable mobility by offering easy access to real-life solutions, i.e. the opportunity to test the solution, is considered crucial to win public acceptance and create the motivation to change transport behaviour.

Final Project Conclusions

BSR electric

- Networking was key to fostering the promotion of the project and, overall, sustainable mobility across the Baltic Sea region. Synergies with other projects, e.g. SUMBA and cities.multimodal, were achieved through regular exchanges on lead partner level, the joint participation of project meetings, and, as a highlight, the joint organisation of a major sustainable mobility event, the Baltic Sea Region Mobility Summit 2020 (https://www.bsr-electric.eu/news/riga-mobility-summit-2).

Final Project Conclusions

cities.multimodal

Project title	Project duration
Cities.multimodal – urban transport system in transition towards low carbon mobility	October 2017 - March 2021

Priority	Specific objective
Sustainable Transport	Environmentally friendly urban mobility

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.78 million	3.54 million		

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/citiesmultimodal-132.html	http://www.cities-multimodal.eu/

Lead partner (country)	Countries involved
Hanseatic City of Rostock (Germany)	DE, SE, DK, LV, PL, LT, EE, FI, RU

Project summary

Teaser

The Interreg project cities.multimodal presented environmentally friendly alternatives to driving, enhanced sustainable urban mobility planning for multimodal transport in ten cities and introduced six mobility points and smartphone-based travel planning.

The opportunity

In recent years multimodality in cities has become more integrated and more visible in city planning. New business models and modality modes are constantly emerging and triggering new decisions to be taken. As hubs for the economic development the cities are striving to provide citizens with easy, well-functioning and environmentally friendly transport options. At the same time, the cities and urban areas are facing concrete problems with ever-increasing congestion, growing CO2 emissions, noise caused by heavy car-traffic and accessibility problems partly as a consequence of missing intermodal links.

In order to upgrade multimodality, the cities need a collaborative approach by involving politicians, urban planners, public transport operators, industry as well as inhabitants. Targeted measures and better incentives for shifting from driving to more environmentally friendly alternatives would enhance multimodality and make it an integrated part of city planning process.

EUROPEAN REGIONAL DEVELOPMENT FUND
EUROPEAN UNION

Final Project Conclusions

cities.multimodal

DE	DK	EE	FI	LT	LV	PL	RU	SE
								

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Incentives created

The project has successfully developed the sustainable urban mobility plans, established new mobility points, launched campaigns and introduced living street initiatives. Being driven by citizens, campaigns and living streets ensured stronger commitments and enhanced a better incentive structure. Visualization of how a city could look like in the future simplified understanding what could be done concretely. For 10 city partners, Rostock, Aarhus, Gdansk, Vilnius, Guldborgssund, Karlskrona, Pskov, Riga, Tartu, the multimodal city concept has become a reality.

Additionally, the project has enhanced mobility management in city quarters, schools and companies. Transnational collaboration among the participating cities resulted in a transfer of good practices. Thus, inspired by mobility points in cities like Ghent and Bremen, the participating cities got better insights into the process and found their own way through successful implementation.

Better guided and equipped

By developing guidance on sustainable urban mobility management and a handy toolbox with targeted solutions to concrete challenges, the project has provided the needed framework for public organisations like kindergartens, schools, as well as commercial and industrial companies. Aimed at enhancing institutional capacity, the supporting guide has provided better insights to the mobility mindset of the participating cities, the selection of pilot areas, planning approaches as well as the undertaken measures.

In addition, the project has evaluated the activities implemented within the project´s lifetime in order to show which measures had a major impact on successful implementation. The cities´ specific features were taken into consideration and a possible transferability of practices was accessed. Next, the project has also made multimodal travel planning analysis with a focus on web- and mobile-based travel planning applications. Based on market research, web-based applications and interviews, the analysis provided a comprehensive overview of ICT solutions tailored for different scenarios.

The Interreg project cities.multimodal used EUR 3.54 million from the European Union to find a more environmentally friendly way to driving and improving the citizens´ quality of life.

Final Project Conclusions

cities.multimodal

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Planner's Handbook

The Planner's Guide to Sustainable Urban Mobility Management inspires mobility and transport planners, politicians and NGO's who wish to take their city's multimodality to the next level. The Guide gives an insight to the mobility mindset of the participating cities, the chosen pilot areas, planning approaches and implemented measures.

https://www.cities-multimodal.eu/sites/cmm/files/materials/files/planners_handbook_2020_highres.pdf

Toolbox for Mobility Management

The toolbox provides kindergartens, schools, companies and cities with practical tools and tips for mobility management and implementation.

https://www.cities-multimodal.eu/sites/cmm/files/materials/files/tr_toolbox_layout_v19.pdf

Multimodal travel planning analysis

The analysis focuses on website and mobile-based individual travel planning applications (ICT solutions). These ICT solutions provide different transport options and enable individualised door-to-door travel for end users. The report provides an overview of such applications and offers recommendations for the procurement process. It also covers the results of conducted market research, an analysis of partner cities' ICT solutions, and interviews, providing a helpful starting point for cities to educate themselves about the possibilities of multimodal ICT solutions.

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

N/A

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

N/A

Final Project Conclusions

Sohjoa Baltic

Project title	Project duration
Sohjoa - Baltic Sea Region transitioning into eco-friendly autonomous last mile public transportation	October 2017 - September 2020

Priority	Specific objective
Sustainable Transport	Environmentally friendly urban mobility

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.48 million	3.02 million		

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/sohjoa-baltic-111.html	www.sohjoabaltic.eu

Lead partner (country)	Countries involved
Metropolia University of Applied Sciences (Finland)	FI, EE, SE, LV, DE, PL, NO, DK

Project summary

Teaser

The Interreg project Sohjoa Baltic increased knowledge on autonomous public transport in eight countries, brought piloting experience of self-driving electric minibuses to six countries, and contributed to promotion of environmentally friendly transport solutions in the Baltic Sea region.

The challenge

Public transport is not as flexible and accessible as private cars are in the Baltic Sea region.
In general, the public transportation in the region is moderately used, but still in many cities the public transport can not offer competitive options for the citizens. This triggers the use of private cars for daily routines and commuting. The public transportation affects people´s well-being, traffic emissions and capacity problems as well as contributes to the climate change.

In order to tackle the traffic problems, the modal share of the public transportation should be increased and more environmentally friendly transport solutions presented. Meanwhile, the use of low-emission public transportation vehicles such as biogas and hybrid buses is increasing which provides good basis for integrating electric automated last mile public transportation to the travel chain. Besides the problems with traffic congestion, cars as a rule take up more space in comparison to the the number of passengers. This is a challenge for at least urban areas with high density of population.

The project Sohoja aimed to increase the attractiveness of public transport by improving offered services and introducing automated driverless electric minibuses, especially for the first and last mile of the journey.

Final Project Conclusions

Sohjoa Baltic

DE	DK	EE	FI	LV	NO	PL	SE
							

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

The project Sohjoa Baltic gathered partners from Finland, Estonia, Sweden, Latvia, Germany, Poland, Norway, and Denmark and helped the citizens across the Baltic Sea region consider their daily choices by bringing more options to the public transport, offering a driverless bus as one of them.

The pilots have showcased what is possible

The project implemented large-scale pilots in mixed traffic and open streets in Helsinki, Kongsberg and Tallinn. Gdansk, Jelgava and Aizkraukle hosted small scale pilots. In total, the piloting lasted 19 months, covered 11 634 km, and 19 437 passengers, being carried with automated driverless electric minibusses. The feedback gained from the passengers proved the positive expectations in terms of technology safety. The legislative part as regards the safety on the roads was also addressed by the project. In Poland and Latvia, the passengers for the first time got a possibility to test automated electric shuttle busses.

A series of publications on self-driving public transport issued

Sohjoa Baltic's Roadmap to Automated Electric Shuttles in Public Transport is a publication series of five volumes that compiles information on self-driving public transport and practical experiences from the robot bus trials, collected during the project in 2017-2020 in eight countries in the Baltic Sea region. Besides the knowledge on environmentally-friendly vehicles, the publications provided the state of the art of applied technology as well as insights into legislative regulations that cover driving vehicles on a national level.

Obstacles and drives of autonomous public mobility on agenda

The Future of Autonomous Transport in Baltic Sea Region conference 2020 focused on the obstacles and drivers for society to move towards autonomous public mobility. The industry, policymakers and cities joined the Sohjoa Baltic project's final hybrid event held by Tallinn Transport Department (Estonia) and Metropolia University of Applied Sciences (Finland). About 100 delegates from Estonia, Latvia, Lithuania, and Finland gathered in Tallinn, and more took part from a distance. It was an important milestone in the project that brought together enthusiasts who believe in a sustainable future of the Baltic Sea region.

Final Project Conclusions

Sohjoa Baltic

With EUR 3.02 million support from the European Union, the Interreg project Sohjoa Baltic raised awareness about the autonomous electric means of transport, leveraged the knowledge and practical experience to the passengers, and contributed to regional endeavors to tackle climate change.

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

A series of publications

The Roadmap to Automated Electric Shuttles in Public Transport is a publication series of five volumes, disseminating compiled information on regulations and technology of self-driving public transport in eight countries in the Baltic Sea Region. It also includes the practical piloting and user experiences of the six robot bus trials in Gdansk (PL), Helsinki (FI), Kongsberg (NO), Tallinn (EE), Jelgava and Aizkraukle (LV) during the project period 2017-2020.

The publications can be used as practical guidance or as research material depending on the needs of the users. A list of potential users is comprehensive, including academic and research institutions, urban planning authorities, urban transport authorities, companies providing public transport, traffic safety authorities, passengers including elderly and people with moving disabilities, private sector innovation and service developers, developers of smart cities and communities in the Baltic Sea region, and European autonomous vehicles stakeholders.

1. The Legal Framework
2. Technology and safety requirements
3. Starting Your Own Pilot
4. Procurement Challenges
5. Sohjoa Baltic User experience and impact on public transport

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The work continues in the extension project Sohjoa Last Mile (www.sohjoalastmile.eu). In the project period from October 2020 to March 2022, the consortium implements three automated, electric shuttle remote operating pilots in Kongsberg, Tallinn and Gdansk. The aim is to study true driverless driving. The pilots take place both in closed and open areas and they provide information for the future remote fleet operating. The project is coordinated by Metropolia University of Applied Sciences, with seven project partners and total project budget of EUR 898 203,00.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

The project take-aways:

- Start procurements early as they will take time.
- Try to keep communication simple and clear, for most English is not their native language.
- Stay up to date on similar activities in the region.

Final Project Conclusions

SUMBA

Project title	Project duration
Sustainable urban mobility and commuting in Baltic cities	October 2017 - March 2021

Priority	Specific objective
Sustainable Transport	Environmentally friendly urban mobility

Budget	Spent budget	Flagship project	EUSBSR Policy Area/Horizontal Action
3.13 million	2.94 million	x	HA Climate

Link to the project library	Link to the project's website
https://projects.interreg-baltic.eu/projects/sumba-128.html	http://www.sumba.eu/

Lead partner (country)	Countries involved
City of Hamburg, Borough of Altona (Germany)	DE, EE, LV, SE, LT, PL

Project summary

Teaser

By developing master plans on commuting for nine municipalities in five Baltic Sea region countries, the Interreg project SUMBA paved a way for sustainable and greener transport transformation in the region.

The challenge

Tackling emissions in transport

Commuting by car from suburbs to metropolitan areas is the most common way observed in the identified areas in the Baltic Sea region. While the citizens are trying to find the most optimal and convenient way of commuting, the cities are struggling with increasing emissions and climate change mitigation. Climate mitigation is impossible without including transport solutions and finding new ways of tackling emissions.

On this background, an alternative combination of various transport modes, including bike and car sharing, would help the cities to reach the wishful targets and introduce an environmentally friendly commuting system.

A clear policy framework needed

In order to ensure the durability of sustainable solutions, the cities would need to integrate alternative mobility options in transport plans and policies. A better understanding of actions needed in policy implementation and who should be involved in the transformation process is needed.

The project SUMBA provided a platform for piloting measures which would give clarity on the process and justification of the tested transport solutions.

EUROPEAN REGIONAL DEVELOPMENT FUND

EUROPEAN UNION

Final Project Conclusions

SUMBA

DE	DK	EE	FI	LT	LV	NO	PL	RU	SE
									

Project's highlights

The highlights present the project's main achievements and results, e.g. change brought for the target groups, pilots or tests carried out, and exemplary transnational work.

Master plans developed

The SUMBA project successfully developed commuting master plans for 9 functional areas in the Baltic Sea region, specifically in Hamburg-Altona, Växjö, Tallinn/Harju, Tartu, Riga, Šiauliai, Olsztyn, Warsaw donut, Gdynia. These plans aim at improving commuting conditions between the central cities and their suburbs. By bringing transport planners and policymakers together, the project integrated the master plans into the partner cities' policies and transport planning. This allowed the cities to make local transport more environmentally friendly and tackle emissions in a coordinated way.

A toolbox for planning and analytics provided

The SUMBA project provided the tools aimed at supporting cities in developing better commuting conditions. In the toolbox, the users can find the guidance for transport modelling and data collection. The guidance for modelling complies the available transport models as well as planning support tools. Thanks to the guidance cities can choose the right web-based application for their needs.

Furthermore, the toolbox contains an Intermodalyzer index measuring a level of inter-modality, or how well intermodal the transport system of a city is. The index is useful for municipal planners and transport non-governmental organisations to assess the transport situation.

The Interreg project SUMBA used EURO 2.94 million from European Union to support the cities in the Baltic Sea region in sustainable transport transformation and make the cities environmentally friendly.

Final Project Conclusions

SUMBA

Main Outputs

The main outputs present the project's main deliveries which are tangible and can be used by others outside the project.

Intermodalyzer - a Benchmarking Scheme to assess the City's Transport System with regard to Intermodality

The "Intermodalyzer index" measures how intermodal a city or functional urban area is. The index is described in a methodological report that enables municipal planners as well as transport non-governmental organisations (NGOs) to evaluate the transport situation.

https://sumba.eu/en/article/benchmarking-scheme-intermodal-commuting.

Guidance for transport modelling and data collection

The guidance for modelling describes how transport modelling tools work. In addition, it describes the available commercial and free transport models as well as planning support tools. The guidance explains the features of the respective programmes and possible uses of the software. In this way the guidance helps cities to choose the right application for their needs.

https://sumba.eu/en/article/guidance-modelling-and-data-collection.

Template for commuting masterplans

The "template for commuting masterplans" explains the steps to be taken to develop a commuting masterplan for a functional urban area, i.e. the core city and its surrounding area. It is a supportive document for regional and urban planners in municipal administrations.

https://sumba.eu/en/article/commuting-master-plan-template

Follow-up/spin-off activities

These include specific new activities that have been inspired by or initiated during the project work and will be continued after its implementation.

The project SUMBA continued some of its activities in the project SUMBA+. This extension project focuses on transport hubs, estimating greenhouse gas emissions in transport models, and further supporting bicycle library systems in the partner cities. Apart from that, almost all partner cities have concrete plans to realise the first measures laid down in their commuting master plans.

Administrative matters

These include specific good practices, financial implications, challenges as well as synergies and cooperation with other projects and the main drivers of the project (core partners).

The project benefitted from the cooperation with other sustainable transport projects, funded by the Interreg Baltic Sea Region Programme. The joint final conference was a big success and attracted many interested participants.

Final Project Conclusions

SUMBA

All partners benefitted from the partner meetings in the different partner cities (pre-Covid) where we included a guided tour to look at specific challenges or good examples in the city's transport system.

It was easier to implement the project when the pilot cities were direct partners. In the case of associated partners, it was more difficult to motivate them to apply the project tools compared to the regular project partners.