Project idea form - small projects

Version 2.1

Registration no. (filled in by MA/JS only) _____

Project Idea Form

Date of submission 03/06/2025

1. Project idea identification

Project idea name	Advancing Active Aging through 3D-Custom Orthotics: Interregional Innovation in Biomechanical Mobility Rehabilitation
Short name of the project	3D-ACTIVE
Previous calls	yes ◯ no ◉
Seed money support	yes ◯ no ◉

2. Programme priority

	1. Innovative societies

3. Programme objective

	1.2. Responsive public services

4. Potential lead applicant

Name of the organisation (original)	Tursekeskus OÜ (Reio Vilipuu Taastusravikliinik)
Name of the organisation (English)	Reio Vilipuu Rehabilitation clinic
Website	https://taastusravikliinik.ee/
Country	EE

Type of Partner	Small and medium enterprise
	micro, small, medium enterprises
Contact person 1	
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Contact person 2	
Name	Reio Vilipuu
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Which organisation(s) in the planned partnership take part in a project within the Interreg Baltic Sea Region Programme for the first time? Please list the respective partners.

KLAIPĖDOS VALSTYBINĖ KOLEGIJA (Lithuania)
Tartu University Hospital (Estonia) or Regional Council of Skåne (Sweden)
Age Institute (Finland)

5.1 Specific challenge to be adressed

Across the Baltic Sea Region, populations are aging rapidly, placing growing pressure on health systems. A key challenge is helping older adults maintain mobility and independence are crucial not only for personal well-being, but for reducing long-term care and social costs. One major obstacle is the insufficient early intervention for common musculoskeletal conditions such as osteoarthritis (OA) of the ankle, knee, and hip, which lead to progressive mobility loss and often result in expensive surgeries and prolonged rehabilitation.
Public health services in several regions do not yet systematically integrate emerging biomechanical technologies such as 3D-custom orthotics or gait analysis using pressure-sensitive insoles to support older adults in early-stage mobility loss. These tools can support early-stage management of OA and other mobility issues by preventing deterioration and reducing fall risks. While such innovations exist in some clinical or research settings, public services rarely adopt them due to limited policy frameworks, untested service models, and scarce transnational knowledge exchange. Older adults especially those in small towns or rural areas face delayed or generic rehabilitation support, which can escalate healthcare costs and dependency. At the same time, public authorities and healthcare professionals lack access to validated, practical models for integrating these tools into routine care.The

primary target group includes municipal and regional health authorities responsible for ageing and rehabilitation strategies. Secondary groups include physiotherapists, orthopaedic specialists, innovation-focused SMEs, and older adults who would benefit from earlier, personalised mobility support.This project addresses these challenges by helping regions co-develop and test integrated models that apply biomechanical technologies in OA prevention and mobility rehab. By fostering interregional learning and small-scale pilots, we aim to ease pressure on public services while improving quality of life for older citizens.

5.2 Focus of the call

The project supports the cohesive development of small and rural communities by addressing a rising challenge: the lack of accessible, personalised care options for older adults experiencing mobility decline. In these areas, health services struggle to adopt emerging technologies like 3D-printed orthotics and pressure-sensitive insoles due to high initial costs, limited capacity, and unclear evidence on how to integrate them into routine care.
Our project tackles this by helping regions collaboratively test and validate how these tools can be shared, scaled, or adapted for use in community-based care. Through pilot actions, local clinics will gain access to pooled technical resources, service blueprints, and joint procurement or referral models. The goal is not to fund widespread deployment, but to build the business and policy case for targeted, sustainable use in high-risk populations.
By translating biomechanical innovation into viable rehabilitation services in underserved areas, the project improves quality of life, delays dependence, and fosters equity across the Baltic Sea Region. It empowers rural actors to engage in smart ageing solutions, ensuring no community is left behind in the digital health transition.

6. Transnational relevance

The challenges of ageing populations and mobility-related health issues are shared across the Baltic Sea Region, but the capacity to respond especially in small and rural areas varies significantly. No single region has yet developed an effective, scalable approach to integrating biomechanical innovations like 3D-printed orthotics and pressure-sensing insoles into public rehabilitation services for older adults. This lack of common practice and institutional know-how calls for transnational cooperation.
Each partner brings unique strengths: some have access to advanced biomechanical tools in research or clinical settings, while others face real-world constraints in public service delivery. By working together, regions can exchange tested approaches, adapt service models to different realities, and jointly assess which aspects are transferable, cost-justifiable, and policy-relevant.The project enables shared learning on technical, clinical, and policy fronts how to identify high-risk patients, when to prescribe custom orthotics, how to train local staff, and how to demonstrate impact to public funders. Small-scale pilots in different health systems will offer comparative insights that no single region could generate alone.
Transnational cooperation also allows joint validation of outcomes, creation of interoperable tools, and co-development of frameworks for procurement, reimbursement, and long-term integration into care pathways. This strengthens institutional capacity across borders, particularly for smaller communities that may not otherwise access or trial these technologies.

Ultimately, the project ensures that all regions not just well-resourced urban centres can contribute to and benefit from a smarter, more inclusive model for active ageing and mobility care.

7. Specific aims to be adressed

Building trust that could lead to further cooperation initiatives

This project creates trust among health professionals, policymakers, and researchers by establishing an open, problem-solving environment around a shared challenge: how to provide accessible, effective mobility care for ageing populations. Through hands-on collaboration, joint pilots, and shared analysis of outcomes, partners will co-develop and refine service models that reflect diverse regional realities. Transparent communication, mutual learning, and regular peer exchange will strengthen institutional bonds, fostering a culture of cooperation that extends beyond the project. By demonstrating that biomechanical health innovations can be responsibly and inclusively adapted across borders, the project lays the groundwork for follow-up initiatives in smart ageing, public health digitalisation, and rural innovation. This trust-building process is essential for scaling impact and continuing transnational collaboration beyond the funding period.

Initiating and keeping networks that are important for the BSR

The project initiates a functional, interdisciplinary network focused on active ageing and mobility rehabilitation. This network brings together public health institutions, rehabilitation clinics, universities, and civil society actors from across the Baltic Sea Region. It is designed not only to support knowledge exchange during the project, but to create a durable platform for continued cooperation. Through co-created training materials, shared service protocols, and digital collaboration tools, the network fosters long-term connectivity. It encourages ongoing dialogue about how to scale, adapt, and finance smart biomechanical innovations in small and rural communities. By rooting this network in practical work, trust and relevance are built organically. After the project ends, the partnership will seek to formalise the network as a working group or thematic cluster within existing BSR cooperation structures.

Bringing the Programme closer to the citizens

The project delivers clear, visible benefits to citizens, especially older adults living in small towns and rural areas. By involving them directly in pilot actions, user feedback sessions, and local events, the project ensures that their needs and voices shape service design. Citizens will see tangible improvements in their rehabilitation journeys such as earlier assessment of gait issues and mobility or more comfortable, personalised orthotic solutions. These changes are made possible through cross-border cooperation, which will be clearly communicated through regional media and community outreach. Health professionals and public authorities will also gain new tools and skills, improving everyday care. By translating EU cooperation into better local services, the project builds public trust in the value of European collaboration and shows how smart investments in innovation can improve quality of life in real, personal ways.

Allowing a swift response to unpredictable and urgent challenges

N/A

8. Target groups

The project targets a carefully selected group of actors who are both directly affected by the challenge of ageing-related mobility decline and positioned to act on it through innovation, service delivery, or policy change.
The primary target groups include public health authorities at municipal and regional levels, these actors are central to testing, adapting, and scaling up new care models. Physiotherapists and rehabilitation specialists working in local clinics, especially in rural and underserved areas, are directly involved in the clinical application of new tools and approaches. Older adults, especially those in early stages of mobility loss or with chronic conditions like osteoarthritis. They are the core beneficiaries and their direct participation in pilot activities and structured feedback processes ensures that project outcomes are relevant and user-driven. Secondary target groups include universities and R&D centres with expertise in biomechanics, gait analysis, and orthotic design, which will contribute scientific insight and help translate research into actionable solutions. Clinics like ours, who involved in 3D printing and pressure-sensitive insole technology will also play a key role in supporting implementation and gaining access to new public service markets. All target groups will participate actively in project activities such as pilot testing, workshops, peer reviews, and training. Project outputs are designed to meet their operational and strategic needs, including service protocols, training materials, procurement guidelines, and care models suitable for replication in the Baltic Sea Region.

	Please use the drop-down list to define up to five target groups that you will involve through your project's activities.	Please define a field of responsibility or an economic sector of the selected target group	Specify the countries and regions that the representatives of this target group come from.
1.	Hospital and medical centre	Rehabilitation service delivery and musculoskeletal care in ageing populations	Estonia (Tartu), Sweden (Skåne), Lithuania (Klaipėda)
2.	Higher education and research institution	Biomechanical innovation, gait analysis, orthotics R&D, public health system evaluation	Finland (Helsinki), Sweden (Växjö), Lithuania (Klaipėda)
3.	Small and medium enterprise	Development of 3D orthotics, walking gait analysis tools, and assistive rehab tech	Estonia (Tallinn), Finland (Helsinki)
4.	Regional public authority	Healthcare strategy, funding and coordination of active ageing services in rural areas	Sweden (Skåne), Estonia (Harju County), Finland

5. NGO	Advocacy and service co-design for older adults, inclusion in public healthcare innovation	Finland (Uusimaa), Estonia (Tallinn)

9. Contribution to the EU Strategy for the Baltic Sea Region

Please indicate if your project idea has the potential to contribute to the implementation of the Action Plan of the EU Strategy for the Baltic Sea Region (https://eusbsr.eu/implementation/).

yes ◉ no ◯

Please select which policy area(s) of the EUSBSR your project idea contributes to most.

PA Innovation

PA Health

PA Education

The MA/JS may share your project idea form with the respective policy area coordinator(s) of the EUSBSR. You can find contacts of PACs at the EUSBSR website (https://eusbsr.eu/contact-us/).

☐ If you disagree, please tick here.

10. Partnership

The partnership brings together complementary organisations from across the Baltic Sea Region with a shared commitment to improving mobility care for ageing populations through biomechanical innovation. Each partner plays a specific role aligned with their expertise and regional context, ensuring practical relevance, diversity of experience, and strong implementation capacity.
Reio Vilipuu Taastusravikliinik (Estonia) is the lead partner, bringing clinical expertise in gait analysis, 3D scanning, and custom orthotic production. It will lead the pilot development and coordinate the exchange of practice. Tartu University Hospital (Estonia) contributes experience in regional rehabilitation services and will support clinical validation of the pilots. Klaipėdos Valstybinė Kolegija (Lithuania), a higher education and applied research institution, will lead knowledge transfer and development of professional training content. The Age Institute (Finland), an NGO focused on active ageing, will ensure citizen engagement and co-design methods involving older adults. The Regional Council of Skåne (Sweden), as a regional public authority responsible for healthcare, will lead policy integration efforts and assess the potential for system-level adoption.
These partners were selected to reflect a balance between healthcare delivery, research and education, user representation, and policymaking. The mix of regions ensures that the project

addresses both innovation-rich and underserved contexts, with a strong focus on rural and small-town challenges. The geographic spread covers both eastern and western BSR countries, which allows comparative learning and context-sensitive adaptation of the pilots.
The partnership will be expanded by involving two SME partners: Voxelcare from the Netherlands, specialising in CAD/CAM-based custom orthotic production, and Medilogic from Germany, developers of pressure-sensitive insole systems. Both are already used in the clinical setting at RV Taastusravikliinik in Estonia, which ensures immediate integration and real-world testing during the pilot phase. Their formal inclusion will allow for technical refinement, contribute to training and tool adaptation, and support the development of scalable service delivery models. Their cross-border perspective will also add value to discussions on procurement, cost-effectiveness, and policy integration across different health systems.

11. Workplan

The project is structured around a core exchange and testing cycle, aimed at adapting biomechanical innovations to public rehabilitation services for ageing populations. The main activities are organised into three work packages: interregional learning, pilot implementation, and results transfer.
In the interregional learning phase, partners will conduct joint workshops, site visits, and structured peer reviews. These will focus on comparing current approaches to mobility rehabilitation, including when and how orthotic solutions are introduced in older adults with joint stress or early-stage osteoarthritis. Best practices and barriers to adoption will be documented and shared.
The pilot phase will test a joint service model integrating 3D-custom orthotics and pressure-sensitive insole analysis into public or semi-public rehabilitation pathways. Each region will apply the core model in a different care setting: urban outpatient clinics, rural physiotherapy units, or municipal elderly care centres. The pilots will include screening protocols using Medilogic pressure insoles, CAD/CAM workflows for Voxelcare orthotics, and structured feedback loops with patients and clinicians. Cost-efficiency, patient outcomes, and ease of integration will be evaluated.
Target groups will be engaged throughout. Public authorities will help shape policy and funding models. Physiotherapists will co-design workflows and test tools. Older adults will participate in focus groups and direct feedback sessions. RV Taastusravikliinik, Universities and SMEs will provide training and support tools, including digital manuals and guidance on equipment use.
The project will produce a set of practical outputs, including: a validated pilot service model adaptable for public health use; a cross-regional guide on integrating biomechanical tools into rehab pathways; a training package for physiotherapists; and policy briefs to support regional decision-makers in scaling innovation. Final outcomes will be used by public health authorities for system planning, by clinics to modernise practice, by universities for professional education, and by SMEs to access public service markets. The project ensures that innovation leads to lasting, practical improvements in mobility care across the BSR.

12. Planned budget

ERDF budget (planned expenditure of partners from the EU)	EUR 430,000.00
Norwegian budget (planned expenditure of partners from Norway)	*EUR XXX*
Total budget (including preparatory costs)	**EUR 430,000.00**

13. Project consultation

Please indicate if you wish to have a consultation (online meeting) with the MA/JS to discuss your project idea

yes ◉ no ◯

14. Questions to the MA/JS

Questions related to the content of the planned project	Would you consider biomechanical orthotic tools eligible as part of pilot testing, given they are not new inventions but new to public healthcare in the partner regions?
Questions related to budgeting and expenditure	Can costs related to interregional training, technical adaptation of devices, and small-scale patient testing be fully covered as pilot implementation under ERDF?
Any other questions	Is it possible to integrate this pilot into existing health service pathways (e.g. rehabilitation centres) without triggering state aid or procurement complications?

15. Additional information

The project is rooted in clinical experience and real-world use of advanced biomechanical tools, ensuring a high level of technical readiness and practical insight. Our aim is not to invent new devices, but to develop service delivery models that can be adopted by public systems across the BSR. The project team includes organisations already working with the tools proposed, allowing for efficient pilot launches and credible impact measurement. We are also exploring how to align outcomes with national health strategies and potential funding frameworks beyond the project's duration. Any guidance from MA/JS on long-term integration into policy or structural funds would be appreciated.

Your account in BAMOS+

Please remember that to officially submit your application you need to access our electronic data exchange system BAMOS+. More information about the process of applying for your account in BAMOS+ you will find here:
https://interreg-baltic.eu/gateway/bamos-account