

Anne Ilvonen, Pekka Malvela, Kaisa Varis (Eds.)

# New Perspectives on Internationalisation and Applied Research 2022



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# **New Perspectives on Internationalisation and Applied Research 2022**

Anne Ilvonen, Pekka Malvela, Kaisa Varis (Eds.)

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# President's foreword



**Petri Raivo**  
President / CEO,  
Karelia University of  
Applied Sciences

**T**his year, our university of applied sciences is celebrating its 30th anniversary. Right from the very beginning, internationalisation was a central goal for our new higher educational institute. The process started from scratch, but gradually we were able to build good cooperative relationships with lots of international partners. The degree programme in English, *International Business*, started operating as early as 1996.

Now, 30 years later, we have two international bachelor's degree programmes (*International Business* and *Industrial Management*) and a third (*ICT Engineering*) is beginning in 2023, as well as master's level training in *Competence of Ageing* and *Advanced Manufacturing*. We have more than 100 international higher education partners and 70 special RDI partners.

Specific areas of our international cooperation include:

- Energy and Environmental Engineering double degree training, accredited by the Chinese Ministry of Education (Heilongjiang Institute of Technology)
- Strategic Invest partnership with five European universities (Slovak University of Agriculture (Slovakia), University of Agribusiness and Rural Development (Bulgaria), University of Thessaly (Greece), Karelia University of Applied Sciences (Finland), Van Hall Larenstein University of Applied Sciences (Netherlands))

- Building a master's and diploma programme in Competence of Ageing in Chile (University of Chile)
- Applied higher education development project in Uzbekistan (Nordic International University)

Five per cent of our students are from outside Finland and this number is rising.

It is therefore quite natural that in honour of our 30th anniversary, we should add a new English-language chapter to our publication series, the content of which consists of expert articles from Karelia's own professionals as well as from our international partners. This has been hoped for and expected for a long time.

The articles in this first publication come from Karelia's own RDI projects. In the future, this publication series will provide a good platform for all our international partners to publish the products of our common themes and seminars. With this new publication forum, Karelia University of Applied Sciences wants to strengthen international cooperation and visibility in research, development and innovation work. I am really looking forward to the thematic joint publications with our international partners.

# INVEST European University – why it is needed and what it is all about?



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## Abstract

Erasmus+ European Universities is a flagship programme developing higher education in a more ambitious and holistic manner than ever seen before. The programme sets goals high: the alliances are expected to reshape the higher education programmes to meet the ideal of the European degree, create a completely new kind of physical and virtual inter-European campus enabling students and staff to work, learn and do research together, and build research, development and innovation (RDI) communities that can mitigate European challenges and promote sustainability (European Universities Initiative).

Thus, the alliances are to both contribute to the European Education Area following the conclusions of the European Commission (EC), and to implement the aims of the European Research Area in their RDI, creating applicable showcases that any other higher education institute can benefit from. Fortunately, the EC acknowledges that the challenges and ambitions set for the alliances do take time, and has set a programme framework that offers



three funding calls with 3 + 4 + 2-year opportunities for each alliance. When successful, proceeding with the alliance's specific aims and objectives, and showing concrete results, the funding may even cover a period of nine years, providing a remarkable opportunity to make a real change (Conclusions on European Universities 2021; European Universities Initiative).

Karelia University of Applied Sciences has been part of the INVEST European University alliance since 2020 and is close to the end of the first period of funding and revising strategy for INVEST 2.0 to be ready for the coming call. What is this all about and why are we involved? This article provides a brief overview reflecting INVEST's key objectives and work-plan, and discusses the added value of the European Universities programme.

## Introduction

INVEST, the Innovations of Regional Sustainability European University Alliance, is a consortium of five pioneering universities: Slovak University of Agriculture in Nitra (SUA, Slovakia, coordinator), Karelia University of Applied Sciences (Karelia, Finland), University of Agribusiness and Rural Development (UARD, Bulgaria), University of Thessaly (UTH, Greece), and Van Hall Larenstein University of Applied Sciences (VHL, the Netherlands). The coordinator envisaged the European University programme to meet its strategic internationalisation goals and started to build a group of partners with similar interests to join the consortia. To be even stronger during the next programme stage, INVEST plans to extend the group of partners up to seven or eight for the coming 2023 call. For Karelia, the INVEST partnership was a perfect match from the first request: the key areas resonated beautifully with the Karelia2030 strategy goals of promoting internationalisation of education, boosting international RDI and providing opportunities for internationalisation for all. INVEST was funded in 2020 and ranked high, with 90 points.

Following the vision, INVEST enhances the sustainability and inclusiveness of the partner regions, promotes innovation in the education system and research methods, and invests in students to become active citizens and future shaping professionals for a more sustainable Europe. The alliance has four strategic pillars: (1) Competitive education and valuable learning outcomes, (2) collective excellent research and innovation, (3) high mobility levels beyond Europe, and (4) networking as the platform for future education and research, covering the three main focus areas – the Water, Energy Food and Environment Nexus, Quality of Life and Entrepreneurship.

It is quite an ambitious, somewhat abstract and high-reaching vision, isn't it? Yet it is still achievable in time when considered from the objectives and action plan perspectives.

## INVEST objectives and action plan

To turn the vision into living reality, INVEST has six key objectives to work with. The key operational areas are related to the main challenges that have to be resolved to be able to meet the European Education Area aims. Thus, the INVEST objectives are: definition of joint governance of partner universities; identification of tools for mitigating challenges in joint degree accreditation; systemic joint degree curriculum and implementation programme and facilitation of other non-degree learning opportunities; joint promotion and facilitation of student and staff mobility in physical, virtual and hybrid forms; elaboration of joint, research-intensive, but work-relevant pedagogy; and, finally, living lab establishment or/and shared operational living lab working rules into all partner regions to serve the needs of education and joint research, development and innovation actions (see Table 1).

Table 1. INVEST key objectives (INVEST project proposal, 2020, 11)

Theme of the objective	Description
<b>(1) Governance Structure</b>	Creation of democratic governance structure in which managers, staff and students determine together in close consultation with stakeholders the content and future of INVEST.
<b>(2) Joint European Accreditation System</b>	Development of a joint INVEST Accreditation Framework for degree courses (BSc, MSc and PhD) to overcome the differences between the different accreditation systems.
<b>(3) Joint Degree Programmes</b>	Development of joint European degrees, and creation of links from vocational training to higher education. Demand-driven, participatory applied research projects conducted in so-called living labs and results from other current scientific research will be an integral part of the educational programmes that will be developed. Automatic recognition of study credits by the home university is another goal for the use of this tool.
<b>(4) Mobility of Staff and Students</b>	Foresee the implementation of physical, virtual and hybrid mobility, where students from BSc, MSc, PhD lifelong learning programmes, and staff can move to/ stay at another university to study, teach, do research, work, or share services and experiences, in the spirit of the joint European education policy. Mobilities will be facilitated through INVEST Virtual Campus. Mobility will also be strengthened through participation in winter and summer schools.
<b>(5) Joint Vision on Education and Pedagogy</b>	Design and implementation of new, appropriate, innovative teaching, learning and learning strategies. Establishment of joint educational principles that will be incorporated in the new pedagogy, including multidisciplinary approaches, challenge-, competence- and work-based methods, and the fostering of transversal competences. ICT-related learning and evaluation methods will be applied.
<b>(6) Living Labs</b>	A living lab and work rules will be established at each of the partner universities.

All these key objectives are elaborated into living practices within the INVEST workplan relying on co-creation practices. However, meeting the objectives to their full extent is not possible during the first stage of the funding, which covers the three years from October 2020 to September 2023. All the key operational areas are highly demanding to work in, not only due to national differences in education policy, degree awarding and funding models, but also as they call for profound and holistic joint understanding, and commitment and involvement of the partner universities. Consequently, the first three years are needed to create the pilot models and tools on which to build further achievements.

The INVEST workplan includes five work packages, each coordinated by one of the INVEST partners (see Figure 1 below, which shows the work packages, their coordinators and key work contents). Work Package 1 is coordinated by SUA and it facilitates the whole INVEST development process and internal communication between the consortium members, monitors the budget and looks after reporting. Work Package 2 is coordinated by UARD and elaborates the governance model and tools for the alliance to work as one entity in the future. Work Package 3 is coordinated by VHL and is devoted to curriculum development and living lab establishment. Work Package 4 is coordinated by Karelia and elaborates tools for INVEST degrees and joint services, visualises mobility opportunities, creates the entrepreneurship pathway and builds a process for staff capacity building. Finally, Work Package 5 coordinated by UTH builds the virtual tools for the alliance and promotes joint education policy contribution.

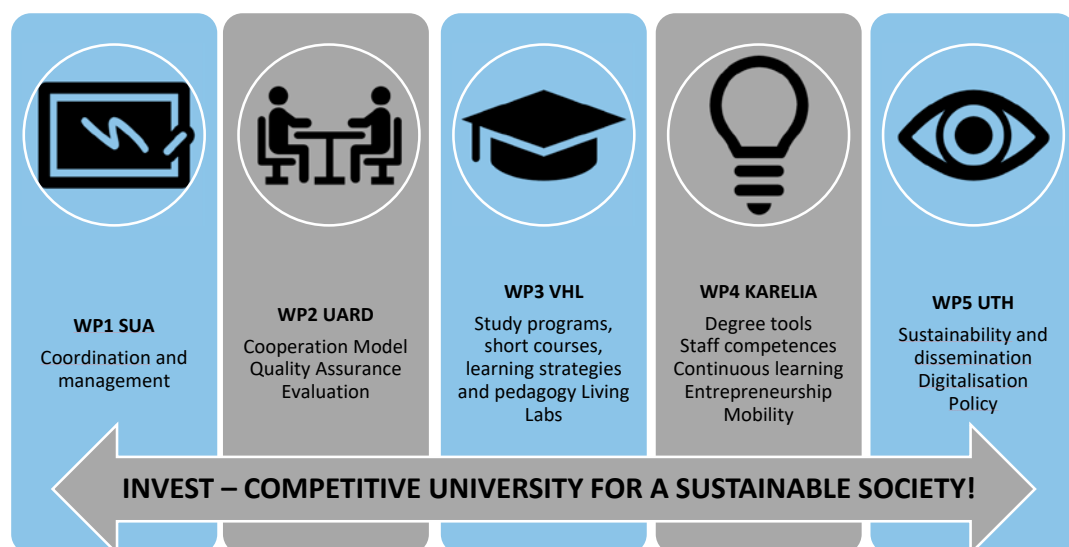


Figure 1. INVEST work packages, work package coordinators and key content

As a whole, INVEST is becoming a joint learning organisation that systematically works for the completion of its workplan to meet the vision and facilitates learning opportunities for each staff member to enable the transformation in time. The co-creation process is a highly demanding process that is sometimes full of stress due to concerns about all the tasks and different viewpoints, while at other times full of joy and happiness over achievements and consensus. However, it is all a big investment for a better future.

## Discussion: Why is the European Universities programme necessary?

One might ask why we need the European Universities programme, including INVEST, with its ambitious goals, and how come the objectives have not been met thus far with other tools available? What is the added value that these challenging and resource-demanding entities bring to higher education? Why did the European Commission fund 41 working alliances until now and is planning to expand up to 60 by 2025?

First, to elaborate on why, one could state that the European Universities programme enables a holistic approach to reshaping higher education in a completely new manner. The Erasmus programme, with its different key actions and calls, offers us a great variety of tools that are widely used. However, European Universities is the first Erasmus programme ever that enables profound strategic development actions within one entity, bridging education, mobility, RDI, platforms and services, HR development and strategic leadership into one development process in a way the other programme tools haven't enabled before. The European University initiative is ambitious, demanding and sometimes difficult, and requires a sufficiently long timeline. Therefore, the three-call application opportunity for each funded or to-be-funded alliance is definitely needed.

What is also worth noting is that the European Universities programme fosters solid higher education management and governance involvement that is really needed to make the turn. It is obvious that universities and universities of applied sciences do not change if senior management does not support the change profoundly, no matter how innovative, skilful and ambitious the staff and their actions are. Real change calls for strong joint vision, commitment and involvement of higher education leaders. This approach is embedded into the programme as one of its key elements.

Finally, the European Universities programme links Erasmus with the Horizon programme in a new way we haven't experienced in other Erasmus tools. It also systematically links HEIs with their regional ecosystems that promote applied RDI intensity and business development. In addition, the supportive capacity-building tools for the alliances offered by Horizon enable European Universities to increase its joint Horizon involvement and contribute to the European challenges. The supportive tools promote the rescaling of competences and working with joint RDI strategies more deeply. This also fosters the less experienced Horizon actors to become more involved in time, again meeting the needs of the European Research Area. The RDI intensity strengthens systematic co-creation between the academic and applied universities and their working life partners, thus supporting the relevance of higher education.

To summarise, the holistic nature of the programme, the strong programme-embedded involvement of the leaders, and direct integration links with the Horizon programme enable the European Universities programme to create the added value we all need and will benefit from. This programme enables showcase development and work with European education policy, addressing educational challenges and potential. By developing good practices, testing models and addressing important questions to be solved, the alliances can ensure benefits for all. That is why the added value of the European Universities programme is obvious. And INVEST does its best to meet expectations.

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# Developing Karelia Education in a multidisciplinary network, INVEST



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## Abstract

This article discusses the role of the European University Alliance INVEST in developing education at Karelia University of Applied Sciences. The INVEST alliance is funded by the Erasmus+ European Universities initiative and it consists of five European universities. We look at the development work carried out in INVEST from three different perspectives: developing educational content, developing pedagogy, and developing processes and tools to support education and co-operation.

## Introduction

The aim of this article is to discuss the co-operation in the European University Alliance INVEST and how it has contributed to educational development at Karelia University of Applied Sciences. European universities are transnational alliances that have a joint long-term strategy to promote sustainability, excellence and European values. The alliances offer joint study programmes with student-centred curricula and challenge-based approaches (European Universities Initiative, 2022).

The INVEST alliance is funded by the Erasmus+ European Universities initiative and it consists of five universities: Slovak University of Agriculture (SUA), University of Agribusiness and Rural Development (UARD), University of Thessaly (UTH), Karelia University of Applied Sciences (Karelia UAS) and Van Hall Larenstein, University of Applied Sciences (VHL). INVEST co-operation aims at strengthening the link between teaching, research, innovation and knowledge transfer, encouraging mobility and enhancing high quality and excellence in education and research. In education, the INVEST network intends to develop joint and innovative education and research study programmes and curricula, as well as the implementation of multilingual learning, blended and work-based learning and European mobilities (Grant Agreement)

## Developing the Content – Focus on Regional Sustainability

The INVEST network focuses on regional sustainable development and how we as a university alliance can contribute not only to solving regional challenges but also global ones. Sustainable development needs and the UN Sustainable Development Goals are at the centre of our work. The three focal areas of INVEST degrees are: the Water, Energy, Food and Environment Nexus, Quality of Life, and Entrepreneurship. INVEST aims at training a new generation of Europeans who can act as leaders in introducing sustainable life in regions across Europe.

Water, Energy Food and Environment Nexus	Quality of Life	Entrepreneurship
<ul style="list-style-type: none"> <li>• Climate-proof regional development</li> <li>• Sustainable, smart agriculture, aquaculture and food security and safety</li> <li>• Water resources management</li> <li>• Energy transition, green energies</li> </ul>	<ul style="list-style-type: none"> <li>• Education and capacity building</li> <li>• Urban-rural relationship</li> <li>• Inter-European citizenship</li> <li>• Ensuring the quality of public services</li> <li>• Life-long learning</li> <li>• Natural and cultural heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Circular bio-based economy</li> <li>• Job creation and human capital management</li> <li>• New business models and smart technologies</li> <li>• Regional sustainability driven capitalism and bio-based industries</li> </ul>

## Deliverable D3.7 Description of Joint Pedagogy (2021, 22)

INVEST co-operation offers us at Karelia an opportunity to develop our bachelor's and master's programmes to meet the rapidly-changing and challenging labour markets in an international context. In addition, we are creating a path for our students towards international PhD programmes in various fields. In the future, Karelia students can start our bachelor's programmes and continue as far as to defending their own PhD at one of the INVEST partner universities.

These INVEST goals and ideals have been put into practice in our curriculum development process. For example, this is how we applied INVEST at Karelia: We created the latest curricula for the Bachelor's Degree in Energy and Environmental Engineering and the Bachelor's Degree in Forestry by creating an optional path. Students can choose an INVEST specialisation year as their final year of studies. The goal of the specialisation year is to strengthen students' international networks and collaboration skills and at the same time offer them a chance to gain special knowledge and expertise in their own subject area. Piloting of the first specialisation year, Sustainable Communities in Energy Transition, has just begun at Karelia. The studies focus on energy transition and the sustainable development of local communities. The aim of the study programme is to develop international future engineers and professionals who are able to facilitate and promote energy transition.

Society 5.0 and Digital Transformation is the name of another INVEST specialisation year. It is included in the curriculum of the Degree Programme in Business Information Technology at Karelia. Digital technologies are now commonplace in almost every aspect of society, and many benefits can be gained from that. However, digital technologies also present a variety of challenges and interlinked risks for both people and nature. The focus of this specialisation year is to study and understand the use of digital methodologies, tools and techniques in decision-making processes and in enhancing regional sustainability.

This autumn, INVEST is starting its second round of curriculum development work. In developing the next specialisation years, the INVEST team will address the challenges of changing climate and the future expectations in the forest sector, for example. The specialisation studies in forestry, coordinated by Karelia, will start in the autumn of 2023.

## Not only what, but also how

The INVEST network aims at not only developing educational contents but also INVEST pedagogy. The joint INVEST pedagogy is described as

- Innovative, international, high quality and cutting edge (meaningful)
- Involvement in the real world: labour market and stakeholders in development and offering the programmes
- Personal, inclusive and flexible towards students

All the partner universities are establishing living labs, which will function as innovative platforms for the quadruple helix (research, education, companies/NGOs and GOs) collaboration with stakeholders from the regions (see Grant Agreement). The principles of INVEST pedagogy resonate well with the pedagogy of Finnish universities of applied sciences. Integration with RDI activities and active development of our learning environments have given us good tools for innovation in international contexts. Close interaction with industry is the cornerstone of Finnish UAS education and is a central part of the curriculum



development process at Karelia. Therefore, the integration of INVEST pedagogical principles into Karelia education has been quite easy.

In addition to specialisation years, the network also organises summer and winter schools that are planned around the INVEST focal areas. The summer and winter schools have concentrated on regional development and innovation, artificial intelligence, and quality of public services. During the COVID-19 pandemic, the first summer and winter schools were carried out as online hackathons. The second summer school that was organised in Plovdiv, Bulgaria, provided our students with the first opportunity to meet face to face. Summer and winter schools offer a different type of international mobility for those students who cannot take part in longer exchange periods. They also offer an excellent platform to test and develop our teaching methods and practices.

## Tools for co-operation

One of the goals in INVEST co-operation is to create processes and tools that support education and mobility. The virtual campus platform that is under development will connect all the universities and facilitate mobility and learning. The EDUC8EU tool will provide support for students in making their study choices. The INVEST Teachers' Handbook provides teachers with the information and tools they need when carrying out INVEST specialisation years. The organisation of summer and winter schools is facilitated by a tool that instructs on the process of planning and carrying out these intensive courses. These joint tools add quality to our actions and make co-operation, teaching and learning easier.

The INVEST network is very much focused on developing the quality of its education. Therefore, we are also continuously developing tools to improve our joint curriculum planning system. During the first round of curriculum development, we conducted a survey on co-operation methods and planning procedures. Overall, the respondents were pleased with the flexible and effective ways of participating in the work. The participants were also satisfied with working life co-operation. According to the survey, clear instructions regarding participant roles and input are essential. The survey showed that the participants felt that face-to-face meetings were the most effective working method. The flow of information between partner universities and within home universities (at different levels) was found to be crucial for the involvement and commitment of experts. According to the respondents, we still need to find more effective ways to activate working life partners and students in planning and implementing the studies.

## Discussion and conclusions

The effect of INVEST co-operation at Karelia has been substantial and it has involved more study fields and operations than any other international network so far. The integration of international studies into the Karelia curricula has been successful. This has been a joint effort that has demanded a lot from our teachers and other staff members. The ambitious goals and sometimes limited timeframes have challenged us and our partners.

During this development work, flexibility has proven to be one of the central issues. In order to create flexible study pathways, we need to overcome many practical challenges – some of them big and some smaller, such as how should we work with accreditation and national legislation? How do we plan joint programmes, when academic calendars are totally different?



On a personal level, it has been rewarding to get to know colleagues from different HEIs, and to build trust and common initiatives in a European context. We share common challenges but also common opportunities to develop more qualified education for our students.

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Grant Agreement number 101004073 – INVEST. 2478885.pdf (gov.sk)

# INVEST Capacity Building – joint actions for HR strategy and staff competence development



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## Abstract

The INVEST European University alliance aims to grow a model of sustainable higher education practice that bridges education and RDI in a strategic manner in accordance with the policies of the European Education Area and the European Research Area. The ambitious goal is to be met with the systematic co-creation of innovative learning programmes in degree- and non-degree education, establishment of a joint coherent research agenda and living labs in selected thematic focal areas, promotion of physical, virtual and hybrid mobility of students and staff, and the development of a robust academic INVEST culture.

This all takes time and also calls for joint capacity building that enables staff members to re- and upscale their competences and skills to meet future needs. All the INVEST partner organisations have their own HR processes that are slightly different. They also apply different approaches in staff competence development and even the level of systemics in the processes varies. This paper discusses the aims and objectives of shared capacity building and shows how the INVEST HR strategy is jointly elaborated. It also describes in brief the INVEST Fellow Programme process and key content. Finally, it offers a personal learning story to share a concrete example of a process-embedded learning pathway.

## **Introduction – what is our Fellow Programme about?**

Human resources and competent staff are said to be the key factors in ensuring organisational success and competitiveness. Strategic human resources management (HRM) and systemic processes for re- and upscaling staff competences are among the top conditions to be able to define where the organisation is able and competent to go and how the goals are to be achieved. This puzzle of human resources is even more demanding when the context grows into an international consortium with five different higher education institutes that work together for the European Education Area and its concrete action plans. To strive towards these highly ambitious goals, strategic human resource development (HRD) plays a pivotal role. (See e.g. Bratton and Gold, 2015, 219–226.)

The INVEST Fellow Programme is established to ensure strategic human resources development framed with concrete action plans on how to offer systematic opportunities for learning. The HRD here refers to a process, where employer(s) provide organised learning experiences within a specified period of time, thus enabling personal growth and development (Bratton and Gold, 2015, 219). The INVEST Fellow Programme needs are jointly identified in an evidence-based process, including focus group interviews and surveys. It meets the first part of the project life cycle, from 2020 to 2023, in a timely way.

The Fellow Programme capacity building process includes both formal and informal learning paths that are influenced based on personal roles and responsibilities (see Bratton and Gold, 2015, 220). The informal learning path is embedded into the staff member's role within the INVEST development process, where the individual is supported to develop their competences and skills that are relevant in the specific role and its possible future elaborations. The informal learning is supported with regular personal guidance and continuous reflection, and the aim is to reflect and transfer tacit knowledge. The formal learning path in its turn refers to the structured and timed INVEST Fellow Programme offering, where the specified thematic areas of learning are available to the relevant staff groups during the 2022–2023 academic year. The learning here is supported by several methods and opportunities, including those elements that are not dependent on time or place. Some elements have already been piloted to verify the methods and contents. All this is built on the joint INVEST HR strategy that shows INVEST the way to go as a learning organisation.

## **INVEST HR strategy – INVEST as a learning organisation**

The INVEST HR strategy is based on identified needs and development goals of staff competences within the INVEST community. The INVEST HR strategy describes future competences and working life needs and ensures suitable and competent human resources by providing a plan for systematic capacity building. The competence needs and goals defined in the INVEST HR strategy are based on the INVEST project plan, results from INVEST

work packages, and needs analyses. The INVEST HR strategy includes a staff development strategy, competence management, staff competence development methods and toolkit, and the INVEST fellow programme. Competence management addresses human capital components, key competences and individual approaches to development. Methods to develop competences are varied, including for example webinars, workshops, mentoring and work experience for teachers and other staff (INVEST HR Strategy 2022, 6).

The key objective of the INVEST HR strategy is not only to ensure competent human resources within the INVEST community but also to create the framework for knowledge management and organisational learning in the INVEST community. Knowledge management and organisational learning respond to the demands of our age in order to meet existing and future working life needs. Knowledge management is a key to success. Successful organisations have the capability to learn both at the collective and individual levels (Clegg et al., 2019, 320).

Moreover, the objective of INVEST HR is also to respond to rapid changes in Europe and all INVEST partner regions. Work communities are becoming more diverse. Work is carried out in different places, work communities consist of experts from different cultural backgrounds and of different ages, the productivity requirements of work are increasing, and careers are longer. The methods of implementing duties are changing as a result of digitalisation and changes in the contents of the work, in expertise and in competence needs. This all means that all actors in the INVEST community have to develop their competences in order to adapt to changes in working life (Bredwell & Thompson, 2014, 218.; INVEST HR Strategy 2022).

Shared expertise, co-creation, peer-learning and collaborative learning are capacity-building practices that are applied within the INVEST community. These practices enable needs-based capacity building to support effective and practical use of competences in all INVEST actions. The INVEST community grows from interactive cooperation based on organisational learning (INVEST HR Strategy 2022, 6).

## INVEST Fellow Programme in practice

### Programme framework/process and key content

Karelia UAS coordinates the development work of INVEST staff competence development. Each partner has actively contributed to the work in their own fields of thematic responsibilities. The Fellow Programme framework tool used in the process includes the key themes that were preliminarily identified in the project application and further refined during the development process. Some new areas, such as *Sustainability and responsibility in higher education*, were added based on the needs analyses conducted with survey and focus group interview tools. Each Fellow Programme capacity-building theme includes several sub-topics clarified in the needs analyses process. The programme framework also defines the key target groups for each capacity building actions, names the coordinating and contributing partners and lists the training methods to be used. The INVEST Fellow Programme timetable for the academic year 2022–2023 and learning themes are summarised in Table 1.

Table 1. Preliminary INVEST Fellow Programme timetable for the academic year 2022–2023 (INVEST Fellow Programme planning table)

Autumn 2022	Spring 2023
<p><b>Sustainability and responsibility in higher education</b> Webinar series for all staff groups</p> <p><b>Pedagogical approach, concepts and tools</b> Onsite work week on coaching and online mentoring for INVEST academics</p> <p><b>Living labs and innovative training methods</b> Webinars and onsite work week on coaching for INVEST teachers, researchers and all staff groups</p> <p><b>Application of ICT in teaching and learning and services</b> Online live training on INVEST e-learning platform for teaching and administrative staff</p> <p><b>Open science, academic publication and e-publishing</b> Virtual coffee mornings with lists of reading for all staff groups</p> <p><b>Needs for supported learning and special education</b> Webinars and mentoring for INVEST teachers, student admission services, heads of education</p> <p><b>Inclusive and open education for all types of learners</b> Webinars and peer learning workshops for INVEST teachers and head staff</p>	<p><b>Project management and process facilitation</b> Peer learning workshops for all staff groups</p> <p><b>Change management</b> Work week with coaching for senior management and RDI staff</p> <p><b>Project applications and research initiatives</b> Webinars for RDI staff</p> <p><b>Framework of studies for international degree</b></p> <p><b>Multicultural collaboration and teamwork</b> Peer learning workshop for all staff groups</p> <p><b>Work with refugees and minority groups</b> Webinars for non-academic staff, student support service departments, resource tutors</p> <p><b>Work with people with disabilities</b> Webinars and online course for non-academic staff, student support service departments, resource tutors</p> <p><b>English for administrative purposes</b> Peer learning workshops</p>

## Case example: what is informal, supported learning in INVEST?

Working in the INVEST competence development team has offered me a very varied range of tasks, given me the opportunity to deepen my knowledge of project work, and take on new challenges with an open mind. My own learning experience is an example of the non-formal learning paths offered by INVEST. I might complement my skills later by participating in mentoring and/or shadowing offered as a form of formal learning.

As a member of the Karelia team, I have found that I am most comfortable coordinating development work as part of the team, producing events for the International Workshop Week and implementing various online platforms, design support tools and marketing materials. Time management, organisational and international teamwork skills develop inevitably in the daily work, and working with people coming from different personal styles, sectors and cultures brings its own richness to the process.

Co-development is a long, gradual process, which needs to consider different needs and ways of working, and tolerate incompleteness. It builds up month by month. It is rewarding to be at this point when the programme starts to take shape and materialise at events, workshops and webinars. The next phase of the process is about to begin, the Fellow Programme will be published during autumn 2022 and the training will get underway!

## Discussion

Someone once said that an organisation creates its results when recruiting staff. This is true but one might add not only when recruiting but also when offering systematic capacity building and career development opportunities for staff. Competent and motivated staff are the key to any success and sustainability.

Thus, the INVEST alliance devotes a significant amount of its time and resources to strategic human resource management and development. The capacity building opportunities are open to all, including beyond the alliance, as all staff members and regional working life partners are invited to join the competence development journey according to their own interests. The INVEST Fellow Programme provides many opportunities for formal and informal learning, all the learning opportunities are free of charge and openly available, and some are not dependent on time and place. This promotes peer-learning, co-creation, openness and accessibility within higher education, and shows us the way for the future.

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# Integrated INVEST model of entrepreneurship support and education



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## Abstract

Cost-effective ways to integrate the three missions of universities, especially when it comes to entrepreneurship, are difficult to come by. This article first describes the current state of entrepreneurship education and support at Karelia UAS. It then shows how some of these implemented elements can be integrated into a new four-element model of entrepreneurship support and education. Finally, it discusses how this new approach matches the current national universities' basic funding scheme, and enables new forms of international collaboration within the INVEST European University Alliance.

## Introduction

The broad field of entrepreneurship support and education in universities can be divided into two main functions: entrepreneurship education, and knowledge transfer & new business creation (Immonen, 2021). Immonen's (2021) model of entrepreneurship education, synthesised from the literature, separates the pedagogical approach and targeted competences as the two main dimensions. On the other hand, knowledge transfer and new business creation are enabled by activities and programmes such as support services offered to academics, technology transfer offices, incubators and accelerators, and other approaches such as POC (proof-of-concept) programs (Rothaermel et al., 2007), (Miller et al., 2018).

The literature has reported that economic development and the other two more traditional missions of universities, namely research and education, are often in conflict (Rothaermel et al., 2007). Miller et al. (2018) also recognised the same tension. Christensen & Eyring (2011) went one step further and proposed that the conflict between the three missions is the main cause for the higher growth rate of administration budgets in universities relative to the budgets of the basic functions of research, education and economic/entrepreneurial activities.

It is clear that there is a need for models that better integrate the three missions of universities, especially when it comes to entrepreneurship. In the following section we present the INVEST model of entrepreneurship support and education by first taking a brief look at the current state of Karelia UAS's entrepreneurship activities, and then showing how the new INVEST model builds upon these experiences.

## Entrepreneurship support, education and collaboration at Karelia UAS

Two surveys carried out in 2016 and 2021 revealed that entrepreneurship-related courses are readily available to Karelia University of Applied Sciences (Karelia) students. In fact, during the academic year 2021–2022, the total combined number of study credits from all entrepreneurship-linked optional courses was roughly 300, which is about the same as a bachelor's degree and a master's degree combined. These approximately 60 courses range from introduction to business to financial management and digital marketing. Karelia also allows its student to combine their entrepreneurial ambitions with their practical training and thesis, as long as other requirements of the degree programme are otherwise satisfied.

Since 2018 students from almost 10 different degree programmes have had an opportunity to finish the last two years of their studies at Y-akatemia®. At Y-akatemia, or Business Academy, students work in large teams and operate their own co-operative companies generating real revenues. Learning is based on what is termed team pedagogy, and it emphasises entrepreneurial competences while also making sure that the requirements of each student's degree programme are satisfied. In the past few years, about 30–40 new students have joined the programme annually. The goal is to launch Y-akatemia studies to English speaking students in 2023. The focus of Y-akatemia is clearly on learning, as the companies students administer during their time at the academy are run down at the end of their studies. As such, it can be seen as *educating through entrepreneurship* (Lackeus, 2015).



Polku, an almost week-long entrepreneurship event, co-funded and supported by Karelia, is organised by local entrepreneurial students. This four-day event offers speakers, lectures, workshops and networking opportunities to students and the local start-up community. The main focus is on learning, and students can even get credits for participation. Polku belongs to the Lackeus category of *educating about entrepreneurship* (Lackeus, 2015).

Besides education, Karelia offers and sponsors several entrepreneurship support services and programmes together with its key partners. All key programmes are also offered in English.

Draft Program® has been in operation since 2012, and it offers personal business coaching and grants (EUR 1,000–4,000) to selected teams. Teams that have at least one student, staff member or alumni of Karelia are eligible. In 2021 Draft Program® was recognised at the EU Commission level as an award-worthy entrepreneurship promotion activity. From a functional perspective, Draft Program’s main focus is new business creation, which is facilitated by grants and coaching. With the coaching element, it is *educating for entrepreneurship* (Lackeus, 2015).

The annual Start Me Up business idea competition has a 20-year history. It is operated by Business Joensuu, a local small business centre. Karelia is an active partner, and is promoting the competition to its students and staff. Prizes range from EUR 50,000 to EUR 1000. Start Me Up can be categorised as a new business creation programme with very little emphasis on education.

Of the two education-first programmes and the two new business creation-focused programmes, only Y-akatemia is the only one funded and operated by Karelia. The other three are co-funded and supported by several other regional organisations. These connections are represented in Table 1.

**Table 1.** Collaboration and co-funding connections between three entrepreneurship programmes and regional organisations.

	<b>Polku – event week</b>	<b>Draft Program®</b>	<b>Start Me Up – business idea competition</b>
Karelia UAS	yes	yes	yes
University of Eastern Finland	yes	yes	yes
Riveria College (vocational school)	yes	yes	yes
Business Joensuu (local SME centre)	yes		yes
Pohjois-Karjalan Yrittäjät (regional SME advocacy)	yes		yes

When it comes to national collaboration, Draft Program® also operates in the neighbouring region of North-Savo. Internationally, Y-akatemia® is a member of the international Team Academy network, which allows participating students to combine an exchange programme with studies at Y-akatemia.

The next step in international collaboration in the field of entrepreneurship, beyond offering all the above-mentioned programmes in English to international students, is the development of the INVEST model for entrepreneurship support and education. Let's discuss these details next.

## Emerging INVEST entrepreneurship education and support model

INVEST is an EU-funded alliance between Karelia and four other European universities gearing towards the creation of a new truly international university. As part of the alliance, the authors of this paper along with colleagues from the partner universities have been designing the INVEST model for entrepreneurship. The entrepreneurial competence development is to be embedded into all types of higher education offered by the INVEST alliance, from degree studies to various modes of continuous learning. The goal is ambitious and is to be achieved with the establishment of entrepreneurial elements in stages following the principles of agile development. The first elements of the model have been piloted separately at Karelia, but they will come together for the first time in an integrated way under the INVEST umbrella during winter 2022–2023.

The first and core element of the model is the start-up coaching and support programme operating very much like the Draft Program®. This programme has real start-up teams working to build, launch and grow their business as their focus. There is emphasis on international business and remote coaching via online meeting tools.

The second element, explorative entrepreneurship, is described by Immonen and Ruotsalainen (2021):

*"In a traditional business advising setting, new knowledge and opportunities are only accumulated in the mind of the business advisor. Our key insight was to convert our findings from the work we do with our start-up teams into practically useful, openly accessible publications."*

The new model implements this approach, converting the start-up coaching into a living lab. Every start-up case is a unique opportunity to explore the state of the local start-up ecosystem, develop and test new coaching tools, and share specific localised lessons with the broader public.

The third element of the INVEST model integrates education with the start-up coaching programme. This approach seeks to bring the benefits of practice-based entrepreneurship education to a more scalable model. In the model, students participate in lectures about starting up a business, and then get to join real-life start-up coaching sessions in the start-up coaching programme to see the skills used in practice. Finally, they implement the skills themselves in the final course assignment.

The fourth and final element of the model is the way university staff update their entrepreneurial competences and knowledge. In the INVEST model, it is recognised that the arrow of learning also points towards the staff who have joined the start-up coaching team. In every coaching session, there are several employees of Karelia or its partner universities acting as coaches and subject-matter experts. This means that people learn not just from the experiences of the start-up being coached, but also from their colleagues locally and internationally.

## Discussions and conclusions

Nenonen (2020) and Immonen (2021) have shown that the results-based national funding model of universities in Finland has had a big impact on both the quality and type of activities universities are engaged in. As Immonen (2021) argues, it is very important to align any future entrepreneurship programme or initiative with the funding framework.

The new INVEST entrepreneurship model represented in this article connects directly with the three universities' basic funding criteria: 1. the explorative entrepreneurship model generates publications, 2. integrated education generates study credits, 3. the coaching programme helps more alumni to become self-employed as entrepreneurs.

The INVEST exploratory entrepreneurship pathway will include different types of learning opportunities for all students. As described, it includes entrepreneurial studies (number of ECTS and micro-credentials available to be confirmed), business innovation and idea generation opportunities, competitions, hackathons, innocamps and different forms of coaching. They can be included into the INVEST specialisation programmes, full degrees or continuous learning buckets in a flexible manner. Later, teachers and other practitioners are systematically encouraged to foster innovative and entrepreneurial education by offering the INVEST Fellow Programme for peer-learning opportunities.

As the new INVEST model of entrepreneurship education and support is actively utilising online meeting tools and other digital forms of collaboration, it is at the same time enabling the programme to be truly international. It is likely that this significant reduction of difficulty in collaborating internationally will likely lead to new activities such as helping start-ups gain access to markets abroad and international funding opportunities.

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# INVEST4EXCELLENCE builds human capacity for more sustainable supply chains



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## Abstract

Holistic internationalisation and the promotion of sustainable development in all our actions are among the key strategic aims of Karelia University of Applied Sciences. This development work is in turn supported by the three-year Horizon2020-funded project INVEST4EXCELLENCE. The project is elaborated by the INVEST European University, which is an educational and research community of five higher education institutions (HEIs) from Slovakia, Bulgaria, Greece, Finland and the Netherlands, and their regional stakeholders.

The INVEST4EXCELLENCE project aims for capacity building that fosters the competence development and strategic elaboration of the joint research and innovation agenda for the existing INVEST alliance. This paper discusses the development, implementation and key findings of the three-step case study research that frames the staff competence development process.

## Introduction

In 2020, Karelia UAS joined the ERASMUS+ European Universities-funded INVEST Alliance. The INVEST consortium is a combination of five HEIs from Finland, Slovakia, Bulgaria, Greece and the Netherlands. The alliance is supported with the three-year Horizon2020-funded INVEST4EXCELLENCE project that started in 2021 and aims at establishing a common research, development and innovation agenda and a competence development ecosystem for the alliance.

To support the development agenda, the alliance conducted a three-step case study to identify the key research, development, and innovation (RDI) competences, which are essential in developing and maintaining sustainable supply chains (SSC). Firstly, the case was framed with scoping review analyses that were based loosely on the scoping review protocol by the Joanna Briggs Institute (JBI, 2022). Secondly, it was defined in more detail with organisational case descriptions and, thirdly, the focus group data was collected from the identified informants. The focus group informants included RDI professionals from most of the INVEST partners and their regional stakeholders from the public and private sectors. The results were summarised in the form of an RDI competence matrix, in which three key areas of competence were identified: 1) sustainable supply chain management (SSCM), 2) HEI-stakeholder interactions, and 3) the internal sustainable development of HEIs.

The results provide a reference point for the HR development that is needed to ensure relevant capabilities in promoting sustainability and responsibility in the research, development and innovation of supply chains within the INVEST consortium. This process serves the goal to create a joint INVEST centre for excellence in the longer term.

## Research process and competence matrix description

Karelia UAS leads the capacity-building process and is responsible for the evidence-based approach. The essential RDI competences in maintaining and developing sustainable supply chains (SSC) were reported in the form of a competence matrix. The data collection included a scoping review, an organisational case study and a focus group interview, and the results were grouped into three categories based on the content analysis method.

First, the sustainable supply chain management group (SSCM) included four main categories that are all sub-grouped in more detail into general and specific competences (see Table 1a).

**Table 1a.** Competence matrix for Sustainable Supply Chain Management (SSCM)

<b>Sustainable Supply Chain Management (SSCM)</b>		
<b>Competence type</b>	<b>General competences</b>	<b>Specific competences</b>
Planning, Evaluation & Innovation	Sustainability management and leadership competences; Knowledge of the concept and practices of corporate social responsibility (CSR); Knowledge of sustainability goals; Sustainable supply chain innovation (SSCI) Stakeholder collaboration; Organisational transformation and change management towards sustainability; Energy-water-environment sustainability nexus; Knowledge of customer interface; Close collaboration with scientific research; Practical experience; Digital and technological skills; Global collaboration in research, development and innovation; Understanding the unfavourable effect of global phenomena on SC and developing solutions to overcome them on a global and local scale; Collaboration skills in sustainability development networks; Sustainability practices in SMEs; Risk and crisis management	Food supply chains; Circular economy & bioeconomy; Smart solutions; Social-ecological systems; Peace economics; Sustainable tourism
Product & Process Design	Sustainability design; Understanding a dynamic product line; Technology and IT; Sustainability certifications; Reverse supply chain management; Patenting skills	Life Cycle Assessments (LCAs); Circular economy
Supplier Management & Operations	Understanding the models for sustainability supplier assessment; Purchasing practices in supply chain management; Collaboration skills in sustainability supply networks; Ability to manage and improve human resources; Talent and competence management; Understanding of innovation implementation in practice; Big data and data analytics	N/A
Logistics	Green logistics; Reverse logistics; Digital interoperability in logistics and supply chain management; Physical Internet (PI); Sustainable express transport services; Investments in eco-solutions in logistics; Smart urban logistics; Awareness of the need for sustainability-related knowledge development and training in staff	

The general competences include a wide variety of skills and knowledge from sustainable leadership to corporate social responsibility (CSR) and from sustainability certifications to technology and IT, big data and green logistics. Specific competences seem to go deeper in understanding a more defined context and include the circular economy, life cycle assessment (LCA) and peace economics, for example. Some competences are overlapping within the four main categories.

Second, based on the scoping review and internal and external interviews, the higher education and industry interaction group includes a wide list of detailed competences that still need thematic grouping and further elaborations (see table 1b).

**Table 1b.** Competence matrix for Higher Education and Industry Interaction

## Higher Education and Industry interaction

<b>Scoping review (based on literature)</b>	<b>External interviews (industry and public sector stakeholders)</b>	<b>Internal interviews (higher educational institute representatives)</b>
<p>Understanding the concept and practices of smart specialisation ICT and technology skills; Participatory approaches and partnerships; Interdisciplinary knowledge and skills; Learning environments; Knowledge of sustainable development; Creating project-based initiatives for sustainability; Competence management; Innovation-related competences; Social innovation understanding; Sustainable organisational change; Entrepreneurship skills; Intellectual property management; Commercialisation and marketing knowledge and skills; Thinking skills</p>	<p>Commercialisation and marketing skills; Producer-consumer relations development; Qualification and requalification (life-long learning); Multidisciplinary /interdisciplinary / transdisciplinary approaches and knowledge; Identification of digitalisation opportunities; Attitude towards RDI work; Self-leadership skills; Project management skills; Knowledge exchange in bilateral collaboration; Understanding of (public) stakeholders' role in the sustainable development of companies; Benchmarking practices; cross-benchmarking; Utilising disruptions in the sustainable development work; Knowledge acquisition skills; Slow food and slow tourism; Interaction and listening skills</p>	<p>Cooperation in specialist networks; Knowledge of communities and groups; Co-creation skills; Knowledge of sustainability regulations and standards; Continuing education and lifelong learning skills; Digital skills and tools; Competences in curriculum development; Knowledge of the shortage of workforce in different fields of work; Attitude towards learning and development; Self-leadership skills; Business-driven development skills; Integration of technical knowledge and eco-social approach; Innovation skills; Project management skills; Organisational change management; Eco-design; Stakeholder (i.e. advocate) organisations as sustainability information providers; Forms of industry-HEI cooperation; Future research competences; Sustainable management skills; Globalisation and glocalisation processes; Flexible implementation of curriculum; Innovative forms of travel services; Pedagogical approaches; Ethical thinking skills; Marketing approach in business and co-operation; Cooperatives development; Geography; Finances and investing in RDI</p>

Both higher education professionals and stakeholder representatives stressed that a varied set of substance skills and knowledge have to be increasingly accompanied by a wide range of interaction skills. An important aspect of these skills is flexible interaction in interdisciplinary specialist networks in a vast variety of contexts. Companies pointed out that their work in diverse contexts benefits from experts with diverse professional backgrounds and cross-cutting competences. One company representative stated that it is difficult for them to find employers who can explore solutions from several points of view, such as water and electricity, simultaneously.

Third, based on the scoping review and the internal and external interviews, the sustainability in higher education group includes quite a comprehensive list of organisation-related competences that support applying sustainability into all actions of higher education (see table 1c).

**Table 1c.** Competence matrix for Sustainability in Higher Education

### Sustainability in Higher Education

#### Competences based on scoping review and internal interviews

HEI management competences; HEI competence management; Social responsibility in HEIs; Knowledge of international dimensions of HEIs; Knowledge-based economy and smart growth; Cooperation between science, education and business; Developing a curriculum with a transdisciplinary approach; Sustainable start-up development support; Higher Education for Sustainable Development (HESD) practices; Open innovation in HEIs; Technology and IT; Inclusive education; Project management; Future research

Examples of the main competences include, for example, Higher Education for Sustainable Development (HESD) practices (see e.g. Lozano et al. 2017), open innovation in HEIs, and knowledge of international dimensions of HEIs. As sustainability challenges are global, sustainable development calls for global interaction and reciprocal co-creation. Thus, the RDI professionals need to be competent in order to contribute to global networks. More specifically, this requires skills in globalisation, languages and intercultural communication.

## Discussion

The definitions of all these three groups, sustainable supply chain management, interactions between HEIs and industry, and sustainability in higher education, can bring benefits as a baseline to evaluate existing competences, identifying the gaps and developing specified learning opportunities for capacity-building actions within the INVEST alliance.

Overall, the results indicated that the RDI skills, competences and knowledge related to HEI-stakeholder interaction are an important and diverse aspect of RDI capacity-building actions in sustainable supply chains. The HEI-stakeholder interaction pertains to 1) the competences needed by the RDI professionals to carry out the HEI-stakeholder collaboration, and 2) the competences that the students need when working in the context of sustainable supply chains now and in the future. The study showed that higher education and stakeholder representatives partly share the same vision for these interaction capacities, but there are also differences.



Based on the results, it seems that the focus groups, which included HEI professionals and stakeholders, agree that managing sustainability challenges requires self-oriented continuous learning and business development of RDI personnel. Moreover, the informants highlighted the right attitude towards RDI work and self-oriented life-long learning skills as essential. Thus, the results of this three-step case study validate the need to create a systematic capacity-building process with both informal and formal learning opportunities to re- and upscale the competences to boost more sustainable supply chains.

In addition to fostering interactional activities with stakeholder groups, sustainability efforts in supply chains challenge higher education institutions to identify, manage and develop their internal competences, skills and knowledge. Overall, the research provided insight into the organisational competence development of RDI dimension with respect to management, social responsibility and internationalisation on a broad scale.

In the following project years, the capacity-building process will be further complemented with the creation of a tool for stakeholder involvement, development of open science training materials, and opening up the holistic INVEST Fellow Programme for peer-learning opportunities.

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Another article on the same study is in the process of being published:

Timonen, L., Puhakka-Tarvainen H. & Muhonen T. (2022) Relevant Research and Development Competences. Smart Energy for Smart Transport –Proceedings of the 6th Conference on Sustainable Urban Mobility, CSUM2022, August 31- September 2, 2022, Skiathos, Greece.

# Exploring the Horizon of Timber Construction: Building a cross-boundary community of data-driven practice



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## Abstract

Today's world is facing a challenge due to climate change, worldwide population growth, energy demand, increased infrastructure demand, and alarming resource scarcity. The construction industry has been identified as one of the major catalysts of the adverse effects of climate change. It is crucial to reinvent the best practices through benchmarking to achieve carbon neutrality in the construction industry for better environment. The opportunity for cross-border collaboration amongst countries that share similar goals to achieve the carbon neutrality, can be a window to share updated expertise and excel in

construction technology. The following article portrays how an international collaboration project called 'Sustainable Building Technologies- Community of Practice' has contributed to expert community development for sustainable development, specially focusing on timber construction techniques.

## Introduction

The construction industry and buildings consume about 40% of all energy and release about 30% of all carbon dioxide emissions (CO<sub>2</sub>e). This means that an increased focus on carbon-neutral construction combined with the circularity of construction residues can create a significant impact on reaching the sustainable development goals (SDGs) by 2030 set by the EU. While countries are setting ambitious goals to achieve carbon neutrality by 2030, having international perspectives/collaboration might make the route there more efficient. According to a universal survey on how companies are now working to incorporate their activities with the SDGs by the World Business Council for Sustainable Development (WBCSD), and DNV GL (2018), SDG 13 (climate action) is the most ranked goal, and the responsible consumption and production goal (SDG 12) scored the highest percentage in Europe and the Asia-Pacific regions (Gomme & Perks, 2018). Therefore, it is important to analyse how the construction industry, being one of the most important sectors responsible for climate change and resource usage, can move towards sustainability.

There is great scope for internationalising current best practices in wood construction to enhance the competitiveness of wood construction for sustainable cities. Those questions related to information management are a particularly important area for competitiveness. A tool for information management is building information modelling (BIM), which is widely used but still needs a widely applied study. This research project aims to build a community to research effective approaches towards different real-time challenges in wood construction and reinforce wood construction knowledge in different contexts (e.g. Finland, Austria and Germany).

The article explains where international projects can contribute to a better understanding of common grounds of challenges and possible mitigation strategies. The article also explains how exploring common barriers and possibilities can help develop a cross-boundary community of advanced wood construction research and practices.

## Background

There is a debate about multistorey wood construction and traditional material-based construction. The reason is that wood construction is still seen as a more expensive construction method compared to traditional ones in Europe. In addition, the adequacy of the supply chain is under question, especially for massive wood construction. However, to meet the goal of sustainable development, building construction needs to be seen in the light of the entire life cycle of buildings.

Several researchers, such as Omer & Noguchi (2019) and Ribeiro & Gonçalves (2019), have associated the expected growth of urbanisation and large cities in the coming decades with significant production of raw materials and consumption of natural resources and economic movements. Hence, this could cause adverse environmental and social impacts. Indeed, it will increase the need for green building materials for constructing new buildings and infrastructure to accommodate these expansions and to achieve overall sustainable development (Omer & Noguchi 2019).

One of the challenges here is to develop a generic platform for the comparison of different materials, which can be considered in a wide variety of contexts/countries. There is a need to develop new wood-based products to fulfil the tightening requirements of low-carbon construction. Therefore, a comparative analysis of whole-life embodied carbon and GHG emissions from multistorey buildings considering different materials (e.g. concrete, brick, wood, steel) needs further research.

The article sheds light on the current challenges towards internationalising the best practices in wood construction through expert communication located in three selected case study cities. Observations from cross-boundary expert discussions, workshops, empirical studies and literature reviews were used. The study helps to pinpoint the common ground of challenges and possible mitigation strategies for the future to develop a cross-boundary community of advanced wood construction practices.

## Objectives

The article briefly explains *how international collaboration in the SBTCP project (Sustainable Building Technologies – Community of Practice) has effectively contributed to the research developed by the cross-border community of professionals, companies and stakeholders from three countries: Finland, Austria and Germany.*

The objectives of the article are to:

1. assess and explain how the SBTCP project is internationalising wood construction knowledge and benefiting cross-border countries
2. explain the common internationalisation framework of the SBTCP project for reinforcing wood construction knowledge and best practices

## Methodology

The SBTCP project connects cross-border wood construction experts, resulting in two main output areas: 1) *research development* and 2) *practice-oriented community development*. While the development of the SBTCP project concerns collaboration amongst three partner universities located in three countries, the method for the project development includes expert opinions, literature review, pilot testing, and empirical studies based on observations in the selected contexts.

## Results

The SBTCP project is a platform of three collaborating partner universities. The research activity of the project started by selecting research topics for collaboration by the partner universities from Finland, Austria and Germany.

The objectives of the SBTCP project are:

1. Identifying key research topics in sustainable construction
2. Knowledge sharing and pilot-testing solutions for the pinpointed problems from the partner countries with expert support/companies
3. Workshop activities and knowledge hub development connecting with international students
4. Dissemination and publications in collaboration with international partners

Figure 01 illustrates how the SBTCP project is tying together three main concepts from three different countries: 1) Sustainable Buildings, 2) Building Information Modelling, and 3) Material Sciences, from the perspective of Finland, Germany and Austria. The Venn diagram shows the overlapping areas of research opportunities through collaboration, which will potentially reinforce the expertise and knowledge of wood construction.

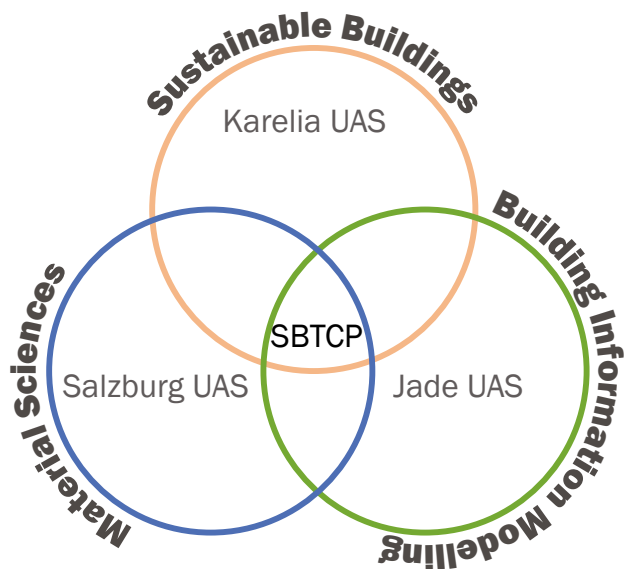


Figure 1. Research collaboration model of the SBTCP project

The possible outcomes of internationalising best practices through expert collaboration from cross-boundary organisations are as follows:

1. Identification of real-time/contextual challenges
2. Cross-boundary best practice sharing
3. Mitigating barriers to the internationalisation process
4. Connection development with stakeholders and companies

Figure 02 shows the resultant framework of the SBTCP project and how it connects three partnering universities and experts from Finland, Germany and Austria to develop the research and wood expert community. The framework leads to findings such as:

1. Contextual challenges identification is required to pinpoint areas of expertise/best practice sharing,
2. Identification of barriers against the internationalisation process can ease/speed up future international collaboration and boost the active involvement of stakeholders and companies.

The findings from the SBTCP framework align with the outcomes of internationalising best practices for a sustainable future.

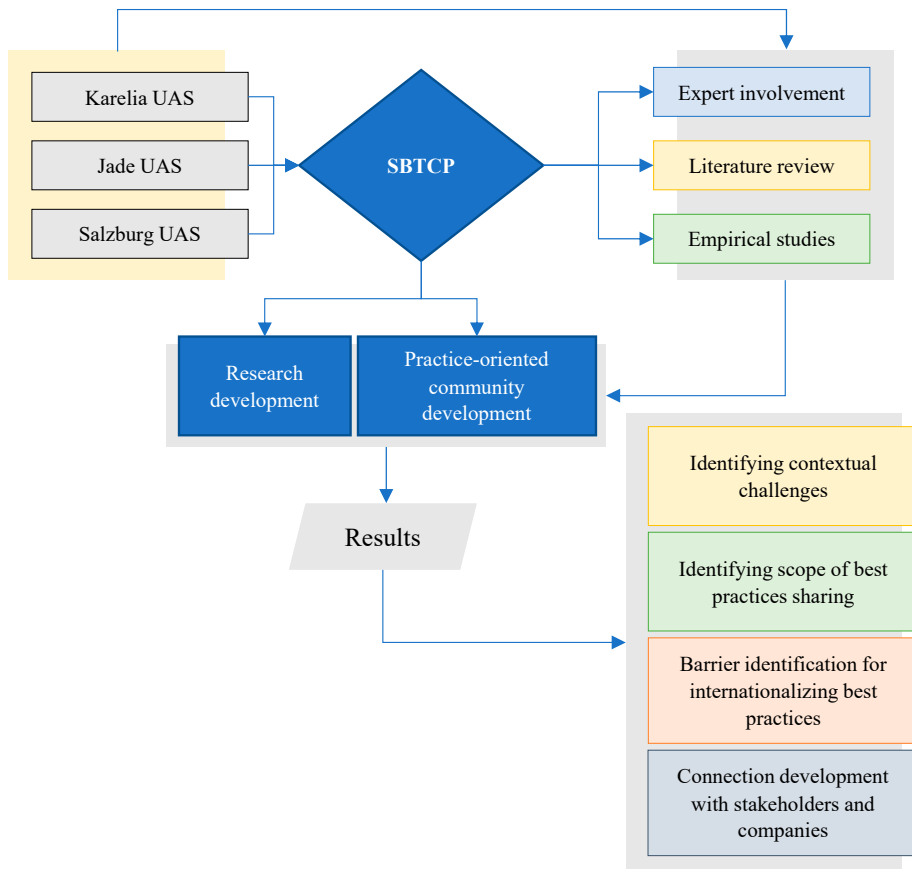


Figure 2. Framework for internationalizing wood construction technologies through SBTCP project

## Conclusion

The framework shown in Figure 01 indicates the need for developing common ground in cross-boundary collaborative research for effective information- and expertise-sharing. Furthermore, the framework of the SBTCP project in Figure 02 indicates the simultaneous incorporation of international experts and open up-to-date data along with hands-on experience-based insights, leading to a deeper understanding of contextual differences, challenges/barriers, commonalities, and therefore opportunities/ways of effective future collaboration. Here, international collaboration can support data collection, analysis and up-to-date expertise sharing using a common language for the long-term futuristic global utilisation of research outputs during the project period. Moreover, the research data will reinforce the global-scale knowledge of wood construction for sustainable development, which ultimately indicates the robust outcome of internationalisation of the common practices in countries all over the world.

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# The ENDURANCE project – How to harness sport skills in entrepreneurship



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## Abstract

The international ENDURANCE project has mapped the links between sport and entrepreneurship and has developed new innovative educational solutions. Online training material was developed in the project to improve and promote entrepreneurship education and vocational training in the vocational education and training ecosystem.

The ENDURANCE project had eight partners from seven countries. It consisted of four different outputs, the main ones being the comprehensive mapping of key results reports and an online training material package containing eight different modules. These training modules were designed using mapping results and the European Entrepreneurship Skills Framework (Entrecomp) for background guidelines (<https://ec.europa.eu/social/main.jsp?catId=1317&langId=en>).



## Introduction

For centuries, sport has been the most popular recreational activity and an important part of society. Entrepreneurship has also been part of societies for a long time, helping people to develop socially and economically. The role of entrepreneurship in the EU is greater than ever due to today's socio-economic challenges. New forms of entrepreneurship are emerging, while sport is playing an increasing role in society. The links between sport and entrepreneurship are numerous but often overlooked and rarely exploited. This is the case in many sectors, particularly in vocational education and training.

Karelia UAS has been one of eight partners from seven countries (Belgium, Bulgaria, Croatia, Finland, Italy, Slovakia and Spain) in the international ENDURANCE project – Entrepreneurial Capacity Building for Sport. The project “rethought” the teaching/training and learning of entrepreneurship based on the complementary features and commonalities between sport and entrepreneurship, such as determination, perseverance, self-confidence, stamina, respect for rules, team play, self-reliance, competition, success/failure, and so on.

The leading partner was Comenius University in Slovakia, and the project had the following four intellectual outputs (with the responsible partner referenced):

1. Establishing an online interactive OER platform for ENDURANCE training. (IWS Spain)
2. Mapping the dynamics of sport and entrepreneurship, with the common traits and links for sustainable careers for learners in VET and sport systems. (Comenius University, Slovakia)
3. Developing custom-made ENDURANCE entrepreneurship training and tools. (KUAS Finland)
4. Advancing entrepreneurship and sport discourse at the policy level with the ENDURANCE Green Paper. (BulSport Bulgaria)

The project was funded by Erasmus+. It officially started in November 2020 and ended in November 2022.

## Mapping results

During 2021 the partners carried out a comprehensive mapping of the integration of sport and entrepreneurship and produced three different reports.

1. ENDURANCE Report on Commonalities between Sport and Entrepreneurship
2. ENDURANCE List of Recommendations and Success/Failure Factors (SFFs) in Linking Sports and Entrepreneurship
3. ENDURANCE Academic Literature Review Executive Summary

The mapping reports summarise the above aspects into a set of findings on the common features and links between sport and entrepreneurship. Recommendations for learners and teachers in VET and sport systems were also produced during the mapping period. In making these recommendations, a combination of success and failure factors has been used to link sport and entrepreneurship to achieve sustainable careers. Every partner also produced case studies and good practice examples from every country.

During the ENDURANCE project, partners examined a number of academic sources and practical documents related to sport entrepreneurship, describing the links between these two fields. In addition, athletes were interviewed and several doctoral theses were studied. On this basis, partners developed a framework that highlighted the following five themes of commonality and connection between sport and entrepreneurship.

**1. Individual personality traits common in sport and entrepreneurship**

Personality traits and cognitive characteristics that make athletes more likely to be inclined to consider entrepreneurship and that improve their chances of success in business. There are many similarities between sport and entrepreneurship in terms of the personality traits that both fields both promote and require. Athletes face many challenges during their careers that unknowingly prepare them for the world of entrepreneurship.

**2. Other individual-level fostering factors**

These factors are mainly related to the individual's personal and family background, networks, skills acquired during a sporting career, sport and discipline expertise, educational background and access to resources. In addition to personal characteristics, there are a number of individual-level variables that are strengthened through or result from sport and can be exploited in entrepreneurship.

**3. External supporting and triggering factors**

Factors such as sport infrastructure and sport communities, policies and programmes, entrepreneurial climate and a favourable business environment, cultural and social norms, barriers to entrepreneurship and/or the transition from sport to entrepreneurship, or systems and initiatives that support entrepreneurship. The external environment and the factors that support and promote it are of course different in each country and may also vary at regional or local levels.

**4. Pedagogical approaches and education**

The educational offerings in terms of content and pedagogy, such as examples of good practice in entrepreneurship education and training; availability of generic and tailored training provision; types of training; appropriate teaching methods and pedagogical approaches. From a pedagogical and educational point of view, the link between sport and entrepreneurship is the best, but is not yet very close, especially in higher education.

**5. Connecting sport and entrepreneurship for social impact**

How sport entrepreneurship contributes to social inclusion, maintaining social stability and peace, healthy leisure and social interaction, job creation and a positive local economy; how social business models can be transformed into commercial models; how traditional beneficiaries can be turned into customers.

Results and findings stemming from this evaluation are available for free and in various languages via the project's official OER Platform under the Mapping section (<https://www.enduranceproject.eu/mapping.php>).

## **Endurance training modules**

The main goal of the ENDURANCE project was to develop eight online training modules for the VET ecosystem. The following training modules were developed together with eight project partners. Karelia UAS coordinated the process.

### **Innovation skills – how to harness sport innovation in business**

Athletes often have to be innovative, both in training and in competition. Innovation skills are an important part of sport. The same skills are a vital part of business, when planning your strategy and thinking about competitive advantage.

### **The essentials of project management for aspiring sport entrepreneurs**

In the context of this training module, learners have the opportunity to familiarise themselves with the very essentials of project management (PM). PM is one of the most liquid and transversal business functions; it embraces a wide range of activities, capabilities and strategic priorities for business competitiveness and excellence.

### **Management and self-leadership**

Nowadays, entrepreneurship and being an entrepreneur is something that may be considered a global phenomenon. The way that entrepreneurs engage with passion in the creation of a particular business venture is something worthy of all types of study and research.

### **A comprehensive introduction to marketing for aspiring sport entrepreneurs**

The content of this module is designed to facilitate an introduction to topics and terminology that are common in established marketing theory and practice.

### **Digital skills**

This module offers a training path for how to use digital skills to enhance your entrepreneurial spirit as a business athlete.

### **Finance and economics**

This module includes basic concepts and calculations that need to be mastered to understand the field of finance and economics. When thinking about starting their own business and making a decision, athletes need to know certain financial fundamentals.

## Branding

In this module, the learner goes through and learns the entire branding process, from how companies choose their brands and measure their effectiveness, to what strategies they use to keep a brand successful in today's marketplace.

## Setting up a business

This module covers some of the most important aspects related to setting up a business from a sport background.

## Testing and validation process

Modules and training content were tested and validated in pilot version by partners with a total cohort of nearly 750 people (university students, new graduates, entrepreneurs-to-be, professionals and trainers, representatives of the entrepreneurship support network, etc.)

Feedback and impressions from participants were collected by all partners after each piloting session for fine-tuning actions and other recommended integrations. Final satisfaction feedback surveys gathered by the training staff of the organisations confirm the pedagogical reliability and great satisfaction among the target audience with the accuracy and ease of use of training material.

## Discussion and conclusions

The ENDURANCE project was quite an effort at the time of the COVID-19 pandemic. Partners from seven countries were able to jointly build training content by working exclusively remotely. The partners met regularly in remote meetings and the development work was taken forward using a variety of collaborative tools on the internet. These tools became very familiar and their usefulness in a difficult time of crisis was enormous. One interesting fact that captures this peculiar period well is that partners were only able to meet for first time in person at the project's closing meeting.

All in all, partners were very satisfied with the outcome of the project and the materials produced. Cultural and working differences between countries brought several challenges to the work, but all's well that ends well. The process was well planned from the beginning and the roles of all partners were crystal clear. Good planning made it possible to put the ENDURANCE puzzle together and a functional entity was achieved.

At the end of the project, it could be said that one thing is certain; top sport and entrepreneurship have a lot in common and the natural extension of a sporting career is entrepreneurship. In practice, however, to fit studies into a serious sporting career is often very difficult, if not impossible. Top-level sport is a full-time job and existing study paths are difficult for athletes to complete. The results of the ENDURANCE project do not offer a philosopher's stone to this problem, but hopefully the materials produced by the project will inspire and help athletes to realise that the strengths they have in their sporting careers can be an advantage in an entrepreneurial career. From an educational perspective, it is clear that a completely new approach needs to be found to smooth the transition from sport to entrepreneurship for top athletes. Educational institutions around the globe will have to meet this challenge in the near future and ENDURANCE reports and online training materials can be helpful in this process.

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# The Development of the Karelia UAS Media Degree Programme as Part of the International Networks in the Northern Periphery and Arctic Projects



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## Abstract

The key benefits of cooperation between the Northern Periphery and the Arctic Programme with the Karelia University of Applied Sciences media degree programme include updating specific know-how, testing new technologies, and cooperating with international partners to share knowledge. In this article, the development of the Karelia University of Applied

Sciences media degree programme from 2009–2022 is outlined and explained. By integrating the Northern Periphery and Arctic Programmes into teaching, students and staff were able to naturally updated their professional skills and knowledge in cooperation with international partners, local organisations and enterprises.

Keywords: technology, cooperation, media degree programme, international cooperation, development, NPA project, Karelia UAS

## Introduction

The continuous advancement of digitalisation brings great challenges to Karelia University of Applied Sciences' (Karelia UAS) media degree programme. As different content, programmes and devices are constantly developing, new media elements and platforms are needed. This should be taken into account in higher education teaching, as it requires constant updating of skills, new experiments and the ability to take in new information. The Northern Periphery and Arctic (NPA) projects have been an important channel in the development and updating of new skills in the media degree programme. With the help of the NPA projects, the education department has been able to develop knowledge and skills together with international partners, which have been included in the teaching. In addition, project development and experiments have been carried out together with provincial partners, whereby new information and skills have also spread provincially. By acting in this way, Karelia UAS's strategy is being implemented as well. As Karelia UAS's HR manager states, internationality is our job and part of the organisation's strategy. Karelia UAS promotes the development of staff knowledge and skills through the means of personnel management, and thus also working in knowledge projects is a natural way to smoothly receive influences from beyond the country's borders (Tolkki 2022).

## Impact of NPA projects from 2008–2022

The first example of the impact of the NPA projects became visible at the end of the first decade of the 21st century, a time when mobile devices quickly conquered the world. At the same time, their use became more diverse: mobile devices were used to search for information and they started to be used as information platforms. Karelia UAS actively applied for two consecutive NPA projects, the focus of which was the utilisation of mobile devices. The effects of the Connected Mobile Communities in the Northern Periphery 2.3 (CMC@NP) and the Tourist Guide for Northern Periphery (TG4NP) projects were great, as mobile guides became the core competency of the media degree programme in the first half of the 2010s. The CMC@NP project took place from 2008 to 2010 and the TG4NP took place from 2010 to 2013.

In the media degree programme, information on mobile devices and the content that can be connected to them was searched for by the joint efforts of teachers and students, in accordance with proven good practices. The media degree programme wanted to study both content production and mobile programming. The first finished product was an audio navigator, completed in 2009, which presented the military history of Ilomantsi. This was followed by the first functional event guide app produced in Finland, the Ilosaarirock Mobile Guide, for the summer 2010 Ilosaarirock music festival. The development and production of the Ilosaarirock Mobile Guide, which greatly motivated students and teachers, was continued as part of student's studies until 2018. In addition to that, in the early 2010s, student interns on the TG4NP project and thesis authors made mobile guides for Koli, Vuonislahti and Ilomantsi. These guides were also evaluated by the international partners in the project. The Irish and Northern Irish partners were particularly active in commenting on the guides.





Picture 1. Examples of digital guides created by the TG4NP & CMC@NP Projects. Photo: Timo Rui.

As the media field changed, new methods and techniques also shifted. As mobile technology and design had become a basic competence, the media degree programme deliberately started to change its teaching, moving on to new elements. Once again, new NPA projects helped with this. From 2015 to 2018, the Improve Project (Involving the coMMunity to co-PRoDUce public serVICes), together with partners from Ireland, Northern Ireland, Iceland, Sweden and Norway took place. In particular, the joint use of streaming and mobile devices was learnt about, tested and developed in the project. In North Karelia, the partners were the North Karelia Martha Organization, Siun sote (the joint municipal authority for North Karelia social and health services), and Vaarakirjastot (the municipalities libraries); whose activities, especially streaming, brought new dimensions and opportunities to their services. The services developed, in accordance with the goals of the northern periphery, were also transferable from one area to another. For example, the streams from the Mevo camera were also tested by students and international partners.



Picture 2. Sharing knowledge from the IMPROVE Project with international partners during the Norway Partner Meeting. Photo: Pasi Lamminluoto.



The Digi2Market - Digital Access to Markets for Sustainable Rural Business. Project took place from 2018 to 2022 together with Icelandic, Irish and Northern Irish partners. During the implementation of the project, the digital leap could be directly experienced, particularly when the COVID-19 years caused a growing interest among companies to utilise new technologies in the marketing communication of their products and services. In the Digi2Market Project, the marketing communication of small and medium-sized enterprises (SMEs) was promoted with immersive technologies in cooperation between two universities and four development companies. This cooperation broadened the understanding of the technical and functional boundary conditions of different regions and deepened the importance of international cooperation in a rapidly changing world. During the development work, Karelia UAS's multidisciplinary project team, in cooperation with local companies, was able to refine their expertise and skills in virtual technologies, environmental mapping and marketing communications. They also learnt how to genuinely integrate the research, development and innovation work into teaching.

Digi2Market's development approach included cooperation with companies in the use of immersive technologies, and gave experiences and insights into the modernisation process of Karelia UAS's learning technologies. These developments were realised in the Future Work Investment and Development projects. In their article on digital pedagogy, Puustinen and Hyttinen (2022) write that experiments related to XR (VR, AR and MR) technologies are in an intensive development phase in various education programmes at Karelia UAS, and these technologies can be widely used by teachers and students in different fields of study (not only media studies) in the XR-lab spaces being prepared for campuses.

At the start of the project, in 2018, the media degree programme boldly took over 360 videography, Thinglink and Augmented Reality technology in line with the professional interests of two teachers. There was also curiosity about other virtual technologies, but in order to achieve immersiveness in the project, the focus was placed on these technologies. They were new and required preliminary investigation work, independent testing and comparison before even the first small-scale experiments together with micro and SME companies were started. In the Digi2Market Project, the productions based on the technological solutions made by each participating country, i.e. the videos, were attached to a common platform: [digi2market.eu](http://digi2market.eu). On this platform, they can be viewed and compared in terms of how the different services and products of different companies appear in them. The domestic website, [digi2market.karelia.fi](http://digi2market.karelia.fi), has analytical explanatory texts about the products made in Finland, what was learnt from them, and how the three-year development work progressed systematically.



Picture 3. Karelia UAS staff meeting with the Digi2Market Project. Photo: Maria Saastamoinen

## Conclusion

Throughout the years, multiple NPA projects, such as CMC@NP, TG4NP, IMPROVE and Digi2Market have had an immense impact and have been integral in the development of Karelia UAS's media degree programme. Being able to utilise new knowledge, technologies and international insight allows Karelia UAS students to gain profound knowledge required for work following graduation. The NPA projects also strengthen the know-how of project and teaching staff, which also allows for staff members to integrate their knowledge to other departments.

Furthermore, in her article, Karelia UAS's marketing lecturer Lotta Lilja explains that development projects give variety to teaching work, as well as an understanding of the educational institution's regional impact. Cooperation within an educational institution between different programmes was strengthened in Digi2Market through regular meetings and joint business projects. Multidisciplinary, long-term, joint development work promotes understanding of the working methods of teachers from different fields and different educational disciplines (Lilja 2022).

In his article, Hyttinen continues that the integration of teaching and project work requires planning and preparation, so that activities related to the project's outcome goals serve the education and support the students' learning. At best, project assignments strengthen teachers' skills in addition to students' learning. And the competence that has been strengthened in this way can also be seen in teaching (Hyttinen 2022).

In this article, the benefits of the NPA projects to Karelia UAS's media degree programme were overviewed and explained, but continuous learning is done consistently throughout the university. Teaching and project staff participate in various seminars, training courses, and domestic and international projects to update and improve on their know-how. This ultimately trickles down to students. Moreover, NPA projects are just one way Karelia UAS develops its student and staff know-how to serve the need for modern-day challenges.

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# Empowerment of Older People in International Collaboration between Karelia UAS and CUAS – experiences and learning from a joint module



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## Abstract

In this paper we aim to discuss the empowerment of older people through international collaboration in higher education. We focus on analysing some pedagogical objectives and choices to deepen activities that have already begun between the education institutions of Karelia UAS (Finland) and CUAS (Austria). We utilise a participatory action research framework to state our arguments and to describe our practical suggestions for peda-

gogical solutions in this field of interest. The research questions are: How can demographic development due to the ageing process be viewed from an international perspective? What practical recommendations for empowerment and active ageing can be derived from this, and how can these be communicated pedagogically? In the discussion section we define empowerment of older people as a concept, and describe some pedagogical needs and possibilities for the future according to previous studies. As conclusions we state that participation, interdisciplinarity and empowerment are made possible on the most diverse levels, such as students, teachers, projects and the discussion of organisational questions. International collaboration between our education institutions advances the competence of future professionals and the empowerment of older people.

## Introduction

Ageing is a worldwide phenomenon, and the number of older people is rapidly increasing globally. To respond to possibilities and challenges of this megatrend in society, higher educations of applied sciences in Finland (Karelia University of Applied Sciences) and Austria (Carinthia University of Applied Sciences) have collaborated actively in recent years on these issues, in an attempt to find empowered solutions to this contemporary phenomenon.

Karelia UAS and CUAS have the same kinds of strategical objectives to ageing issues. Applied science, research and development are strongly on the agenda in both institutions, e.g. at the Institute for Applied Research on Ageing (IARA) at CUAS. For these reasons, preconditions and organisational structures support and advance productive and future-oriented collaboration between Karelia UAS and CUAS. On a practical level, the shared interests of ageing between teachers and the same kinds of pedagogical approaches promote a different kind of collaboration “in the ageing and digital era”. For example, a joint study module piloted online in 2020 in the Active Ageing master’s degree programme at Karelia UAS and the Disability and Diversity Studies bachelor’s degree programme at CUAS represent several opportunities to study and learn via online and independent of place. Furthermore, on a practical level different kinds of common projects, development work and cooperation have been done in recent years between these organisations, such as cooperation in the EMMA Project (Erasmus+) and the AlivE project application in 2022 (Erasmus+).

In line with these strategic and collaborative aspects, in this paper we aim to discuss the empowerment of older people in international higher education collaboration and focus on analysing some pedagogical objectives and choices to deepen activities that are already in progress between our education institutions on this topic. We focus on utilising a participatory action research framework to state our arguments and to describe our practical suggestions for pedagogical solutions in this field of interest. Our research questions are: How can demographic development due to the ageing process be viewed from an international perspective? What practical recommendations for empowerment and active ageing can be derived from this, and how can these be communicated pedagogically?

## Discussion

The origin of the concept of empowerment lies in the philosophies of community work, which emphasises people’s power and participation. The idea of empowerment is to raise people’s social consciousness and change the environment to eliminate the social constraints acting on people’s lives (Kam 1996, 231). Empowerment theory connects individ-

ual well-being with the wider social and political environment, and suggests that people need opportunities to become active in community decision-making in order to improve their lives, organisation and communities (Zimmermann 2000, 58). In this context, the empowerment of older people is understood from the perspectives of three levels of action: individual, social group and society. Demographic change shows that it is important to recognise older people as an independent, heterogeneous group and to strengthen their abilities and skills. Understanding empowerment in a broad way, as explained above, also leads to social inclusion of people in old age.

An idea of empowerment is historically closely linked to the fight for civil, human and social rights (pedagogy of the oppressed, the US civil rights movement, feminism and self-help movements). Empowerment is intended to help people understand the effect of power and to promote their own power in order to reduce disadvantages. It turns to people's individual and collective resources, and could of course also lead to professional attitudes in the sense of helping other people (peer counselling) (Lenz & Stark 2002).

However, empowerment as a concept is difficult to define, since it depends very much on specific forms of action of the persons involved in practice, communities, etc. (Zimmermann 2000). Below we list examples of structural barriers of empowerment among older people according to Berry (2009), de Souza (2003) and Lauder et al., (2006): Low levels of income, lack of money, poverty, loneliness, living alone and mobility problems, widowhood, poor sense of belonging, lack of optimism, ill health, lack of trust and poor mental health, negative stereotypes towards members of older generations, and low levels of community-level social capital may be associated with higher levels of depression. In the international higher education context, former points of views are vital. Described definitions of structural barriers express the universal nature of ageing issues; therefore, the empowerment of older people concerns us regardless of where we live. An international comparison in particular shows that the social, institutional and individual challenges associated with old age and demographic change are similar and that empowerment of this group of people can therefore also be discussed jointly. The reflection on the joint study module, which was carried out in 2020, showed that similar problems and fields of research were identified in the exchange between students.

The consequences of demographic change in ageing guide educators to consider and analyse ageing issues more accurately. From an international perspective, collaborative discussions and analysis widen the points of view and support to see all the dimensions of ageing. In practice, by focusing on individual, institutional and societal levels, students are able to recognise entanglements of demographic change, and can find solutions to provide recommendations to support empowerment at all levels for individuals, groups, policies, etc. Hand in hand with these perspectives, international collaboration brings in future-oriented approaches and novel pedagogical solutions, and enables students and teachers to learn from each other by sharing good practices.

Regarding previous studies of conceptions of learning and online learning environments among higher education social and health care students, students' learning conceptions and traditional learning contexts and styles are rupturing as online and collaborative learning is increasing. At the same time, study orientations are changing, and individual learner agency is becoming more and more emphasised. Student groups are becoming more heterogeneous and unbound, as studying is no longer limited to the classroom or some other physical context. Despite the growing distance between students, collaborative groups and tasks are typically required (Myller & Vänskä 2018). The needs of pedagogical development and solutions represent ruptures in the traditional pedagogical environment, but they also describe future-oriented approaches, where learners are in a part of a

worldwide network (Downes 2012, 9). Moreover, different kinds of blended learning applications are utilised increasingly in higher education, and the worldwide COVID-19 pandemic has sped up this development (Bashir A, Bashir S, Rana, Lambert & Vernallis 2021).

At Karelia UAS and CUAS, we have a common and global interest to promote our students' competence in empowered ageing. By educating future professionals in applied gerontology and Disability and Diversity studies, we have to consider different pedagogical choices to advance our students' practical knowledge and skills, their ability to take part in multiprofessional and intercultural groupwork, their readiness for applied research and development, as well as phenomenon-based learning, critical thinking and inter- and transdisciplinary work. These competencies will be required in the future. International collaboration brings in a learning space where online pedagogy, for example, can support us to pilot and monitor these kinds of experiments together to respond to ageing issues from a higher education perspective. Furthermore, students learn how to work together with diverse people in an international context, and they learn to organise themselves in group work and discussions. In addition, students' digital competencies are strengthened by finding online digital solutions for working together (e.g. by using MS Teams for synchronous group work or other digital tools and platforms for asynchronous work).

To achieve the competence of empowerment of older people among our students in international collaboration, a participatory process of working together is needed. For example in Finland, Toikko and Rantanen (2009) state that participatory research-based development is a useful method of approach for applied science education. This approach is used to a significant extent in Finnish higher education of applied sciences and especially in master's theses. In the context of international collaboration, participatory research-based development would also be suitable. In accordance with this approach, students bring in their individual experiences of their working fields or internships, they develop research questions together and focus on specific questions which arise from their experiences.

In relation to classic and current literature on participatory research (e.g. Arnstein 1971, Bergold & Thomas 2012, von Unger 2014), it becomes apparent that the level of participation in particular is decisive for whether genuine participation can succeed or not. The joint module has shown that the involvement of students from the beginning of the research process on the topic is central. After a brief overview of the content and reflection on existing knowledge on empowerment and active ageing, it was particularly important that the students got involved right away and worked out research questions together in international and interdisciplinary groups. In addition to the challenge of language differences in an international team, it is especially the interdisciplinarity that can pose challenges for students – and teachers. Interdisciplinarity or, subsequently, transdisciplinarity, especially in the context of empowerment and active ageing, opens up opportunities to think beyond one's own disciplinary boundaries and to develop something new (Brauer et al. 2018).

- The combination of participatory and inter- as well as transdisciplinary approaches in teaching requires some coordination processes. Time preparation and planning are particularly relevant on the part of teachers: on the one hand, there must be precise coordination of content in advance, and on the other, for a joint module that integrates synchronous moments, it is also necessary to define time windows in which the students can actually meet virtually. The main focus must therefore not be purely on content-related aspects; administrative points must also be clarified. Furthermore, it is particularly important to clarify central concepts and terms from the start so that a common language can be spoken.



## Conclusions

The interests of both Karelia UAS and CUAS lie in the field of ageing and related processes. The joint module was an opportunity for students to deepen their understanding of these issues and to discuss them in an international context. It is planned that a module of this kind will be carried out again in the future and that it will offer more opportunities for systematic exchange, especially for the students.

With regard to our research questions (How can demographic development due to the ageing process be viewed from an international perspective? What practical recommendations for empowerment and active ageing can be derived from this and how can these be communicated pedagogically?), it can be stated that the joint module has shown that ageing processes in the two participating countries show socially, politically and economically similar structures and that, from the students' point of view, comparative analyses are possible here. This promotes, especially with regard to the second research question, international and interdisciplinary exchange between students from different countries. Nevertheless, in the pedagogical considerations for planning such a module, different national structures must be taken into account, which are framework conditions for empowerment and active ageing. At the same time, in the pedagogical implementation attention must first be paid to a clarification and understanding of main terms, as well as to intercultural and interdisciplinary cooperation between teachers and students.

In order to strengthen the exchange between Karelia UAS and CUAS, it is generally planned that, in addition to joint project cooperation (e.g. EMMA, AliVe), joint proposals or exchanges within the framework of blended intensive programmes will be considered. This should strengthen physical and virtual cooperation and create opportunities to work together on different facets of the topic of ageing. Participation, interdisciplinarity and empowerment are thus made possible on the most diverse levels, like students, teachers, projects and the discussion of organisational questions.

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# 30 Years of Nordplus Cooperation



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## Abstract

Nordic cooperation at Karelia has its roots in the 1990s. Financed by the Nordic Council, the Nordplus programme has provided funding for student and teacher mobility, development programmes and short intensive courses. The first Nordplus networks at Karelia were founded in health care. Over 30 years of cooperation, the number of partner universities has varied and is now six. Three partners, however, have remained the same from the very beginning: Karelia UAS, Malmö University and University College Copenhagen (KP) Hillerød. This article is based on the authors' experiences of Nordplus cooperation in health care. The article discusses the various benefits this cooperation has offered, without forgetting a few difficulties on the way. But that's what makes cooperation interesting and rewarding.

## Introduction

Nordic cooperation has deep roots in politics, economics and culture. In the vision, the values shared by the Nordic countries help make the region one of the most innovative and competitive in the world. "The Nordic Council of Ministers and the Nordic Council are the main forums for official Nordic cooperation, which involves Denmark, Finland, Iceland, Norway, Sweden, the Faroe Islands, Greenland and Åland." International work includes cooperation with the Baltic countries, among others. The interdisciplinary perspectives that touch on all activities are sustainable development, gender equality, and a children's rights and youth perspective (Nordic Council, 2022).

Nordplus is a mobility and networking programme for education that includes all educational levels, from primary education to University. One of the aims is to support development and innovation in educational systems through cooperation in education and training, as well as cooperation on development projects, exchange programmes and networking (Nordplus, 2020).

At Karelia, the Nordplus programme has played an important role in developing student and teacher mobilities and short intensive courses. Currently the Nord-Baltic 6 network includes six higher education institutions concentrating on bachelor's programmes in nursing and public health nursing, and master's degrees in social and health care. The participating universities are Malmö University (Sweden), University College Copenhagen KP (Denmark), Rīga Stradiņš University (Latvia), the University of South-Eastern Norway (Norway), Karelia University of Applied Sciences (Finland) and the University of Iceland. All network members are equally responsible for the activities and decision-making. Leadership and coordination tasks change every three years. Nord-Baltic 6 focuses on student and teacher exchanges, short study visits and online cooperation. In the 2010 application period, Rīga Stradiņš University (Latvia) became a member of the network and the name changed to Nord-Baltic 5. This was an important step towards widening the cultural perspective.

The authors of this article have all worked as Nordplus nursing network coordinators for several years.

## The first mobilities and a lot to learn

In this section, Principal Lecturer Arja-Irene Tiainen describes her first experiences as a teacher and coordinator in this Nordplus network in the 1990s.

In the beginning stages of my work as a coordinator, there were many basic matters that needed to be considered. Swedish language was more or less problematic for all Finnish coordinators. In the degree programme in nursing, this was a time when teacher and student exchanges started. Everything needed to be done for the first time. There was no internet or email at that time. Fax, phone, telegram and letters were the tools used to keep conversations running between the partners.

I took part in my first Nordplus teacher exchange in the autumn of 1996. The teacher exchanges had just started at Karelia University of Applied Sciences. Nordplus principles emphasised the use of Swedish in all activities. The first teacher exchange at Malmö University was a demanding experience. There were several days of teaching and the teaching material had to be created almost from scratch. The second teacher exchange in the spring of 1997 was easier in many respects. It was nice to see that my knowledge of Swedish had improved and I could use it more than I could during the first exchange period.

Gradually, teacher exchanges became more common, and the Nordplus programme played a significant role in this development. Internationality became a more important thing in Karelia's operations. For me, the most memorable short course took place in the spring of 2001, when we organised a short intensive course exclusively for male nurse students. The most important aim was to support male students in their nursing studies as they were a clear minority in the world of nursing. In those days, many health care institutions needed more male nurses and more nursing professionals in general.

## Boosting motivation for Swedish studies

In this section, Head of Educational Development Marjo Nenonen describes her experiences as a young language teacher and a Nordplus network coordinator in the late 1990s and the early 21st century.

The Nordplus network offered me my first intensive experience in internationalisation and intercultural communication. As a young language teacher, I was chosen to coordinate the Nordplus network in nursing. That task came with the job of being a chair in Nordplus meetings where all the participants used their native languages (Swedish, Norwegian and Danish), except us Finns who had to manage with Swedish. The first meetings with the Nordic colleagues were a struggle. However, there was always help from Swedish colleagues and a very warm and understanding attitude from all the participants towards a young Finnish language teacher who was trying to cope with all these languages. Little by little, communication became easier, and I even learnt to understand some Danish and Norwegian.

For Karelia students, Nordplus cooperation has offered a chance to create personal contacts and gain experiences that have improved their communication skills, increased their understanding of the neighbouring countries and their languages. Short exchanges and short intensive courses have provided students with a different type of mobility opportunity. These exchanges have been possible even for those students who cannot take part in longer exchanges. The numerous positive experiences have boosted students' communication skills and created a positive attitude towards learning Swedish. It is not the mistakes you make, but the things you can say and do using a foreign language. And the friends you make while doing that.

## From language studies to nursing

In this chapter, Lecturer Kirsi Tanskanen describes her experiences as a network coordinator and nursing teacher in the 21st century.

When the task of coordinating the network was transferred to a nursing teacher, the network came closer to nursing education. The Scandinavian partners understood each other even though they spoke their own languages – which amazed me in the beginning. I was always encouraged to use Swedish even though I did not speak it perfectly.

The official language of the network changed to English when Rīga Stradiņš University from Latvia joined the network, but in more non-professional situations the partners continued to use Swedish/Danish/Norwegian too. The Scandinavian languages created a sense of unity and cultural closeness. The partners were surprised that everyone in Finland studies Swedish, so in many ways there was a lot to learn from each other. Over time, the perspective changed and English became the official language of the cooperation, although for me it was important to continue practising my Swedish.

It has been surprising to note that for many students from the partner countries, the Nordplus exchange has been the first time they have visited Finland. I remember vividly a Danish nursing student who told me that it was only in Finland that she learnt to be quiet in company without feeling uncomfortable – she called it comfortable silence – liberating, isn't it? All in all, the network has played an important role in both linguistic and cultural aspects. It has strengthened the collaboration between partner universities and supported the growth of nursing understanding. Nordic cooperation is important for young people to promote the understanding of health and welfare in the Arctic region.

## Thoughts from partners

In this section, we give the floor to our Nordplus partners Katherine Webster and Siv Roel to describe briefly what Nordplus cooperation has meant for them.

“My interest in participating in this exchange programme has resulted from the students who have been involved. Those students that I have helped with exchange through this network have inspired me with their motivation to improve their professional skills and their willingness to improve their competence across the cultural interface.”

*Katherine Webster, Lecturer of Nursing, Network Coordinator, Malmö University Sweden*

“Nordplus is a suitable network for students who want to go on short-term exchanges. It's an opportunity for everyone to become a little more familiar with nursing education in other countries. It gives teachers an opportunity through exchange to get to know education in other countries, gain new colleagues and form networks for professional development and research. It is also an important offer for master's degree students that do not have the opportunity for exchanges of three months in their study programme. Exchange in general gives students and staff an opportunity to take part in a global world.”

*Siv Roel, Lecturer of Nursing, USN Norway*

## Discussion and conclusions

The Nordplus programme and the Nordplus nursing network have had a remarkable influence on internationalisation at Karelia UAS. Student and teacher mobilities in the Nordic countries created a solid basis for entering other exchange programmes. For teachers, the network has offered opportunities to exchange ideas with Nordic colleagues and to create new teaching content. Since the cultures and the standards in health care are quite similar, cooperation has in many ways been easy and effective. Furthermore, the cooperation has had the impact of increasing interest in studying the Swedish language and learning more about Nordic cultures.

Although this article focuses on history, the network itself is very much alive and developing its actions. These long-standing partnerships have also served as a basis for other international networks and projects. Today, Karelia students on the master's programme in social services and health care can take part in short intensive courses in Latvia. The partners have also been eager to plan new projects, such as for the Erasmus+ programme. In the future, the Nord-Baltic6 network intends to strengthen the perspectives of the environment and well-being in the Arctic region, and to enhance cooperation and digital activities in addition to student, staff and teachers exchanges.

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# Differences and similarities in international project work in relation to project financing



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## Abstract

This article describes the differences and similarities between international projects in terms of design and implementation. It concludes that less attention has been paid to the international work carried out during the project. The article also notes that applying for an international project is much more challenging than applying for a national project. It describes the usefulness of international projects, even if different actors set their own objectives for the project.

## Introduction

The authors of this article have several years of experience in international development activities. They implemented an SMErec project together between 2017 and 2019, the aim of which was to enhance recruitment in small and medium-sized enterprises. Several articles

have been written about this project, including the publication *SMErec – new generation recruitment skills for SMEs and workforce* (Ruotsalainen, M-L & Tiainen, A-I. 2019), which has been utilised in the online course “New Winds of Recruitment”, for example, which was created as a result of the project.

So far, less attention has been paid to the international work carried out during the project and to the analysis of project partners’ mutual expectations and objectives within the project. On the other hand, Tiainen and Miettola (2011) have described the experiences of cooperation between universities of applied sciences and science universities in international projects. According to them, the institutions learnt from each other and made full use of the strengths of both parties in higher education. This article discusses the challenges in and experiences of international cooperation.

## **Internationality in the SMErec project and the challenges in internationalisation**

Intercultural communication skills are important in the implementation of smooth international cooperation. These skills include cultural understanding and communication skills. For example, the way we use English as a working language differs widely across Europe. Differences between cultures can sometimes cause more misunderstandings than consensus (Krastina & Musifullina 2022).

In the SMErec project, international cooperation was based on a joint consortium agreement with Belgian and German higher education institutions. According to the agreement, the international cooperation aims to address challenges by supporting SMEs towards more objective recruitment of new personnel (Consortium Agreement ESF Collaboration). A timetable was defined for the cooperation, but as the project started, it became apparent that the partners carried out their own projects with funding from different financiers, which resulted in varying implementation schedules. This affected the resources that were available to be used for travelling and working, for example. Separate funding programmes directed the implementation of the project in each organisation. As a result, the project staff in different organisations had two types of work going on: their own projects implemented based on funding, and the international cooperation project, whose conditions had been defined more broadly than in traditional project cooperation.

The Belgian HoGent project focused on developing the recruitment process in SMEs and on promoting non-discriminatory employment. The German partner organisation, Hochschule Harz, was particularly interested in competences and statistical analysis as part of the recruitment process. Their aim was to develop a digital recruitment tool primarily for the field of health care. The international partners considered the networking goals of the Finnish project partners significant and valued the fact that SMErec, unlike other national projects, provided education for both companies and students. The other partners did not engage students in the project as effectively, and they found the Finnish thesis integration model useful. Also, the integration of students into the development of a digital tool in Finland differed from other project partners (Ruotsalainen, Meriö, Penttinen, Leminen & Rimpilä 2017).

## Experiences of internationalisation in project work

Retrospectively, the international cooperation proved to be fruitful, as, for example, the Belgian studies resulted in the production of factual information that was used as a basis for creating an application for anonymous recruitment. It was, however, often unclear during the implementation whether the partners were implementing their own development projects quickly enough so that it would be possible to utilise the results in Finland. As a result, there was not enough time to implement the planned transnational spread. One of the reasons was the lack of joint funding, which resulted in each partner acting in an independent manner with their own schedules.

Marja-Liisa Ruotsalainen also reflects on her other experiences of international cooperation with science universities. Based on her experiences of one joint project with a joint budget for achieving the objectives, she states that science universities can be reluctant to share the gained information openly. The results of the agreed actions are reported, but the actual development approach and the ways of working are not openly reported. The results may only be discussed verbally at partner meetings and people whose mother tongue is not the language spoken at the meetings may not fully understand the issues discussed.

Rauhala, Merkkiniemi and Juntti (2022) state that big international projects have many benefits. However, project preparations require more time compared to regional and national funding programmes. Sketching the idea, creating values and gathering customers and partners in one's own area require more time. Making a funding application is also a bigger process compared to regional and national projects.

The same types of differences in international project preparation are described by Tiainen (2015). According to Tiainen, the preparation process is a significant learning experience. Science universities and universities of applied sciences have different types of practices, e.g. science universities have more members involved in the preparation of project than universities of applied sciences. Tiainen (2015) also mentions that differences in working cultures and in ways of working may be surprising, but they broaden the international perspective of work. During the project, proactive planning, clarity of planning, and shared understanding between all those involved is particularly important.

## Discussion and conclusion

Universities of applied sciences often have partners from science universities in their development projects. Usually the aim of these partners is to write and publish as many scientific articles as possible during the project and at its expense. As a result, the actual objectives of the project may be overlooked as the research itself takes up time and resources. Universities of applied sciences are, as their name states, focused on applied development, and concrete, practical cooperation with companies and organisations required by the funding programmes is, therefore, natural. Projects at universities of applied sciences aim to increase the competence of the personnel or enhance business competence in companies. Projects at universities of applied sciences are implemented with an applied approach, which means that there is courage to experiment with new technologies during the project, for example. It may be that science universities focus on theoretical, in-depth clarifications and the results of these clarifications may be of help when creating ready-to-use applications for companies, for example. Co-development only takes the form of clarifying companies' needs and small-scale testing.

Despite the criticism, science universities and universities of applied sciences complement each other in projects by generating benefits for companies.



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# Innovation and vitality in international cooperation



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Universities of applied sciences play a role as developers, not only by producing skilled experts for working life, but also by developing innovations introduced in companies and other organisations through research, development and innovation (RDI) activities. Innovations are new products, services and operating models that contribute to improving organisational renewal, competitiveness, productivity and employment.

Karelia University of Applied Sciences implements this innovation work together with companies, educational and research institutions, and public and third sector agencies. The development partners of Karelia UAS are regional, national and international. Networks and partners are important for developing and sharing expertise in terms of practice and sharing knowledge.

In this thematic publication, we have described views and examples of where learning, expertise and innovations have been developed over the long term and through collaboration, and what kind of expertise has been adopted at Karelia University of Applied Sciences and its partner organisations. In addition, we have gathered experiences of what it is like to cooperate internationally and what this requires.

Along with innovation challenges, the task of universities of applied sciences is to ensure that new skills and innovation capabilities are available for the needs of companies and from the perspective of continuous learning. That is why we are involved in developing business life around us in an academic manner and with a long-term perspective, and ensuring that our educational content develops into the competence capital and innovation capacity of our students, i.e. the experts of the future, which are utilised in work and wider society.



This year 2022 Karelia University of Applied Sciences is celebrating its 30th anniversary. Right from the very beginning, internationalisation was a central goal for the new higher educational institute. In honour of our 30th anniversary, we add a new English-language chapter to our publication series, the content of which consists of expert articles from Karelia's own professionals as well as from our international partners. The objective of New Perspectives on Internationalisation and Applied Research 2022 is to present the expertise and RDI activities of Karelia University of Applied Sciences in international networks. The articles in this first publication come from Karelia's own RDI projects. In the future, this publication series will provide a good platform for all our international partners to publish the products of our common themes and seminars.

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