



INTERNATIONAL RESEARCH, DEVELOPMENT AND INNOVATION SECTOR

Kajaani University of Applied Sciences (KAMK) is a proactive, genuinely international university with a strong regional and national profile. R&D is one of our key functions, with tens of new projects starting every year and a total budget exceeding 5 million euros per year. In all our previous and current international projects we have proven ourselves to be an innovative, business-oriented and professional partner.



Our subject experts in **Activity Tourism** regularly collaborate with industry and other universities and educational institutions to deliver development projects. Our collaborative projects focus on smart solutions and adventure tourism.

Mechanical and Mining Engineering main competences cover regional industrial processes, such as mining, mineral processing, robotized production in digitalized environment, industrial services and maintenance. KAMK R&D studies the use of geopolymers for construction, soil stabilization and wastewater treatment applications and solutions. All R&D projects are business-oriented and involve development of products, processes and know-how for businesses.



The **Information Systems** competence area includes game solutions, intelligent systems and data center services. The R&D activities focus on smart solutions, utilising measurement and sensor technology. KAMK's business information technology and information technology expertise are combined with the regionally and nationally significant Center of Measurement and Information Systems Research and Training – CEMIS.



Nursing and Healthcare competence covers the skills required in meeting the health challenges of present society and working in digitalizing environment. This supports the development of Kainuu Social and Health care Joint Authority and regional entrepreneurship activities. KAMK's special field of expertise is health promotion and development of smart home care processes.



Business and Innovations competence is comprised of business, management and development skills. Business and Innovations trains students as marketing and financial administration professionals working in management and expert positions as well as entrepreneurs. Development activity creates a productive environment for young entrepreneurs and supports the development of businesses in the Kainuu region.

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KAJAANIN AMMATTIKORKEAKOULU UNIVERSITY OF APPLIED SCIENCES

INTERNATIONAL PROJECTS AT KAJAANI UNIVERSITY OF APPLIED SCIENCES



White Road (Activity Tourism)

Cross Border Tourism Development in Northern Finland and the Republic of Karelia. The objective of the project was to increase inbound tourism in Kainuu, Kuusamo and the Republic of Karelia by creating new, high quality travel products that correspond to the requirements of and are easily obtainable by the modern customer from Russia, Finland or Central Europe. The project involved 13 partners from Russia, Finland and Holland and over 50 participating stakeholders.

GeoROAD (Multidisciplinary project combining technology and business)

The aim of the project is to study the technical suitability of geopolymer materials for repairs to paved roads and assess the business potential of new material applications. Geopolymer materials enable usability and good durability in Northern conditions reducing the need for repeated repairs and costs, in addition to costs to road users caused by damaged roads. The object of the research part of the project is to support commercialization and create prerequisites for product development by studying the significance of factors affecting the functional properties of geopolymer materials (proof-of-concept).

Eco-efficient data center training (Information Systems)

The aim of the project was to develop a unique training course that would provide a multidisciplinary overview of eco-efficient data center design, construction and operation. Planning and delivery of the post-graduate level training (30 ECTS) was completed by a consortium of companies in Finland (including the national cluster DIGITICE Finland, KAMK and adult education centre AIKOPA). The training has been so well received that it was nominated for an award at the 2014 International Datacentre and Cloud Awards in London.

RYE Connect (Business and Innovations)

The programme seeks to offer an extensive RYE model, which will provide better transnational business opportunities, services and solutions for young entrepreneurs operating within the NPA region. This transnational programme delivered by project partners in Finland, Greenland and Northern Ireland and a wider Associate Network spanning the Northern Periphery and Arctic (NPA) region.

LifeLong Wellbeing (Nursing and Healthcare)

The aim of the project was to develop and boost early intervention tools and the use of pupil counselling to promote the well-being of children, young people and their parents, to increase interaction and communication between teaching staff and parents in support groups and to find ways of instigating the use of a discussion based model for parents, education and teaching staff. Project involved partners from Russia and Finland.

GeoSorbents (Mechanical and Mining Engineering)

The main goal of this project is to develop new geopolymer based water treatment materials from low cost clay minerals and industrial side-products with industrial partners. The specific developed materials can be used for the removal of toxic metals and metalloids, sulfate and ammonium nitrogen from industrial and municipal wastewaters, mine waters and landfill leachates. The project focus is to develop and characterize geopolymer based materials, as well as to perform tests with real wastewater matrixes and conduct pilot scale field tests.