Projects in the Academy for Smart Specialisation

The Academy for Smart Specialisation invests in the six identified areas of specialisation in Värmland's Research and Innovation Strategy for Smart Specialisation - VRIS3, http://www.regionvarmland.se/wp-content/uploads/2016/02/VRIS3.pdf.

These are: Forest-based bioeconomy, Digitalisation of welfare services, Advanced manufacturing and complex systems, Nature, culture and place-based digitalised experiences, System solutions with photovoltaics, and Value-creating services. A separate investment is also made in Gender Studies, in partnership with the Centre for Gender Studies.

In addition to establishing projects and their budgets in the different specialisations, project funding is also allocated for coordination, marketing and further developing the Academy partnerships.

An overview of the different projects that have so far been established as part of the Academy for Smart Specialisation is presented below, under the associated specialisations.

Forest-based bioeconomy

Transition to sustainable forest bioeconomy

The project aims to develop the current regional innovation system in Värmland as it converts to a sustainable forest-based bioeconomy, in which civil society also can participate. The project aims to contribute knowledge about what conversion to a sustainable forest-based bioeconomy means for the entire society: industrial production needs to change, but so do consumption habits.

Involved research group: The Centre for Regional Studies (CRS)
Project manager: Margareta Dahlström, Professor of Human Geography, Ida Grundel, Senior lecturer of Human Geography.
Website: https://www.kau.se/crs/forskning/projekt

The Research Environment for a Circular Forest-Based Bioeconomy (FoSBE)

The project aims to contribute research-based knowledge, in order to prepare the public and private sectors in Värmland for future needs for new biomaterial and renewable bioenergy.

Involved research groups: Processes and Products for a circular BioEconomy (Pro2Be), Service Research Center (CTF)
Project managers: Lars Nilsson, Professor of Chemical Engineering; Mikael Johnson, Senior Lecturer in Business Administration, CTF
Website: https://www.kau.se/pro2be/projekt/fosbe

Digitalisation of welfare services

Graduate School for Digitalisation in Education (FUNDIG)
The aim is to contribute to research on the digitalisation of education, as well as to developing the knowledge and skills of primary and pre-primary schoolteachers in Värmland.

Involved research groups: Centre for Social Science Education (CSD),
Centre for Language and Literature in Education (CSL),
Science, Mathematics and Engineering Education Research (SMEER),
Research on Subject-Specific Education (ROSE)
Project manager: Jorryt van Bommel, Assistant professor in mathematics education

Website: www.kau.se/FUNDIG

DigitalWell Research
This project aims to strengthen research, technological development and innovation in small and medium-sized businesses in the area of digital welfare services. The project will increase the capacity of businesses to develop new services through systematic user inclusion, meeting the needs of the public sector in a secure manner.

Involved research groups: Computer Science (CS), Service Research Center (CTF),
Nursing Science
Project managers: Anna Brunström, Professor of Computer Science; Per Kristensson, Professor of Psychology, CTF; Agneta Anderzén Carlsson, Professor of Nursing Science

Advanced manufacturing and complex systems

Karlstad Lean Factory
Karlstad Lean Factory is a newly established development and meeting environment for industry at Karlstad University. The aim is to optimise processes and production in the manufacturing industry and to establish innovation capacity in an organisation.

Involved research group: Characterizing and Modeling of Materials (CMM)
Project manager: Leo de Vin, Professor of Manufacturing Engineering

AT-LAB - Regional additive manufacturing laboratory at Karlstad University
The aim of the project is to install a laboratory for Additive Manufacturing (AT LAB) at Karlstad University and to use it as a place where academia and regional companies can meet, thus creating opportunities for knowledge transfer and environments where big, small and medium-sized companies can develop knowledge, products and services in conjunction with the university in the form of workshops, seminars and pilot projects.

Involved research group: Characterizing and Modeling of Materials (CMM)
Project manager: Pavel Krakhmalev, Professor of Materials Science
Website: https://www.kau.se/atlab

Nature, culture and place-based digitalised experiences

Digitalisation and the Tourism Industry
The project will initiate a development and innovation process, partnering companies in the tourist industry with IT companies to increase their competitiveness. The project also aims to increase local knowledge and to lay the groundwork for further promoting place-related experiences through digital solutions.

Involved research groups: The Centre for Regional Studies (CRS) and Geomedia
Project manager: Lotta Braunerhielm, Senior Lecturer in Human Geography
Website: https://www.kau.se/geomedia/projekt/interaktiva-platsforankrade-upplevelser

Systems solutions with photovoltaics

Solar Värmland
The aim of the project is to cooperate with regional industries to create new products and services in the area of solar cell-generated electricity and strengthen cooperation between regional companies and international groups. The project contributes to regional competitiveness and increases the use of solar electricity, which means reduced carbon emission.

Involved research group: Characterizing and Modeling of Materials (CMM)
Project manager: Markus Rinio, Professor of Physics

Gender Studies

Gender Academy for SME
The project aims to prepare and develop Värmland and its enterprises by developing and applying knowledge about gender, organisational change processes, gender-mainstreaming and norm-conscious innovation to increase innovation capacity and research and development activity as well as the growth of small and medium-sized enterprises (SME). Overall, the project involves developing and applying research about gender, innovation and sustainable development in a way that benefits both the academy and business.

Involved research group: Centre for Gender Studies (CGF)
Project manager: Ulf Mellström, Professor of Gender Studies.

Value-creating services

This specialisation is included in the DigitalWell and FoSBE projects.

Coordinating and marketing the partnership

VRIS 3 Academy Platform
This project has been created to turn the Academy for Smart Specialisation into a platform for cooperation and joint action, for example by providing meeting places promoting regional

sustainable development, by taking advantage of the collected expertise of Karlstad University, and by enabling the Academy for Smart Specialisation to become a national and international actor in these areas.

Project owner: Grants and Innovation Office
Project manager: Håkan Spjuth
Website: https://www.kau.se/samverkan/samverkan-pa-universitetet/goda-exempel/akademin-smart-specialisering