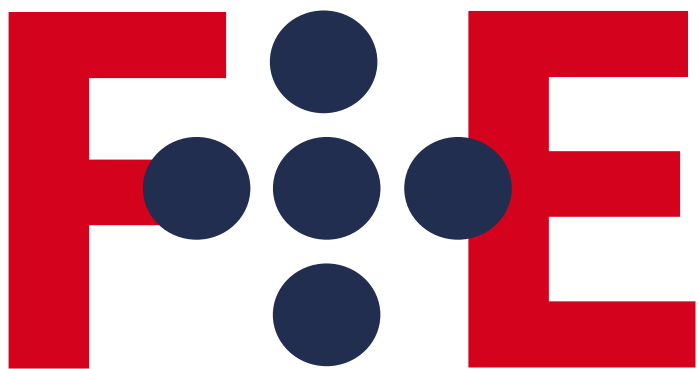
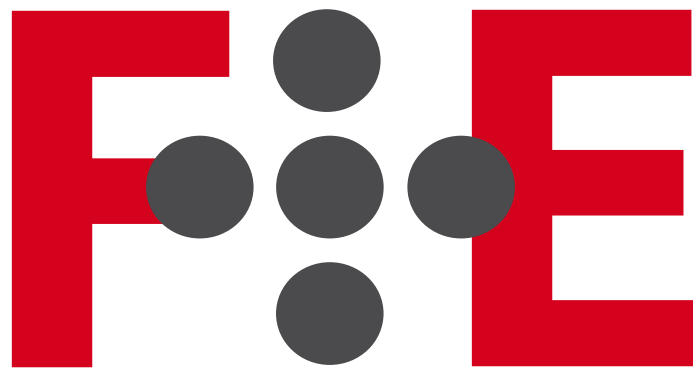




CARINTHIA UNIVERSITY OF APPLIED
SCIENCES RESEARCH REPORT
2016–2018



CARINTHIA UNIVERSITY OF
APPLIED SCIENCES
RESEARCH REPORT 2016–2018

TABLE OF CONTENTS

Preface	4
Research groups	10
Research centres	14
Engineering & IT – projects	18
Health Sciences & Social Work – projects	48
Civil Engineering & Architecture – projects	60
Management – projects	66
Funding bodies	78



SUCCESS FACTORS OF RESEARCH STRATEGY



One special characteristic of the strategy is also reflected in its interdisciplinary nature.

Teaching and applied research are the principle objectives of the Austrian Universities of Applied Sciences. This is also legally defined in the University of Applied Sciences Studies Act. In accordance with this legal framework, Carinthia University of Applied Sciences continues to develop its applied research and development, and strategically integrates this into its teaching and research. To this end, academic research and development activities have been incorporated into a special R&D strategy for the period from 2016 to 2022, which contains specifically defined framework conditions and measures to guarantee continual further development. This includes, for example, an increase in external funding, an incentive system for researchers, and suitable core funding. Calls for proposals for the university's "Central Research Promotion Fund" (Zentraler Forschungsförderungsfonds or ZFF_1) have already played an important role in awarding initial funding for innovative projects. The establishment of research groups was another fundamental milestone of the R&D strategy in order to pool research competence at Carinthia University of Applied Sciences and to increase its profile. Strategic core funding within the second internal funding pool, "ZFF_1+", is a successful tool for sustainably establishing these research groups.

One special characteristic of the strategy is also reflected in its interdisciplinary nature. In this context, applied research is defined as a cooperation of our key areas of "Health Sciences & Social Work", "Technology", and "Management".

Two research centres that focus on current technological and societal issues have enabled us to increase our expertise. The Josef Ressel Center INTERACT researches tomorrow's important subject of wireless communication and the development of modern high-frequency technology. The Institute for Applied Research on Ageing (IARA) is a Carinthia University of Applied Sciences research centre which aims to tackle the challenges and potentials of an ageing society through practice-oriented and interdisciplinary research.

The Carinthia Institute for Smart Materials (CISMAT), which is currently being developed, will support industrial companies in implementing smart components and systems. The main focus is on R&D projects and training programmes in the fields of materials engineering and materials sciences.

I am delighted that the sustainable support for research, with a significant share of funds provided by the university board itself, continues to bear fruit. I would like to thank all the colleagues who, with their impressive research, have contributed towards positioning Carinthia University of Applied Sciences as a regional and supra-regional research institute.

Siegfried Spanz
CEO

106

RESEARCH PROJECTS

130

SCIENTIFIC
COOPERATION PARTNERS

220

R&D MEMBERS OF STAFF

>300

PUBLICATIONS

F·E

OUTPUT

2017

3,3

MILLION EUROS

PROJECT VOLUME

>200

BUSINESS COOPERATION PARTNERS, PUBLIC
ADMINISTRATIONS AND NPOS

82.000

WORK HOURS IN R&D PROJECTS



RESEARCH AND DEVELOPMENT IN DIALOGUE WITH SOCIETY



The main focuses of the research groups cover many of the relevant economic, industrial and societal demands.

Universities of Applied Sciences have long been established as respected centres of application-oriented research. Research projects that deal with relevant societal issues in a regional and supra-regional context do more than just enrich academic teaching; they also deliver essential contributions to the innovative development of regions. This not only guarantees a high quality of teaching within study programmes, it also serves for transferring knowledge from the university into practical application solutions. Carinthia University of Applied Sciences covers a broad spectrum of research topics. Technical, economic and political issues are researched in cooperation with industrial and economic partners and tested for their practical application in the field.

Carinthia University of Applied Sciences has successfully formed seven research groups on different key areas which, in addition to the three research centres – the Institute for Applied Research on Ageing (IARA), the Josef Ressel Center INTERACT and the Carinthia Institute for Smart Materials (CISMAT) – have put scientific findings into practice. In this context, our university regards itself as a catalyst and contact partner for regional SMEs to research socially relevant questions.

This significantly contributes to a knowledge transfer between the university, research and society. It creates a win-win situation for education, research, as well as for cooperating partners that is more than

a mere exchange of knowledge; it is also a dialogue with society. The main focuses of the research groups cover many of the relevant economic, industrial and societal demands, and are the subject of interdisciplinary research at Carinthia University of Applied Sciences.

This strategic orientation has established Carinthia University of Applied Sciences as a research institute and has extended the scope of research and teaching to practical implementation. This research report documents this impressively and presents a selection of the research projects. The focus on key research topics and the interdisciplinary approach show how innovations can be put into practice in all areas of society and how they can be successful.

I would very much like to thank all the colleagues for their extraordinary commitment to their research.

A handwritten signature in black ink, appearing to read 'P. Granig'.

Peter Granig
Rektor

ONE-STOP SHOP FOR EFFICIENT R&D SUPPORT



Research promotion and research management, when implemented as a service for scientists, are becoming increasingly important for the expansion of Carinthia University of Applied Sciences.

In recent years, the area of research management has experienced a restructuring process. Finally, in October 2017, the new organisational unit, FH Kärnten Research (FHKR), was founded. It is managed as a profit centre (in the academic sense) and is therefore responsible for the cross-departmental, operational management of the entire R&D process, including the responsibility for profit. All the coordination, support and administrative bodies that support research at Carinthia University of Applied Sciences are directly assigned to FH Kärnten Research. Therefore, it has the organisational and administrative know-how for this special field of activity.

The FHKR offers researchers many forms of support in the field of research and development, as well as in knowledge and technology transfer. As a central information and transfer point, the FHKR is the first port of call for members of staff at Carinthia University of Applied Sciences as well as for external partners, such as future project and cooperation partners, universities, research institutions, funding bodies, regional developments, etc. FH Kärnten Research is a one-stop shop for research management.

Of primary importance is the support throughout the entire course of the project, i.e. from the project idea to project development, to filing applications, to project implementation including project management, to project settlement and marketing the results by "one department". By optimising co-operation, bundling resources of service points and by more efficiently using expertise, the activities of FH Kärnten Research focus on promoting the existing research potential at Carinthia University of Applied Sciences in the best possible way. This means specifically supporting researchers and continuing to expand research and development services. It also entails presenting the university to the public as a research institute with a targeted presentation of the results, thereby achieving the ambitious goals of the R&D strategy.



The FHKR offers researchers many forms of support in the field of research and development, as well as in knowledge and technology transfer.

A handwritten signature in black ink, appearing to read 'Claudia Pacher'.

Claudia Pacher
Head of FH Kärnten Research





MORE RESEARCH
PROJECTS THAN
EVER BEFORE

AAL – Active & Assisted Living

PROJECT MANAGEMENT: Daniela Krainer
 DURATION: 01.02.2018–31.12.2022
 FUNDING PROGRAMME: Central Research Funding
 PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



The focus of applied research and development of the Active & Assisted Living (AAL) research group is the technical development, validation and evaluation of innovative technical solutions. The AAL research group aims at developing concepts, products and services that connect technologies with social environments, which can be seamlessly integrated into different living conditions, creating a positive user experience and added value. These have a positive effect on acceptance, promote long-term usage and thus contribute positively to a higher quality of life in old age and throughout all stages of life. The clearly defined technical research contents of Smart Home, Smart Health and Smart Interaction are integrated in a Living & Innovation Lab approach – a research approach that combines the methods, processes, infrastructures and partnerships for realising cooperative applied research with relevant actors in the context of AAL. blog.fh-kaernten.at/aal

DTMO – Digital Transformation Modelling

PROJECT MANAGEMENT: Wolfgang Eixelsberger
 DURATION: 01.02.2018–31.12.2022
 FUNDING PROGRAMME: Central Research Funding
 PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



Due to its constantly increasing complexity, digital transformation is a great challenge for many businesses. The modelling of data, processes, organisational structures and transformation tasks is one option that allows us to reduce this complexity. The goal of this research group is to evaluate, adjust and integrate existing business models and to develop new models of digital transformation to give businesses a tool for managing digitalisation.

FUCOSO – Future Concrete Solutions

IMPLEMENTING INNOVATIVE TECHNOLOGIES IN NEW AND EXISTING BUILDINGS

PROJECT MANAGEMENT: Norbert Randl
 DURATION: 01.01.2018–31.12.2022
 FUNDING PROGRAMME: Central Research Funding
 PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



The focus here is on the further development of high-performance, robust types of high performance concrete. The goals include assessing their technical feasibility in Austria and considering an economically justifiable way of building to support the sustainable development of the environment. Modern structural monitoring technologies are used to evaluate the properties of materials throughout their life cycles.

OUPL – Online und Pocket Labs

PROJECT MANAGEMENT: Andreas Pester / Thomas Klinger
DURATION: 01.02.2018–31.12.2022
FUNDING PROGRAMME: Central Research Funding
PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



Online and pocket labs are a new development in the field of MINT education and allow laboratory education independent of location and time. Machine learning as well as virtual and augmented reality concepts are integrated as part of a future-oriented education in engineering. The combination of all types of laboratory creates the foundation for new work practices in the industry.

The research focuses at Carinthia University of Applied Sciences are pooled within specific disciplines as well as across disciplines and are addressed according to topic in research groups and research centres.



RESPECT

RESEARCH GROUP FOR RF SYSTEMS AND CIRCUITS

PROJECT MANAGEMENT: Johannes Sturm
DURATION: 01.02.2018–31.12.2022
FUNDING PROGRAMME: Central Research Funding
PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



Microelectronics and nanoelectronics and, in particular, high-frequency technology are some of the key technologies in the field of ICT in the Horizon-2020 programme. By bundling the research topics in the field of high-frequency technology (RF), we are able to deal with the areas of "Integrated RF circuits", "RF system integration" and "RF applications".

Trans-Space

TRANSFORMATIVE SOCIETAL AND POLITICAL CULTURAL ENGAGEMENT

PROJECT MANAGEMENT: Kathrin Stainer-Hämmerle

DURATION: 01.02.2018–31.12.2022

FUNDING PROGRAMME: Central Research Funding

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



Current changes and their social effects, such as (forced) migration, demographic change, the concept of democracy, issues of globalisation, interculturalism and multilingualism, are subjects of this interdisciplinary research. The results will contribute to consulting processes in politics, economy, education and society.

Triple E – Entrepreneurship & Entrepreneurship Education

PROJECT MANAGEMENT: Erich Alois Hartlieb

DURATION: 01.02.2018–31.12.2022

FUNDING PROGRAMME: Central Research Funding

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



The emergent research field of entrepreneurship deals with the central topics of the mode of organising, individuals and teams, opportunities and environments. Overlapping areas of these central topics are highlighted, and shared aspects such as environmental influences, opportunity creation and individual characteristics of entrepreneurs are investigated.



The future is digital and electric. As one of the most research-based companies in Austria, Infineon Austria focuses on precisely these global trends.

DI DR. SABINE HERLITSCHKA, MBA
CEO of Infineon Technologies Austria



IARA

INSTITUTE FOR APPLIED RESEARCH ON AGEING

PROJECT MANAGEMENT: Birgit Aigner-Walder, Kai Brauer, Johannes Oberzaucher,
 Franz Oswald Riemelmoser, Angelika Voutsinas

DURATION: 01.01.2016–31.12.2020

FUNDING PROGRAMME: Central Research Funding

PROJECT VOLUME COVERED BY CUAS: €1 million



The Institute for Applied Research on Ageing (IARA) was set up at Carinthia University of Applied Sciences in 2016. Since then, research on ageing has been networked across the disciplines in order to meet the challenges and potentials of an ageing society. At the IARA, three departments work on the changing living environments of ageing and old people, on technical support options and economic framework conditions. On the one hand, current findings and trends on ageing processes from different scientific branches are collected, analysed and edited so that this knowledge can be made available for politics, the economy and civil society. On the other hand, the IARA particularly promotes application-based and transdisciplinary approaches through its own projects.

DCRD

Department for Demographic Change and Regional Development

The research field of "Human-Economy" focuses on researching the effects and reciprocal effects of an ageing population from a (macro-) economic point of view. This department mainly focuses on questions concerning the labour market, consumption, and overall economic issues. It investigates what measures can be taken through economic policies so that the challenges created by an ageing society can be met, and growth potentials for ageing regions can be identified.

HAT

Department for Health and Assistive Technologies

The research field of "Human-Technology" aims at the highly interdisciplinary research and innovation approach that stimulates the social and technical innovations that improve the quality of life and social participation of older people, and that support people from all generations who face unprecedented circumstances due to demographic change. The solutions developed in this context are designed to make active and healthy ageing possible in people's own homes, in the public sphere, and in the workplace.

ISAC

Department for Intergenerational Solidarity, Activity and Civil Society

The research field of "Human-Society" focuses on the living environments of older people and social inclusion. Interdisciplinary and solution-oriented approaches are designed to help overcome traditional divides present in gerontology. It's a matter of analysing and supporting the solidarity between generations, of creating appropriate concepts of ageing, of civil commitment by and for older people, of active participation even at a very old age, as well as a combination of support from professionals, family and neighbours in local communities. In a nutshell, it's a matter of the future of wellbeing throughout all stages of life.

Scientific Management
 Birgit Aigner-Walder



Scientific Management
 Johannes Oberzaucher



Scientific Management
 Kai Brauer



INTERACT

JOSEF RESSEL CENTER FOR INTEGRATED CMOS RF SYSTEMS AND CIRCUITS DESIGN

PROJECT MANAGEMENT: Johannes Sturm

DURATION: 01.04.2014–31.03.2019

FUNDING PROGRAMME: Christian Doppler Forschungsgesellschaft, BMWFW

PROJECT VOLUME COVERED BY CUAS: €1,7 million



Modern solutions of wireless RF systems require multi-standard multi-band functionality for future software defined radio and agile radio products. The high number of wireless standards implemented in mobile devices with preferably single radio architectures creates a number of challenges which are not covered by "classical" RF-circuit design methodologies only. Challenges like strong interference between different RF frontends, a complex interface between the RF ICs, external components and the antenna needs to be solved for future products.

PROJECT GOALS

New RF frontend circuit concepts leveraging re-configurable building blocks using "digitally assisted RF" will be researched to cope with non-idealities in the RF performance. There is strong signal interaction between RF, analog and digital IC blocks as well as to external components in package (System-in-Package SiP) and board level. This requires new multi-disciplinary design and modeling approaches, to combine the diverse field of knowledge and tooling for future integrated RF systems.

METHODOLOGY

The research activities at CUAS will focus on re-configurable integrated RF systems and circuits based on standard integrated circuit CMOS technologies. Also electromagnetic interference and co-existence issues in modern wireless transceivers will be investigated and improved. The tasks include all necessary development steps like modeling, simulation, circuit implementation and lab characterization, supporting future integrated wireless communication systems.

BENEFITS

The Ressel Center INTERACT provides a long term perspective for scientific research on a challenging, multidisciplinary topic. It merges different fields of knowledge like integrated RF circuit design, modeling of RF systems, digital signal processing and finite-element simulations of electromagnetic interactions and crosstalk within modern integrated RF systems.

OUTPUT

On-chip re-configurable RF components are cheaper than many individual parallel blocks. Also digitally assisted RF blocks are enabling low-cost standard CMOS SoC integration instead of heterogeneous integration of optimized and expensive components. The digital assistance also results in technically superior solutions with smaller silicon area and less power consumption, which results in an overall economical advantage. Finally an accurate modeling of external components including chip interface and electromagnetic interferences will increase the product quality and supports first-time-right product designs, which leads to significant cost savings.

SMART MATERIALS and CISMAT

ENDOWED CHAIR

PROJECT MANAGEMENT: Franz Oswald Riemelmoser

DURATION: 01.03.2019–28.02.2024

FUNDING PROGRAMME: Regionale Impulsförderung, KWF

PROJECT VOLUME COVERED BY CUAS: €494,500



The endowed chair of SMART MATERIALS is a measure of the European strategy for innovative regional development that belongs to the area of networked sensor technology in the fields of mechanical engineering and materials sciences. It is directed at regional businesses and offers low-threshold access to further education programmes for employees, the contribution of know-how in companies, and dealing with relevant research questions. A package of measures was defined to promote single businesses, SMEs and large companies, based on three adaptable modules:

BASIC ELEMENT FURTHER EDUCATION	INDUSTRIAL RESEARCH	STRATEGIC RESEARCH
Further education of employees in the form of modular training programmes (maximum scope: 2 semesters) or the contribution of know-how in businesses through master's theses and doctoral theses.	Promoting industrial research by intensifying the cooperation between the endowed chair and industrial companies in Carinthia.	Creation of a unique position by developing a strategic research field at the interface between mechanical engineering, materials sciences and sensor integration.

The endowed chair is integrated into the Carinthia Institute for Smart Materials and Manufacturing Technologies (CISMAT). CISMAT supports industrial companies in implementing smart components and systems. The focus is on R&D projects and further development measures.

CISMAT CONSISTS OF:	THE 4 FIELDS OF COMPETENCE OF CISMAT ARE:
- Carinthia University of Applied Sciences: Study programmes in Mechanical Engineering (MB), Systems Engineering (SE), Integrated Systems and Circuits Design (ISCD), and Industrial Engineering and Management (WING) - Selected industrial partners: Hirsch GmbH, Liebherr Hausgeräte Lienz, MADKEM OG, PMS Elektro- und Automationstechnik GmbH, and Treibacher Industrie AG - Selected scientific partners	- Fibre Materials and Smart Materials, FMSM - Sensor Integration in Mechatronic Systems, SIMS - Additive Manufacturing and Agile Production Systems, AMAPS - Transformation and Business Development, TBD

CISMAT regards itself as a contact partner on the subject of Industry 4.0 at Carinthia University of Applied Sciences. It is also the communication hub for this topic within the scientific community and the interested public. In particular, it deals with the matters of interest for SMEs in times of digital change.

The vision of CISMAT is to support digital change in an industrial environment, especially SMEs in mechanical engineering, by way of research and innovation and to create added value for society. At its very centre, the research carried out by CISMAT is designed to support manufacturing companies in the field of lightweight construction. Specialist expertise gained this way is also meant to be applied in other areas of mechanical engineering to increase competence.



Carinthia University of Applied Sciences acts as a key cooperation partner for industry in two ways: firstly, it supports projects and activities at a high level on complex topics such as digitalisation; and secondly, it qualifies young people in an ideal way for the challenges within companies.

DR. CLAUDIA MISCHENSKY
Carinthian Industrialists' Association,
Managing Director





R&D MANAGEMENT: Franz Oswald Riemelmoser
Vice Dean of Engineering & IT,
Professor of Manufacturing Systems Engineering

Europastraße 4, 9524 Villach
+43 5 90500-2112
f.riemelmoser@fh-kaernten.at

Akku4Life

**ANALYSIS AND DEVELOPMENT OF ELECTRONIC ANALYSIS SYSTEMS
"DYNAMIC BATTERY ANALYZER DBA" FOR SECOND LIFE BATTERIES**

PROJECT MANAGEMENT: Stephan Mark Thaler
DURATION: 01.03.2015–06.06.2016
FUNDING PROGRAMME: Central Research Funding
PROJECT VOLUME COVERED BY CUAS: < €50,000



This project focussed on the analysis and development of electronic analysis systems ("Dynamic Battery Analyzer DBA") for second life batteries.

While they cannot be used for dynamic applications, these second life batteries are very useful, e.g. as "storage stacks" in photovoltaic systems. The analytical process in the recycling chain requires very fast status analyses at the start of pre-selection. Deciding between a complete write-off, conversion, reconstruction or simply recharging and refreshing can be aided by electronic analysis systems during pre-selection.

APEX_TOOL

**PILOT PROJECT: FUNCTIONAL DEMONSTRATION PATTERN
TYPE C, IADLM DEMONSTRATION DEVICE**

PROJECT MANAGEMENT: Winfried Egger
DURATION: 01.07.2015–30.09.2017
FUNDING PROGRAMME: Research cooperation
PROJECT VOLUME COVERED BY CUAS: > €10,000



In this project, a demonstration solution system has been developed as a model. It is a functional demonstration pattern, based on battery and charging units provided by the client. In these systems, batteries, chargers and demonstration electronics are implemented. Furthermore, available battery systems were measured, analysed and evaluated.



AURA

INNOVATIVE SWIMMING POOL COVER – WALK ON WATER

PROJECT MANAGEMENT: Franz Oswald Riemelmoser

DURATION: 13.10.2015–25.08.2016

FUNDING PROGRAMME: FFG – Basic programme

PROJECT VOLUME COVERED BY CUAS: < €10,000



In the AURA project, different concepts for the walk-on-water technology were developed and evaluated in cooperation with the firm AURA. This walk-on-water technology includes system solutions for pool covers. The covering elements are used as supporting elements, meaning the actual water surface can be walked on. This way, the surfaces become usable.

CAPACON

PROMOTING R&I CAPACITIES IN THE FIELDS OF ENERGY CONVERSION AND ENERGY MANAGEMENT IN SLOVENIA AND AUSTRIA

PROJECT MANAGEMENT: Stephan Mark Thaler

DURATION: 23.03.2017–31.03.2019

FUNDING PROGRAMME: Interreg SI-AT 2014–2022

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



The project is used to improve the competitiveness of businesses in the fields of energy conversion and energy management in Slovenia and Austria. This is to be made possible through new, integrative ways of thinking within businesses beyond the current state of the art, thereby promoting research and innovation.

CAPSIZE

COLLABORATIVE HUMAN-ROBOT WORKING ENVIRONMENTS

PROJECT MANAGEMENT: Dongning Zhao

DURATION: 01.09.2018–30.09.2021

FUNDING PROGRAMME: KWF – Regionale Impulsförderung/Regional Impulse Promotion/
Regional Impulse Promotion

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



The aim of the CapSize Project is to develop a cost-effective, novel perception sensor system for gesture recognition, position estimation and motion tracking in a real-time human-robot working environment using innovative integrated sensor solutions. The new key technology will enable the development of a Contactless and Safe Interaction Cell (CSIC), where humans can collaborate and interact with the robot in a safe and intuitive way. CapSize is a cooperative project between Alpen-Adria-Universität Klagenfurt, FH Kärnten and Joanneum Research – Robotics. The research target of FH Kärnten is to develop an integrated circuit for capacitive sensor read-out to monitor human safety and increase the collaborative productivity for robots in the future.



Engineering & IT – projects

CARE₄TECH

CROSS-SECTORAL ALLIANCES FOR SMART LIVING

PROJECT MANAGEMENT: Johannes Oberzaucher

DURATION: 01.11.2016–31.10.2019

FUNDING PROGRAMME: Interreg Alpine Space 2014–2020

PROJECT VOLUME COVERED BY CUAS AS LEAD PARTNER: €100,000–€500,000

TOTAL PROJECT VOLUME: €1,8 million



The core aim of this project is to record novel, innovative approaches in the field of “smart living” technologies to make them visible and accessible to the public and to manifest regional Living Labs focussed on special fields of competence. Fields of competence are, for example, Industry 4.0, Active & Assisted Living (AAL) and E-mobility. Joint projects will be stimulated to create added value within the German, Austrian, Swiss, French, Italian and Slovenian Alpine regions.

COOLBOX

ACTIVE COOLING TRANSPORT CONTAINERS

PROJECT MANAGEMENT: Josef Tupping

DURATION: 13.02.2018–15.03.2018

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €10,000



The idea of an active cooling transport container for commercial use will be evaluated as part of an initial, more general research effort and a workshop with experts, identifying demand and requirements.

COOP₄HEALTHCARE

CROSS-SECTORAL ALLIANCES FOR SMART HEALTHCARE SOLUTIONS

PROJECT MANAGEMENT: Daniela Krainer

DURATION: 01.05.2018–30.04.2020

FUNDING PROGRAMME: Interreg SI-AT 2014–2020

PROJECT VOLUME COVERED BY CUAS AS LEAD PARTNER: €100,000–€500,000

TOTAL PROJECT VOLUME: €958,000



As its overriding project goal, the COOP₄HEALTHCARE project promotes an improved offer of services in the healthcare sector by means of cross-border cooperation between the relevant actors in the defined programme area of Slovenia and Austria, including strategic European partners. Regional, national, international and long-term pilot projects in the fields of digitalisation, knowledge excellence and cooperation models are activated and implemented so that current challenges of integrated healthcare solutions can be met accordingly. Strategic positioning and the development of a common roadmap will facilitate timely, long-term, well-adjusted, high-quality care for all communities, independent of location. <https://www.coop4healthcare-project.eu/>



Crank-e

PROJECT MANAGEMENT: Erich Alois Hartlieb

DURATION: 03.03.2016–31.01.2017

FUNDING PROGRAMME: KWF – UIG: Implementation of innovative startup projects

PROJECT VOLUME COVERED BY CUAS: < €50,000



The basic idea was to convert any type of conventional scooter or motorcycle into an electric vehicle. To this end, an E-KIT was developed, consisting of an electric engine, a battery system and a battery management system. The basic model can be customised for special types of vehicles. The product is very attractive for the vintage vehicle niche market, where vehicles can be converted to electric technology in the course of restoration.

Detect & Connect

TECHNOLOGY, CONNECTING PEOPLE IN NEED WITH PEOPLE WHO CARE

PROJECT MANAGEMENT: Daniela Krainer

DURATION: 01.03.2017–31.03.2019

FUNDING PROGRAMME: FFG – Basic programme

PROJECT VOLUME COVERED BY CUAS: < €100,000



Detect & Connect is a research project by the firm P.SYS, caring systems KG with the aim of implementing a user-friendly system that connects older people and people living alone with first aiders from their extended social environment quickly and autonomously in cases of need or emergency. This will be achieved by developing and testing a self-learning system which recognises and interprets the needs of a user – Detect. After identifying a particular need, the best suitable aid provider will be dynamically identified from the extended individual social environment and activated – Connect. During the development stage, the project will get scientific support from Carinthia University of Applied Sciences. Based on theoretical considerations and workshops with the target group, the requirements for the technical system will be defined. In addition, different system components will be tested and documented by the laboratories at Carinthia University of Applied Sciences. <http://www.psysengineering.com/index.htm>



Digital competence framework for Ukrainian teachers and other citizens



PROJECT MANAGEMENT: Andreas Pester

DURATION: 15.11.2018–14.11.2021

FUNDING PROGRAMME: EACEA – Erasmus+ Key Action 2: Capacity building in the field of higher education

PROJECT VOLUME COVERED BY CUAS: < €100,000

The purpose of this project is to improve the Digital Competence (DC) development situation in Ukraine (UA), to harmonise it with the European mainstream by adapting the Digital Competence Frameworks for Citizens and Educators, to create the Ukrainian National Digital Coalition (UNDC); to reform in-service training for teachers and to provide “best practice” experiences of how DC could be further developed in general and adapted to the challenges of the Higher Education sector within society as a whole. The motivation for this comes from the goal set by the European Commission in Digital Skills and Jobs Coalition, DigComp frameworks and the Digital Agenda for Europe (DAE). The project aims to establish an effective UNDC network amongst UA educational institutes, associations, public authorities and business representatives; to design and implement UA DC frameworks; to make recommendations for modifying the DC studies curriculum according to the DAE and modern labour market needs; to create DC training courses for teachers and citizens; to provide high-quality DC training courses for various social classes.

Digital Future

KWF SUPPLIER DEVELOPMENT PROGRAMME II



PROJECT MANAGEMENT: Roland Willmann

DURATION: 01.11.2017–31.05.2019

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000

Digitalisation creates new opportunities, for example, in the fields of cooperation, processes, products, organisations, business models and technologies. To sustain competitiveness, the actual state and potentials of regional suppliers in these fields are analysed. In addition, a curriculum is developed and implemented, consisting of six one-day workshops on the topics of “General Digital Transformation”, “Adaptive Production Systems”, “From Data to Information and Process Control”, “smart Production – Automated Manufacturing”, “smart Products – Sensor System and Internet of Things”, as well as “Digital Business Models”. As an accompanying measure, company-specific or cross-company implementation projects are defined. They are partly implemented in the form of bachelor’s and master’s theses.



Drone-Based Monitoring European Nature Reserve “Bleistätter Moor”

PROJECT MANAGEMENT: Gernot Paulus

DURATION: 01.10.2017–31.12.2021

FUNDING PROGRAMME: Research cooperation

PROJECT VOLUME COVERED BY CUAS: < €10,000



In spring 2017, the “Rehabilitation Project Ossiacher See – Bleistätter Moor” was completed with the construction of flooding and sedimentary basins in the estuary zone of the River Tiebel. In the course of the research cooperation between the Office of the Provincial Government of Carinthia, Dept. 8 – Environment, Water and Protection of the Environment and Carinthia University of Applied Sciences’ study programme on Geoinformation and Environmental Technologies, a drone-based, long-term monitoring programme will be implemented. This will provide a high-resolution recording of the changing processes of this European Nature Reserve in the estuary zone of the River Tiebel at Lake Ossiacher See during the period from 2017–2021.

DRONE ZONE AUSTRIA

**DESIGN OF A WEB PORTAL FOR SAFE DRONE MISSION
PLANNING IN AUSTRIA**

PROJECT MANAGEMENT: Gernot Paulus

DURATION: 01.11.2016–31.01.2018

FUNDING PROGRAMME: BMVIT – TAKE OFF

PROJECT VOLUME COVERED BY CUAS AS LEAD PARTNER: < €100,000



The “Drone Zone Austria” project works on the development of a web portal for the safe mission planning for unmanned aircraft (Remotely Piloted Aircraft Systems – RPAS, or drones). This portal is the first to integrate the one-stop shop principle for geographical data, such as building density, aviation law restrictions and nature protection areas, that is necessary for safe drone flight planning for the entire Austrian territory. This portal is now freely accessible at www.dronezoneaustria.at.

Educational Lab – Modul smart lab

PROJECT MANAGEMENT: Roland Willmann

DURATION: 16.03.2018–31.12.2021

FUNDING PROGRAMME: KWF – Regionale Impulsförderung/Regional Impulse Promotion

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



The smart lab CARINTHIA is to offer secondary school pupils low-threshold access to manufacturing infrastructure, with additional workshops and theoretical courses. To this end, a smart lab at Lakeside Park in Klagenfurt is equipped with suitable machinery and training rooms. This smart lab belonging to Carinthia University of Applied Sciences at Lakeside Park is a central module of the Educational Lab. The smart lab at Lakeside Park and the other one on campus in Villach are networked to cover as large a portfolio of manufacturing technologies as possible.



E-EDU4.0

SUPRA-REGIONAL NETWORK ON EDUCATION 4.0

PROJECT MANAGEMENT: Roland Willmann

DURATION: 16.03.2018–31.10.2020

FUNDING PROGRAMME: Interreg IT-AT 2014–2020

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



E-EDU4.0 develops cross-border qualification and education programmes on the vast topic of Industry 4.0 with project partners from Northern Italy. The focus is on the following target groups: 1. Employees of manufacturing companies, 2. Upper secondary school teachers, as well as 3. Upper secondary school students. In addition, the technical possibilities of remote learning are integrated into the training and educational programmes and lessons. This project is a complementary element to the equipment and network of the smart labs CARINTHIA of the Educational Lab – smart lab Module project.

FISHSTREAM

FINDING FISH LADDERS

KEY STIMULI AND DRONE-AIDED ANALYTICAL TOOLS

PROJECT MANAGEMENT: Gernot Paulus

DURATION: 24.10.2018–31.12.2020

FUNDING PROGRAMME: Research cooperation

PROJECT VOLUME COVERED BY CUAS: < €100,000



On the one hand, the research project provides a detailed investigation into the connection between flow conditions caused by water power plants and finding and the frequency of use of fish ladders, and on the other hand, the systematic clarification of the impact of key stimuli on fish with regard to finding fish ladders. The effects of water currents are examined using drone-aided analytical tools. Key stimuli (heat, sound, light) are temporarily created at the entrance to fish ladders during on-site experiments. The main focus of the scientific cooperation (VERBUND Hydro Power GmbH, flussbau iC GmbH, University of Life Sciences and ViewCopter e.U. Studios) of the project is the conception, the prototypical development, and the validation of drone-aided tools for the quantitative determination of flow conditions in the areas of fish ladders for different operational scenarios of power plants.



FLY_WOERTH

PHOTOGRAMMETRIC ANALYSIS OF DRONE-BASED FLIGHTS OVER THE SHORELINE OF LAKE WÖRTHERSEE



PROJECT MANAGEMENT: Gernot Paulus

DURATION: 01.04.2018–31.12.2018

FUNDING PROGRAMME: Research cooperation of the Office of the Provincial Government of Carinthia, Dept. 8 – Environment, Water and Protection of the Environment, flussbau iC GmbH and ViewCopter Studios e.U.

PROJECT VOLUME COVERED BY CUAS: < €50,000

In 2018, a professional, unmanned aircraft (“Unmanned Aerial System”, “drone”) flew along the entire shoreline of Lake Wörthersee in one of the largest scientific, drone-based geographical data recording projects in Austria. In the course of an interdisciplinary research cooperation between Department 8 – Environment, Water and the Protection of the Environment of the Office of the Provincial Government of Carinthia, the industrial partners flussbau iC and ViewCopter, as well as the study programme “Geoinformation and Environmental Technologies” at Carinthia University of Applied Sciences as scientific partner, the entire shoreline of Lake Wörthersee, with a length of nearly 50 km, was remeasured with a digital, high-precision system with cm resolution. The aim of this project is to prepare a very precise, digital, three-dimensional terrain and surface model of the water’s edge of Lake Wörthersee, paying special attention to the transition area between water and land. The result is the “missing digital link” for a seamless, continuous and complete 3D model between already existing laser scan terrain data of the lake environment and the underwater echo-sounder measurement of Lake Wörthersee performed in winter 2017.

FMCP-16

FIXED MOBILE CONVERGENT PLANNING (SOLVER INTEGRATION AND MAINTENANCE)

PROJECT MANAGEMENT: Markus Prosegger

DURATION: 29.10.2015–06.10.2016

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



Further development of the simulation models for the hybrid extension of the copper and glass fibre networks of national network constructors and operators. Optimisation of the generation of graphs from geographical information and network information systems. Improvement of the FTTC/FTTB network optimisation with regard to runtime and fault tolerance. Consideration of additional (optional) specifications derived from operational planning.

FMCPMR16

FMCP MAJOR RELEASE 2016, BROADBAND PROMOTION AND MAINTENANCE

PROJECT MANAGEMENT: Markus Prosegger

DURATION: 17.10.2016–14.12.2017

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €100,000



Further development and maintenance of simulation models for the FTTx extension of telecommunication networks. Dynamic and real-time extension of graphs and support of strategic specifications from the broadband promotion directives.



5GPLAYP₁

5GPLAYGROUND CARINTHIA PHASE 1 – BABEG GMBH

PROJECT MANAGEMENT: Helmut Wöllik

DURATION: 01.04.2018–31.10.2018

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



The main goal of this project was to perform an analysis of development and test environments (= testbeds) around the future mobile communications standard 5G, and to evaluate it regarding its usability and flexibility in different usage scenarios put forward by research partners and industrial partners.

Go 2 Benelux & Scandinavia

PROJECT MANAGEMENT: Erich Alois Hartlieb

DURATION: 01.05.2018–30.04.2021

FUNDING PROGRAMME: Interreg SI-AT 2014–2020

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



The main objective is to increase the number of internationally oriented SMEs in cross-border areas. Go 2 Benelux & Scandinavia represents a common approach for supporting the internationalisation of SMEs through joint cross-border initiatives as well as the development of shared smart services. The project aims at facilitating internationalisation, smart specialisation, and cross-border learning and competence development by developing transnational linkages between SME networks, clusters and other specialised research and innovation hubs – for the benefit of their members.

Go-Lab

GLOBAL ONLINE SCIENCE LABS FOR INQUIRY LEARNING AT SCHOOL

PROJECT MANAGEMENT: Michael Auer

DURATION: 29.11.2012–31.12.2016

FUNDING PROGRAMME: CORDIS – FP7-ICT – Specific Programme “Cooperation”:
Information and Communication Technologies

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



Go-Lab provides online science laboratories (remote and virtual labs) for large-scale use in education. Its technical framework – the Go-Lab Portal – offers students the opportunity to perform personalised scientific experiments with online labs, while teachers can enrich their classroom activities with demonstrations and disseminate best practices in a web-based pedagogical community.

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The endowed "Smart Materials" chair of the University of Applied Sciences, funded by KWF and five renowned Carinthian industrial businesses, is an impulse for the development of a strategic research area for materials sciences and the interdisciplinary topic of "Industry 4.0" (sensor technology).

DR. ERHARD JURITSCH

CEO of the Carinthian Economic Promotion Fund (KWF)





Gründercampus Kärnten

PROJECT MANAGEMENT: Erich Alois Hartlieb

DURATION: 27.10.2016–31.12.2018

FUNDING PROGRAMME: KWF – Regionale Impulsförderung/Regional Impulse Promotion

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



The Gründercampus (Startup Campus) aims at sensitising entrepreneurship, acquiring and developing startup projects, and creating attractive framework conditions for startups in the university campus environment. Within this framework, extensive support for startup projects was provided, using the expert knowledge and laboratory infrastructure of Carinthia University of Applied Sciences. The environment for startups was further developed in close coordination with StartNet Carinthia, the platform for Carinthian startup institutes.



Competent, skilled staff and a solid network with universities and commercial partners combined with very well-equipped laboratories form the basis of successful, application-oriented research.

Gründergarage

ESTABLISHMENT OF A STARTUP GARAGE WITHIN THE SCOPE OF THE STARTUP INITIATIVE AT CARINTHIA UNIVERSITY OF APPLIED SCIENCES

PROJECT MANAGEMENT: Erich Alois Hartlieb

DURATION: 29.07.2016–31.12.2016

FUNDING PROGRAMME: Internal project

PROJECT VOLUME COVERED BY CUAS: < €100,000



The establishment of startup garages within the scope of the startup initiative serves to support selected young entrepreneurs. Founders get the opportunity to assemble their prototypes in their garages after the components have been manufactured at the smart lab CARINTHIA, and to even maintain the necessary confidentiality with regard to the registration of industrial property rights.



gSmart

SPATIAL ICT INFRASTRUCTURES FOR SMART PLACES

PROJECT MANAGEMENT: Gernot Paulus

DURATION: 29.09.2014–31.07.2018

FUNDING PROGRAMME: EACEA – Erasmus Mundus: Action 2, Scholarship Programme

PROJECT VOLUME COVERED BY CUAS: < €100,000



Carinthia University of Applied Sciences, represented by the Department of Geoinformation and Environmental Technologies, participated for the first time in its history in the prestigious international academic European exchange programme ERASMUS MUNDUS. The project “gSmart – Spatial ICT Infrastructures for Smart Places” has established a partner network of 13 Central Asian universities from Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan and 6 European universities from Austria, Spain, The Netherlands, Hungary and Romania. The major goal of this project was to jump-start the urgent requirements for spatial science specialists in the Central Asia region with a focused programme. Therefore, the overall mission of the gSmart project was to build a highly qualified, motivated and dedicated community of specialists in geospatial technologies and methods within their respective domains of expertise across the spatially oriented sciences, contributing to progress in industry, administration and society within the Central Asia region.

HBMS II

HUMAN BEHAVIOUR MONITORING AND SUPPORT

PROJECT MANAGEMENT: Johannes Oberzaucher

DURATION: 10.07.2015–31.03.2017

FUNDING PROGRAMME: Research cooperation

PROJECT VOLUME COVERED BY CUAS: < €50,000



This project was a follow-up to the subsidised and successfully completed first development stage of the HBMS system in the period from 01.06.2011 to 30.11.2014 at AAU Klagenfurt. The goal of the whole HBMS (Human Behaviour Monitoring and Support) project was to preserve the personal autonomy of people by supporting their individual memory performance. To do so, knowledge about everyday-life activities and behaviour was registered incrementally and saved accordingly. If a person's memory becomes weaker or even fails temporarily, this “acquired” knowledge can be recalled in order to support that person in their activities, e.g. directly through instructions or indirectly through automatic interventions.

HirschProtect

WEARABLE ELECTRONICS

PROJECT MANAGEMENT: Michael Roth

DURATION: 01.07.2017–06.12.2017

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €10,000



A conventional bracelet, preferably made of leather (alternatively: NBR/natural rubber), was equipped with electronic components to allow certain functions (see functionality of HirschProtect) to be executed. The combination of software (app) and integrated electronics aimed at avoiding losing or forgetting a smartphone or watch.



High-temperature measurements with DMS

PROJECT MANAGEMENT: Robert Hauser
DURATION: 01.01.2015–28.01.2016
FUNDING PROGRAMME: Contract research
PROJECT VOLUME COVERED BY CUAS: < €50,000



The goal of this project was to examine the tightening process of thermally stressed bolts by way of measurement and simulation. These bolts are primarily used in high-temperature applications and must withstand considerable temperature fluctuations. As a first step, strain gauges were used to determine the friction coefficient between nut and body at room temperature. After this, a high-temperature measurement was performed with a backup system so that it was possible to examine how the bolts, and therefore also the tested system, would behave during operation. The identified parameters were implemented in an FEM simulation that can be used for other constructive steps.

iCo-op

**INDUSTRIAL COOPERATION AND CREATIVE ENGINEERING EDUCATION
BASED ON REMOTE ENGINEERING AND VIRTUAL INSTRUMENTATION**

PROJECT MANAGEMENT: Andreas Pester
DURATION: 20.11.2012–30.04.2016
FUNDING PROGRAMME: EACEA – TEMPUS IV / 5th Call for Proposals – Joint Projects
PROJECT VOLUME COVERED BY CUAS: < €100,000



iCo-op was initiated to equip engineering students in Armenia, Georgia and Ukraine with the skills necessary for a successful career. The programme forged partnerships between universities and industry to modernise engineering education to provide direct access to top-notch facilities with remote and virtual instrumentation. To support these efforts, “education and training” and “work” were no longer treated as two separate worlds; they were integrated into a single, flexible, lifelong learning process that should develop job-specific skills with essential transversal parts.

IDEATION

**SIMULTANEOUS BIDIRECTIONAL DATA LINK OVER
ON-CHIP GLOBAL MIMO INTERCONNECT**

PROJECT MANAGEMENT: Michael Köberle
DURATION: 01.01.2017–29.02.2020
FUNDING PROGRAMME: FFG – BRIDGE Frühphase
PROJECT VOLUME COVERED BY CUAS: < €100,000



The planned research concentrates on the modelling and design of on-chip networks from the system to the physical level. For verification they need the development and manufacture of test chips in sub-100 nm CMOS technology. The goal is to provide analogous solutions for echo cancellation (full-duplex mode) and to attenuate crosstalk (MIMO). The expected research results could also be of interest for full-duplex wireless communication.



Augmensys

PROJECT MANAGEMENT: Jürgen Schussmann

DURATION: 07.04.2017–04.10.2017

FUNDING PROGRAMME: FFG – Innovation Voucher plus €10,000

PROJECT VOLUME COVERED BY CUAS: < €50,000



In the course of this project, a novel algorithm was designed that is able to very accurately calculate the position and orientation of mobile devices (tablets, smartphones) in an industrial environment. The camera and internal sensors (acceleration sensor, gyroscope) are used as measures. As a consequence, the interference-prone compass – primarily in industrial environments – of such devices will no longer be needed.

FLOOROP

PROJECT MANAGEMENT: Gernot Paulus

DURATION: 01.05.2018–31.12.2018

FUNDING PROGRAMME: FFG – Innovation Voucher plus €10,000

PROJECT VOLUME COVERED BY CUAS: < €50,000



The company Hrovath in Arnoldstein very successfully works with the development of trade fair flooring systems for the automotive industry, using modern compound fibre materials. Under the motto “trade fair floors as maps”, new, creative digital business processes in the field of trade fair floors have been jointly developed. The goal of the project is to design a technical implementation concept for the digital simulation and optimisation of trade fair floor laying projects, taking batch-specific visual surface material variations into account.

Flying Floor

PROJECT MANAGEMENT: Hermann Sterner

DURATION: 01.05.2018–31.12.2018

FUNDING PROGRAMME: FFG – Innovation Voucher with excess 2018

PROJECT VOLUME COVERED BY CUAS: < €50,000



The goal of this project was to significantly increase the value of flooring when designing visually impressive trade fair appearances by integrating additional functions.



i4zero

GET CUSTOMERS READY FOR INDUSTRY 4.0

PROJECT MANAGEMENT: Stephan Mark Thaler
DURATION: 01.09.2015–28.04.2016
FUNDING PROGRAMME: FFG – Innovation Voucher €5,000
PROJECT VOLUME COVERED BY CUAS: < €10,000



In European high-wage countries, working hours are a factor that requires continual optimisation. Often, people spend a major proportion of their working hours with complicated, time-consuming research in data sheets and tables. The relevant production process is not optimised, which is why wage costs are very high. Very often, important information is also lost and must be requested again. Sometimes it is simply forgotten. The unique thing about this project is the uncomplicated and nearly cost-neutral opportunity to provide users with information about a particular product. Apps and new media are now also available for conventional products. To put it simply, the interface between humans and hardware is being optimised.

Nilab

PROJECT MANAGEMENT: Winfried Egger
DURATION: 01.03.2017–19.12.2017
FUNDING PROGRAMME: FFG – Innovation Voucher plus €10,000
PROJECT VOLUME COVERED BY CUAS: < €50,000



The request of the applicant was to get simulations of thermal loads, current displacements, structures and material variations for the new, tubular, three-phase, permanent magnet excited, small linear motors that the applicant wanted to develop. These multiphysics simulations should allow a performance-related comparison of different volumes and dimensions as well as thermal limits.

SARAVINI

SENSOR SYSTEM FOR REFRIGERATOR CABINETS

PROJECT MANAGEMENT: Jürgen Thierry
DURATION: 07.10.2016–18.05.2017
FUNDING PROGRAMME: FFG – Innovation Voucher plus €10,000
PROJECT VOLUME COVERED BY CUAS: < €50,000



The company, Saravini Maßkühlmöbel GmbH, approached Carinthia University of Applied Sciences with the request to evaluate whether it would be possible to identify the content of refrigerators by using electronic sensors and a photo resistor matrix or similar technology, and to find out if the selected sensor system delivers reliable and consistent values in refrigerators, despite the difficult environment (disturbing influences, cooling aggregate, different light sources, etc.). The aim of the project was to provide the company with a prototype of the sensor system, including a visualisation of the data as a web application. The company wants to install this sensor system in prototypes of its refrigerators, and envisions a further development to a smart filling level measurement system if a sufficient usability of the methods can be achieved.



International Credit Mobility with Albania, Bosnia and Herzegovina, Ukraine and Armenia



PROJECT MANAGEMENT: Andreas Pester

DURATION: 13.09.2017–31.07.2020

FUNDING PROGRAMME: EACEA – Erasmus+ Key Action 1: Learning Mobility of Individuals

PROJECT VOLUME COVERED BY CUAS: < €50,000

The aim of these mobility projects is to foster student, teaching and staff exchanges between universities in Albania, Bosnia and Herzegovina, Ukraine and Armenia in engineering and IT subjects. Some of these universities are partners from previous projects, some are new partners. The projects should help to strengthen the position of Carinthia University of Applied Sciences (CUAS) in the Eastern European region and open new areas for cooperation in education and research in that region. In the sub-project with Kharkiv Technical University, two professors visited the partners in Villach and Kharkiv and two students from Kharkiv spent five months at CUAS studying in the EEMS Master of Science programme and working on OUPL projects.

Concept development for new sorting approaches in sawmills



PROJECT MANAGEMENT: Reinhard Tober

DURATION: 17.10.2016–20.12.2016

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €10,000

The aim of this project was to turn a “heap of wooden boards” (unsorted, on top of one another after the main cutting stage) into a “row of boards” (sorted, one board after another on the conveyor belt) in the sawmill. The method should protect the material and work at the highest performance rates. The main goal was to come up with new ideas and solution concepts for this sorting stage, to increase the performance and efficiency of the overall plant.

LILAB

LIVING LAB AS A FOUNDATION FOR SUSTAINABLE RESEARCH



PROJECT MANAGEMENT: Johannes Oberzaucher

DURATION: 04.02.2015–31.03.2016

FUNDING PROGRAMME: Central Research Funding

PROJECT VOLUME COVERED BY CUAS: < €50,000

The goal of this project was to draft an LL realisation concept geared to the demands and requirements of relevant stakeholders, including an implementation schedule for the multi-stage structure, and for obtaining an LL that can be used multidisciplinarily and interdisciplinarily at Carinthia University of Applied Sciences, as a realistic research and development structure and method.



MIMI

MODERNISATION OF INSTITUTIONAL MANAGEMENT OF INTERNATIONALISATION IN SOUTH NEIGHBOURING COUNTRIES

PROJECT MANAGEMENT: Andreas Pester

DURATION: 01.12.2013–31.12.2016

FUNDING PROGRAMME: EACEA – TEMPUS IV / 5th Call for Proposals – Joint Projects

PROJECT VOLUME COVERED BY CUAS: < €50,000



The key deliverable of the project was the development of an internationalization management model for universities in Jordan, Lebanon and Morocco to be implemented in these partner universities and to be used later on by other universities. The model aimed to improve governance procedures to promote and enhance internationalization within university hierarchies, to set guidelines to establish appropriate legal framework and to create the required infrastructure for the implementation of internationalization. The model included principles, priorities, a series of guidelines and procedures. The model is in line with international standards and expectations, particularly the Bologna Process.

MMO – 3D

STRENGTHENING R&I IN TECHNICAL AND INDUSTRIAL FOCUS AREAS BY WAY OF CROSS-BORDER COOPERATION BETWEEN RELEVANT ACTORS

PROJECT MANAGEMENT: Franz Oswald Riemelmoser

DURATION: 04.10.2016–31.08.2019

FUNDING PROGRAMME: Interreg SI-AT 2014–2022

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



The main aim of this project is the development of a robot cell for the 3D printing of composite, lightweight and natural materials. The core of this innovation is the adaptation of a six-axis robot with FDM technology and a fibre manipulator. This technology allows the manufacture of geometrically complex products with high-tensile lightweight construction materials.

MOBI

DEVELOPMENT OF A CROWDSOURCING-BASED SYSTEM FOR DATA COLLECTION IN THE FIELD OF ENVIRONMENTAL MONITORING/BIODIVERSITY

PROJECT MANAGEMENT: Mario Wehr

DURATION: 27.10.2016–11.07.2017

FUNDING PROGRAMME: FFG – Innovation Voucher plus €10,000

PROJECT VOLUME COVERED BY CUAS: < €50,000



As part of the research focus of digitalisation, a system for data collection in the field of environmental monitoring was developed by the Engineering & IT department at Carinthia University of Applied Sciences, commissioned by the project partner eb&p Umweltbüro GmbH. The basic idea was to collect answers to specific questions in the fields of environmental monitoring and biodiversity monitoring by means of crowdsourcing.



Museum Villach

PROJECT MANAGEMENT: Jürgen Schussmann
DURATION: 02.10.2015–15.03.2016
FUNDING PROGRAMME: Research cooperation
PROJECT VOLUME COVERED BY CUAS: < €10,000



A mobile application should identify images in rooms based on an image database provided by the Town of Villach (Museum Villach).

NGA – Next Generation Access

PROJECT MANAGEMENT: Markus Prosegger
DURATION: 03.04.2018–laufend
FUNDING PROGRAMME: Contract research
PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000 (status Apr. 2018 to Aug. 2019)



Development of graph generation and simulation models for the NGA glass fibre extension, based on PON and GPON. Support of specifications from the "Guide on Planning and Construction of Glass Fibre Access Networks" by the Federal Ministry for Transport, Innovation and Technology. Support of local communities, cities and local communication network operators in preparing strategies for broadband initiatives.

NIS

DEVELOPMENT OF AN EMERGENCY INFORMATION SYSTEM FOR PEOPLE WITH RARE METABOLIC DISEASES

PROJECT MANAGEMENT: Jürgen Thierry
DURATION: 20.10.2016–22.11.2017
FUNDING PROGRAMME: FFG – Basic programme
PROJECT VOLUME COVERED BY CUAS: < €100,000



In this project, an emergency information system (NIS) for optimising emergency care for people with rare metabolic diseases was developed. The system functions as a communicator for people who are unable to communicate for themselves, to increase their chances of survival in an emergency, and to give these patients more autonomy. For this purpose, an emergency bracelet equipped with backup features and with the necessary information infrastructure was developed.



Online-Labs4All

ADAPTIVE INTERFACES FOR A GLOBAL ILAB CLOUD

PROJECT MANAGEMENT: Michael Auer

DURATION: 01.10.2014–30.09.2016

FUNDING PROGRAMME: BMBWF – Sparkling Science

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



Online laboratories allow self-directed, investigative learning and are available worldwide, 24/7. Online laboratories also offer a novel environment for collaborative work and the opportunity to exchange experiences with other institutions. The project Online-Labs4All was designed to integrate laboratory tests into a global cloud, and to evaluate their usage on the basis of the novel interfaces to be developed. This way, it actively contributes to the development of a global online cloud, involving foreign schools and institutes.

OPEN_INNO

PILOT PROJECT IN THE FIELD OF OPEN INNOVATION

PROJECT MANAGEMENT: Michael Auer

DURATION: 01.01.2015–31.01.2017

FUNDING PROGRAMME: BMBWF – Sparkling Science

PROJECT VOLUME COVERED BY CUAS: < €50,000



As part of the Sparkling Science project Online-Lab4All, an accompanying pilot project was realised to create an open innovation experiment zone for schools in the field of STEM (Science, Technology, Engineering, Mathematics). The aim of this pilot project was to give recommendations for the Federal Ministry of Education, Science and Research (BMBWF) on which issues should be considered in the development of a special open innovation programme or in the design of calls for proposals.

PILAR2016

PLATFORM INTEGRATION OF LABORATORIES BASED ON THE ARCHITECTURE OF VISIR

PROJECT MANAGEMENT: Andreas Pester

DURATION: 09.11.2016–14.10.2019

FUNDING PROGRAMME: EACEA – Erasmus+ Key Action 2: Capacity building in the field of higher education

PROJECT VOLUME COVERED BY CUAS: < €50,000



The PILAR partnership will enhance the learning, teaching and practical training at the tertiary and secondary levels by allowing the development of many different electronic practices through a newer and richer level of digital integration. The possibility of real practical exercises at almost real time for many different student profiles will help to develop basic and transversal skills throughout the involved countries and, as a second step, this can be expanded to any interested country. The strategic-partnership project includes partners from 5 European countries.



Poly-GENFEROS 4.0

POLYMERIC GENERATIVE MANUFACTURE IN OPERATIONAL SUPPLY CHAINS 4.0

PROJECT MANAGEMENT: Bernhard Heiden

DURATION: 07.10.2016–01.09.2018

FUNDING PROGRAMME: FFG – Qualification Networks

PROJECT VOLUME COVERED BY CUAS: < €100,000



Poly-GENFEROS 4.0 was designed to make 3D printing or generative manufacturing technologies using plastics more easily available as new manufacturing technology for companies in Austria. In pursuing this goal, these technologies should be better integrated into the company's own innovation strategy. Other topics were cost analysis and the integration of these new technologies into the manufacturing process, as well as further education on the latest trends in this field of production technologies.

Quantain – Supply Containers

PROJECT MANAGEMENT: Erich Alois Hartlieb

DURATION: 15.02.2016–31.01.2017

FUNDING PROGRAMME: KWF – UIG: Implementation of innovative startup projects

PROJECT VOLUME COVERED BY CUAS: < €50,000



This product innovation is a mobile unit for the local supply of power, as well as for heating and cooling indoor spaces for people, and is operated using plant-based biomass. This small machine is tailor-made for international aid organisations, NGOs and civil protection, and provides them with an advantage in immediate technical assistance powered by alternative energy.

RPAmSS

NEW ENVIRONMENTAL ROBOTIC SERVICES WITH A REMOTELY PILOTED AIRCRAFT MULTI SENSOR SYSTEM FOR ENVIRONMENTAL MONITORING

PROJECT MANAGEMENT: Gernot Paulus

DURATION: 03.11.2014–31.07.2017

FUNDING PROGRAMME: FFG – COIN Cooperation and Networks

PROJECT VOLUME COVERED BY CUAS AS LEAD PARTNER: €100,000–€500,000



The collaboration and network project, "Remotely Piloted Aircraft Multi Sensor System (RPAmSS)", dealt with the development, application and quantitative validation of a cost-efficient, civil, unmanned, flying multi sensor system for the high-resolution recording of multidimensional environmental data. Throughout the entire project duration, 6 drone pilots were trained, and a total of 107 missions with different sensors were successfully carried out on the basis of monitoring concepts coordinated with domain experts. Firstly, the focus was on high-resolution imaging (RGB, NIR, multi-spectral and hyper-spectral) recording and the photogrammetric analysis of dynamic river environments in two test areas in Carinthia (Gail, Drau), and secondly, the project focused on implementing meteorological missions on recording dynamic weather data. Additional development missions in exciting areas of application, such as archaeology (Aguntum near Lienz), Precision Viticulture (experimental wine-growing estate Götzhof in Klosterneuburg), Alpine pasture measurements (Aflenz Bürgeralm), and infrastructural monitoring (power line routes), have been carried out successfully.



RPH_2030 – Logyard 2030

PROJECT MANAGEMENT: Josef Tuppinger
DURATION: 01.01.2018–02.02.2018
FUNDING PROGRAMME: Contract research
PROJECT VOLUME COVERED BY CUAS: < €10,000



The logyard of a sawmill still offers great potential for differentiation and productivity increases by way of innovation. In a creative workshop, concepts for a logyard 2030 were to be generated by involving external parties and staff members of the Springer company.

R-TRUDI

PROJECT MANAGEMENT: Wolfgang Werth
DURATION: 18.11.2015–31.12.2016
FUNDING PROGRAMME: Research cooperation
PROJECT VOLUME COVERED BY CUAS: < €50,000



The subject of this project was the development, construction and manufacture of a mobile robot platform at Carinthia University of Applied Sciences in cooperation with the Technical University of Nuremberg. Two mobile robots were created.

SAFETYPLAST

IDENTIFICATION OF MARKET ENTRY BARRIERS AND ELABORATION OF STRATEGY OPTIONS FOR MARKET ENTRY

PROJECT MANAGEMENT: Josef Tuppinger
DURATION: 02.02.2018–30.04.2018
FUNDING PROGRAMME: Contract research
PROJECT VOLUME COVERED BY CUAS: < €10,000



Europlast Kunststoffbehälterindustrie GmbH has developed the Safetyplast product for construction site safety and has primarily sold it in France. Market entry in the German-speaking area (DACH region) has not yet been successful. In the project, internal and external market entry barriers in the DACH region were identified and measures to overcome them (technical, organisational, etc.) were derived, strategy options for a market entry were drafted, and a strategy recommendation was made.



SEUSA

SPATIALLY EXPLICIT UNCERTAINTY AND SENSITIVITY ANALYSIS

PROJECT MANAGEMENT: Christoph Erlacher

DURATION: 08.02.2016–31.01.2017

FUNDING PROGRAMME: Central Research Funding

PROJECT VOLUME COVERED BY CUAS: < €50,000



The major objective of this research project was the development of a scalable and adaptable spatially explicit uncertainty and sensitivity analysis (SEUSA) framework. The SEUSA framework provided a quantitative decision quality measure in complex and comprehensive spatial multi-criteria decision-making processes. The advantage of the proposed framework is represented by the generic design that proved to be beneficial for different application domains, such as natural hazard risk assessment, landscape assessment, infrastructure planning, environmental impact assessment or identification of land use strategies for sustainable regional development.

SIAA – Social Innovation

PROJECT MANAGEMENT: Petra Hössl

DURATION: 01.01.2018–30.10.2020

FUNDING PROGRAMME: Interreg IT-AT 2014–2020

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



In the course of the Interreg project, “Social Impact for the Alps-Adriatic Region (SIAA)”, solutions for the key challenges of the Alps-Adriatic border regions are to be developed together with public administrative bodies, institutions and social entrepreneurs. The goal is the identification of the current situation and the development of suitable measures for developing know-how in the region and for implementing social entrepreneurship projects and foundations. In addition, the project partners from Carinthia (Carinthia University of Applied Sciences, University of Klagenfurt, build! Gründerzentrum Kärnten GmbH), Friuli-Venezia Giulia (Friuli Innovazione, Udine University), Treviso (tzi) and South Tyrol (Free University of Bozen-Bolzano) will organise design contests, followed by social impact training and an accelerator programme in order to identify approaches for solutions with a social impact on site. At the end of the project, a manual will be published, and the acquired knowledge will be transferred into the system of public administration by means of workshops.

SIMULATION

SIMULATION OF THE DRIVE TRAIN OF SHREDDERS AND TRANSMISSION RATIOS

PROJECT MANAGEMENT: Reinhard Tober

DURATION: 01.11.2017–31.12.2017

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



In this project, the SimulationX software was used to simulate and compare different variants of a shredder’s drive train. The aim of the project was to analyse and compare a two-stage belt drive with a planetary gear in relation to the degree of efficiency, and to examine the optimisation of the flywheel mass and transmission ratios.



SISOBOX

DEVELOPMENT OF A CONTROL AND MEASURING DEVICE FOR A
VACUUM CHAMBER TO RESEARCH SUPERINSULATION MATERIALS

PROJECT MANAGEMENT: Stephan Mark Thaler
DURATION: 05.08.2016–17.07.2017
FUNDING PROGRAMME: FFG – Innovation Voucher €5,000
PROJECT VOLUME COVERED BY CUAS: < €10,000



The use of superinsulation materials in commercial boiler and storage technologies is a new type of use of this technology that provides many new options for developing highly efficient systems. To ensure that superinsulation actually functions as such, an extremely low residual pressure level is required inside the superinsulation material. It must be evacuated to a point where the area of the pressure-independent gas heat line is undercut and the heat transport becomes effective due to free molecular flow. In order to create a suitable test environment for these materials and allow further research on superinsulating materials, an initial lab setup was developed in the form of a functional model, featuring a vacuum chamber and a suitable control and measuring device that is used to test and verifiably evaluate different superinsulating materials with regard to their suitability for usage in boiler and storage tank technology.

Smarter Leichtbau 4.0

PROJECT MANAGEMENT: Franz Oswald Riemelmoser
DURATION: 01.02.2018–31.01.2021
FUNDING PROGRAMME: KWF – Regionale Impulsförderung/Regional Impulse Promotion
PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



This research focuses on pioneering lightweight construction developments (specifically on the basis of natural fibre-reinforced plastics) with integrated sensors and efficient process analysis. The “Smarter Leichtbau 4.0” project pools the expertise of Carinthia University of Applied Sciences, Carinthian Tech Research and WOOD K Plus and, at the same time, represents a link to the mainstream issue of Industry 4.0.



Smart Production and Service Solutions

PROJECT MANAGEMENT: Roland Willmann

DURATION: 01.08.2016–30.09.2019

FUNDING PROGRAMME: Interreg SI-AT 2014–2022

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



The general project goal is the development of a database of innovative, production-oriented small and medium-sized enterprises in the programme's territory of Slovenia and Austria, in the field of common technological specialisations. The topic areas include the support of small and medium-sized enterprises (SMEs) with the implementation of lean production, smart products, smart production or quality management, as well as the support of technology startups. Besides a best practice database, workshops, consulting services and small-scale implementation projects for SMEs are developed and implemented on these main issues. The focus of Carinthia University of Applied Sciences in this project is on consulting and on the implementation of smart production, as well as the creation of infrastructure to promote talent and startups. It also includes complementary networking with the Educational Lab – smart lab Module project.

smart SensorIQS

**INTELLIGENT AND AUTOMATED QUALITY ASSURANCE OF
HYDROLOGICAL "LIVE" SENSOR MEASURING DATA**

PROJECT MANAGEMENT: Gerald Gruber

DURATION: 18.11.2013–31.03.2016

FUNDING PROGRAMME: FFG – BRIDGE

PROJECT VOLUME COVERED BY CUAS: < €100,000



The central focus of the smart SensorIQS research project was the definition of a new, joint set of methods harmonised throughout Austria and aligned internationally to describe the automated quality assurance of hydrographic (raw) data. This research projects yielded a concept for a new approach in the provision of data, including quality descriptions based on hydrographic sensor networks, implemented as a prototype.

Smart Soccer – SmartFish Unlimited

PROJECT MANAGEMENT: Helmut Wöllik

DURATION: 21.11.2017–31.07.2018

FUNDING PROGRAMME: FFG – Innovation Voucher with excess 2018

PROJECT VOLUME COVERED BY CUAS: < €50,000



The project dealt with the compilation of mathematical models of ball movements during simple football training exercises. The aim is the verification of these models by way of linear acceleration and gyro sensors that can be positioned with little or no influence on or inside the ball. Using Bluetooth low energy transmission methods, they can be visualised on a computer or smartphone.



Smart VitAALity

CARINTHIAN TEST REGION FOR THE SUPPORT OF HEALTH AND WELL-BEING

PROJECT MANAGEMENT: Johannes Oberzaucher

DURATION: 01.01.2017–31.12.2019

FUNDING PROGRAMME: BMVIT – benefit: ICT of the Future – Demographic Change as an Opportunity

PROJECT VOLUME COVERED BY CUAS AS LEAD PARTNER: > €500,000



Within the context of the Smart VitAALity project, assistance systems for older people are being developed. These systems are implemented in a Smart City setting such as “Health, Inclusion and Assisted Living” in senior citizens’ homes. The Smart VitAALity system offers needs-based, extendable/upgradeable, modular and intuitively useable services for future users and their personal environment that are well-integrated in existing everyday processes. The main research question concerns the effectiveness in core dimensions of empirically measurable quality of life (well-being, health, social inclusion) and whether defined factors of quality of life can be positively influenced. Smart VitAALity is a cooperative research project and is co-funded as part of the FFG programme “benefit” with funds provided by the Federal Ministry for Transport, Innovation and Technology

SOKRATES ...

... AND HOW TO MEASURE THE WORLD

PROJECT MANAGEMENT: Claudia Pacher

DURATION: 02.07.2015–24.02.2017

FUNDING PROGRAMME: BMVIT – Talents

PROJECT VOLUME COVERED BY CUAS: < €50,000



The aim of this project was to enhance scientific and technical knowledge amongst children and teens, and was particularly focused on providing access to topics of research, innovation and technology to children and teens with migration backgrounds.

SoLat

INCREASE IN EFFICIENCY OF THERMAL SOLAR PLANTS BY
USING INNOVATIVE HEAT STORAGE TANKS

PROJECT MANAGEMENT: Stephan Mark Thaler

DURATION: 19.01.2016–20.12.2017

FUNDING PROGRAMME: Office of the Provincial Government of Carinthia – K-ElWOG Fund

PROJECT VOLUME COVERED BY CUAS: < €100,000



Within the framework of this project, the suitability of different innovative energy storage media for the intermediate storage and efficient use of thermal solar energy was examined, and their potential with regard to long-term storage (seasonal) for increasing the self-supply quota was highlighted. The focus was on latent heat storage materials such as paraffins and salt hydrates. To this end, the extended modelling of a complex storage system was pursued to be able to depict the influences of different profiles of requirements, interconnection scenarios and usage behaviour patterns of different users, and to verify the calculated parameters with real measured data extracted from specifically developed test settings. Many parameters, such as the influence of ambient temperature with different insulation systems and the complex behaviour of the storage medium in the phase transition zone, could be measured and validated.



SPORTNETWORK

PROJECT MANAGEMENT: Helmut Wöllik

DURATION: 01.05.2018–31.10.2030

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



This project deals with the development and operation of network and communication technology components for their use at sports events. In particular, radio channel planning, setting up operation schedules for communication processes (language, chat, data workflow), development and configuration of software tools and database architectures for athlete administration, ad hoc mobile networks (STAMINA V2) and the development of modern authentication systems for public WLAN with sponsor-ready added value (social login), are taken into account. Clients include the event organisers of Ironman Austria, Kärnten Läufer, Spartan Race, World Bodypainting Festival, Special Olympics Austria, etc.

START-UP

PROJECT MANAGEMENT: Erich Alois Hartlieb

DURATION: 01.05.2014–23.08.2016

FUNDING PROGRAMME: build! Gründerzentrum

PROJECT VOLUME COVERED BY CUAS: < €50,000



The build! Gründerzentrum startup centre promotes innovative startups and is therefore constantly on the lookout for entrepreneurial individuals and startup ideas. This is why the build! Gründerzentrum commissioned Carinthia University of Applied Sciences to develop the "start-UP" initiative, with the aim of identifying entrepreneurial individuals and startup ideas among various UAS programmes, and to acquaint students with the idea of self-employment.

STEVE

SMART-TAILORED L-CATEGORY ELECTRIC VEHICLE DEMONSTRATION IN HETEROGENEOUS URBAN-USE-CASES

PROJECT MANAGEMENT: Erich Alois Hartlieb

DURATION: 01.11.2017–31.10.2020

FUNDING PROGRAMME: H2020-GV-2016–2017 (2016–2017 Green Vehicles)

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



The underlying idea of the STEVE project is the implementation and testing of lightweight electric vehicles in four European towns (Calvià in Spain, Turin and Venaria Reale in Italy, and Villach in Austria). The aim is to create attractive new mobility services that are affordable, convenient and environmentally friendly, both for local residents and for visitors. The team at Carinthia University of Applied Sciences closely cooperates with the project partners and local institutions in Villach to develop customer-oriented offers and business models for sustainable implementation.



Sticklett

EXPERT VALUATION AND QUALITATIVE UX ANALYSIS

PROJECT MANAGEMENT: Daniela Elisabeth Ströckl

DURATION: 01.02.2018–30.05.2018

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



In the context of a heuristic evaluation and based on the heuristics of Jakob Nielsen, an expert evaluation was performed with 5 people from the specialist domains of computer sciences, development and usability. Furthermore, it was ensured that the experts also had contact to children, so they could assess the product properly. Another component was a high-quality UX analysis where 10 test subjects tested the product for 3 to 5 days in their own personal environment. Their experiences were documented in subsequent interviews. Finally, the results were summarised, and suggestions for optimisation were submitted.

T₄ – Transnational Technology Transfer Training

TRAINING BLUEPRINTS FOR ACCELERATED GROWTH

PROJECT MANAGEMENT: Roland Willmann

DURATION: 07.12.2016–31.10.2018

FUNDING PROGRAMME: EACEA – Erasmus+ Key Action 2:

Capacity building in the field of higher education

PROJECT VOLUME COVERED BY CUAS: < €50,000



The main goal of this project was to improve the skills and competencies of European SMEs in the field of transnational technology transfer, as well as to accelerate reactions from public and private organisations and their interest groups to qualification requirements defined by SMEs. In the context of this project, the content of the qualifications demanded from technology transfer managers was identified. Furthermore, a curriculum for transnational technology transfer management was developed and made available to the public on an e-learning platform.

TIK

CREATION AND MANAGEMENT OF TECHNOLOGY-ORIENTED COOPERATION ARRANGEMENTS FOR INNOVATION

PROJECT MANAGEMENT: Erich Alois Hartlieb

DURATION: 10.10.2016–31.12.2016

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €10,000



Rendering innovative capacity for staying ahead of today's and tomorrow's competition is becoming more difficult, more expensive, and more resource-intensive due to ever shorter product life cycles. This is why a technology strategy is required which will subsequently enable the creation and management of technology-oriented cooperation arrangements for innovation.



TIMING

PROJECT MANAGEMENT: Helmut Wöllik

DURATION: 09.02.2018–31.12.2030

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



Executing service contracts for timekeeping in sports. Use of (active and passive) transponder systems developed internally at Carinthia University of Applied Sciences with the corresponding live timing software "FH Timing". Alternatively, or in combination with transponder systems, tracking systems are also offered and used (GPS or beacon technology). Clients include the organisers of the Grossglockner Mountain Run, TriStar Switzerland, Tour de Kärnten and Special Olympics Austria, various associations of the Carinthian Triathlon Federation, and others.

TATU

TRAININGS IN AUTOMATION TECHNOLOGIES FOR UKRAINE

PROJECT MANAGEMENT: Wolfgang Werth

DURATION: 01.12.2013–30.06.2017

FUNDING PROGRAMME: EACEA – TEMPUS IV / 6th Call for Proposals – Joint Projects

PROJECT VOLUME COVERED BY CUAS: < €50,000



This project enabled the training and education of future Ukrainian trainers for automation engineers, maintenance engineers, process workers and students using non-classical teaching methods such as learning by doing, remote and mobile teaching with innovative technologies, as well as lifelong learning and integrating the experience of European universities.

UIG_2017

IMPLEMENTATION OF INNOVATIVE STARTUP PROJECTS

PROJECT MANAGEMENT: Claudia Pacher

DURATION: 05.07.2017–31.12.2018

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



The KWF "Implementation of Innovative Startup Projects" initiative, an instrument for the promotion of innovative, technology-oriented and knowledge-based projects with good business prospects, allows founders to walk the walk from the idea to the final product or innovative service. Carinthia University of Applied Sciences is the grant applicant and manages applications, operational management, as well as the entire accounting procedure.



USA – AUSTRIA Transnational Research Cooperation

MARSHALL PLAN STUDENT SCHOLARSHIPS



PROJECT MANAGEMENT: Gernot Paulus

DURATION: 14 projects with a duration between 3 and 5 months per project (2016–2018)
01.03.2016–01.08.2018

FUNDING PROGRAMME: Austrian Marshall Plan Foundation – Marshall Plan Jubilee Foundation

PROJECT VOLUME COVERED BY CUAS: < €100,000

Since 2009, Carinthia University of Applied Sciences has been one of the most successful Austrian universities at the awards of research grants for students awarded by the Austrian Marshall Plan Foundation, thanks to international research collaborations with top US universities within the study programmes in the fields of Geoinformation and Environmental Technologies (BSc) or Spatial Information Management. These research grants allow ambitious students of our study courses and those at our American partner institutes to gain research experience in an international environment during their education programme, and to prepare themselves in the best possible way for a future career in the field of geoinformation and environmental technologies. In the period from 2016 to 2018, 14 students were successfully nominated for a Marshall Plan grant: 1 American doctoral candidate, 4 American master's students and 9 national and international master's and bachelor's students from our "geo" study courses. The strategic focuses of research topics include innovative methods and applications of geoinformation technologies in the fields of high-resolution environmental monitoring with unmanned aerial systems, crime analysis and prediction, spatial decision support, spatial data mining and the geospatial analysis of social media data.

VIPL

CREATION OF A VIRTUAL INNOVATION AND PRODUCTION LABORATORY FOR EXPERIMENTAL RESEARCH WITH STUDENTS



PROJECT MANAGEMENT: Bernhard Heiden

DURATION: 04.04.2016–31.12.2018

FUNDING PROGRAMME: Research cooperation

PROJECT VOLUME COVERED BY CUAS: < €50,000

Creation of a virtual innovation and production laboratory for experimental research with students. Development and realisation of an experiment for the production of robots. One strategic goal is the further development of the holistic approach of innovation and production processes. In addition, the options available for the production of robots should be researched by using generative manufacturing methods.



VISIR+

EDUCATIONAL MODULES FOR ELECTRIC AND ELECTRONIC CIRCUITS THEORY AND PRACTICE FOLLOWING AN ENQUIRY-BASED TEACHING AND LEARNING METHODOLOGY SUPPORTED BY VISIR



PROJECT MANAGEMENT: Andreas Pester

DURATION: 01.01.2016–12.04.2018

FUNDING PROGRAMME: EACEA – Erasmus+ Key Action 2: Capacity building in the field of higher education

PROJECT VOLUME COVERED BY CUAS: < €100,000

The project targeted the broad field of Electrical Engineering and, within it, the subject of circuit theory and practice. It aimed to define, develop and evaluate a set of educational modules comprising hands-on, virtual and remote experiments; the latter supported by a remote lab named Virtual Instruments System in Reality (VISIR). The nature of each experiment had an impact on the students' perception of circuit behaviour. Therefore, it is mandatory to understand how these different learning objects can be arranged together in order to scaffold their understanding and increase their laboratory-based skills. The concern of the underpinning teaching and learning methodology is to favour, in particular, student autonomy for discovering how circuits work through an enquiry-based approach. VISIR+ brought together the power of the best remote lab for experiments with electrical and electronic circuits as well as the long history of collaboration among the consortium partners. Moreover, it fostered the exchange of best practices between Europe on one side and Brazil and Argentina on the other.

ZentrAAL

CENTRAL TEST REGION FOR AAL TECHNOLOGIES

PROJECT MANAGEMENT: Johannes Oberzaucher

DURATION: 01.01.2015–31.12.2017

FUNDING PROGRAMME: BMVIT – benefit: ICT of the Future – Demographic Change as an Opportunity

PROJECT VOLUME COVERED BY CUAS: < €100,000



In ZentrAAL (holistic, user-centred approach for AAL, i.e. Active & Assisted Living), an upgradeable software system that supports self-determined ageing was tested and evaluated over a longer period of time. This large-scale (>60 households) and long-term (15 months) field test made it possible to gather findings on the sustainable acceptance of individual AAL components, as well as their effectiveness and efficacy.

Development of Centrifuges

PROJECT MANAGEMENT: Robert Hauser

DURATION: 01.03.2017–31.07.2017

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



In the course of this research cooperation in the field of the development of centrifuge machines, shaft seals were analysed with regard to wear during normal operating conditions. Images of damage were analysed to derive constructive measures for redesigning them. There was follow-up support and successful implementation.



R&D MANAGEMENT: Angelika Mitterbacher
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The Images of Old Age in benefit and AAL projects

A MIXED METHODS STUDY

PROJECT MANAGEMENT: Olivia Kada

DURATION: 08.10.2018–31.05.2019

FUNDING PROGRAMME: BMVIT – benefit: ICT of the Future – Demographic Change as an Opportunity

PROJECT VOLUME COVERED BY CUAS AS LEAD PARTNER: < €50,000

TOTAL PROJECT VOLUME: approx. €74,100



In collaboration with the Institute of Psychogerontology (IPG) at the Friedrich Alexander University in Erlangen-Nuremberg, benefit projects and studies as well as AAL projects are analysed in the context of a mixed methods design under Austrian-led management. The content of user groups is analysed, the developed technical solutions are categorised against the backdrop of gerontological theories and concepts of the assessment of consequences of technologies, and an analysis of the images of old age reflected in language use is performed. A comprehensive integration of relevant stakeholders is achieved by involving senior citizens and students, and by taking perspectives held by the researchers taking part in these projects into account.

CHECKSNACK

EVALUATION OF THE “CHECK YOUR SNACK” WORKSHOPS

PROJECT MANAGEMENT: Holger Penz

DURATION: 01.01.2017–24.05.2017

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €10,000



Within the “Our School Cafeteria” project funded by the Carinthian Health Fund, which supported cafeteria operators in filling their display in a way that healthier snacks will be preferred by students, a side project named “Check your Snack” was carried out and was evaluated by Carinthia University of Applied Sciences. The content was a structured survey among students who had come up with different ideas for “healthy snacks” in workshops, and it included another structured survey among cafeteria operators who had offered at least one of these snacks for a minimum period of one month.



DFGM

DEMENTIA-FRIENDLY MODEL COMMUNITY OF MOOSBURG

PROJECT MANAGEMENT: Kai Brauer

DURATION: 01.02.2018–31.01.2020

FUNDING PROGRAMME: FGÖ – Practice-oriented project

PROJECT VOLUME COVERED BY CUAS: < €100,000



The aim of this project is to promote the development of commitment to dementia-friendly living environments and caring local communities. Awareness-raising, specific actions and events to strengthen the support networks and self-organisation, as well as the exchange between generations and professions, are designed to mitigate the exclusion of those affected by dementia.

DRAK

DIVERSITY-ORIENTED USE OF RESOURCES IN THE CONTEXT OF AAL @ WORK

PROJECT MANAGEMENT: Susanne Dungs

DURATION: 08.02.2016–31.07.2017

FUNDING PROGRAMME: Central Research Funding

PROJECT VOLUME COVERED BY CUAS: < €50,000



This project revolved around the question of how work should be organised across the entire active working period, so that people are able and willing to stay productive, healthy, well-qualified and motivated for as long as possible. The goal was to develop demand-oriented solutions and approaches for the working world (= practice), to support, use and promote age-diverse needs and potentials in an organisational context.

E₃M

EVALUATION OF QUALITY OF COOPERATION IN EDUCATION ECOSYSTEM AS A MECHANISM FOR BUILDING PROFESSIONAL COMPETENCIES

PROJECT MANAGEMENT: Helmut Richard Arnold

DURATION: 08.04.2014–28.02.2017

FUNDING PROGRAMME: EACEA – TEMPUS IV / 6th Call for Proposals – Joint Projects

PROJECT VOLUME COVERED BY CUAS: < €100,000



The aim of this project was the modernisation of the higher education system in the Russian Federation with a focus on collaboration among tertiary educational institutions and the working world. Based on comparing country-specific experiences, the need for action in coordinating different academic education systems and the requirements on the labour market were established, potentials for collaboration and innovative projects were identified, and successful processes and programmes were implemented by means of specific steps. The research project provided several master's students from Carinthia University of Applied Sciences (Social Work) with an excellent opportunity to participate in international exchange weeks and, in exchange, to act as hosts in preparing a concept for research weeks. Most of all, it was an opportunity to get a feel for the world of research that is out there.



Health Sciences & Social Work – projects

ELLAN

EUROPEAN LATER LIFE ACTIVE NETWORK

PROJECT MANAGEMENT: Andrea Stitzel

DURATION: 25.11.2013–31.10.2016

FUNDING PROGRAMME: EACEA – Lifelong Learning Programme: Erasmus Networks

PROJECT VOLUME COVERED BY CUAS: < €50,000



Within the context of the EU-funded ELLAN network, 26 EU countries cooperated in order to develop common standards in the form of transprofessional core skills for working with older people, to exchange innovative learning and teaching methods, and to identify factors that can motivate students to work with older people later in their own professional lives.

ETHIOPIA

RESEARCH ON OLD AGE VULNERABILITY IN ETHIOPIA

PROJECT MANAGEMENT: Helmut Spitzer

DURATION: 01.10.2016–31.01.2017

FUNDING PROGRAMME: OEAD – APPEAR Preparatory Funding

PROJECT VOLUME COVERED BY CUAS: < €50,000



The project was conducted in partnership with Addis Ababa University, School of Social Work, Ethiopia. The situation of older people in Ethiopia is notoriously under-researched; hence, this project was supposed to bridge this gap. Several meetings, a stakeholders' workshop and field visits were conducted in November 2016. The overall objective of the preparatory project was to jointly create a full proposal for an APPEAR academic partnership on social research on old age vulnerability in Ethiopia.

ETSCHU

HOW TO BE A PUPIL – OCCUPATIONAL THERAPY IN SCHOOLS

PROJECT MANAGEMENT: Angelika Mitterbacher

DURATION: 06.09.2017–31.10.2018

FUNDING PROGRAMME: Internal project

PROJECT VOLUME COVERED BY CUAS: < €100,000



The “How to be a Pupil – Occupational Therapy in Schools” research project dealt with possible support offers for children during their first year at school. The goal was to point out the efficiency of school-based occupational therapy among children during their first year at school, and to ensure that pupils fulfil their roles in order to cope with the challenges of everyday school life.



EVALCF

EVALUATION OF THE INTEGRATIVE EMPLOYMENT PROJECT “CHANCENFORUM”

PROJECT MANAGEMENT: Susanne Dungs

DURATION: 01.09.2017–31.07.2018

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



autArK Soziale Dienstleistungs-GmbH, with its project ChancenForum (CF, Opportunity Forum) for people with learning disabilities in Carinthia, offers regular employment and therefore promotes inclusion in the mainstream labour market. autArK works as a staff leasing agency for employers and provides comprehensive support both for CF workers and the participating businesses, as it provides personal work assistance (PEAASS) that considerably contributes to implementing inclusion. During the project, the ChancenForum was evaluated based on socio-scientific and macro-economic criteria.

EVALMOB

EVALUATION OF MOBILE CARE ASSISTED FORMS OF LIVING FOR CHILDREN AND ADOLESCENTS IN CARINTHIA

PROJECT MANAGEMENT: Hubert Höllmüller

DURATION: 01.02.2017–17.11.2017

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



Carinthia University of Applied Sciences was commissioned by the Province of Carinthia (Department 4 – Social Affairs) to evaluate child and youth welfare mobile care services. Assisted forms of living that benefit from mobile care services were also evaluated. The research report was completed and publicly presented at an event in Klagenfurt in October.

GEKO

GEKO GERIATRIC CONSULTATION SERVICE ROLLOUT

PROJECT MANAGEMENT: Olivia Kada

DURATION: 12.06.2018–31.12.2020

FUNDING PROGRAMME: Research cooperation

PROJECT VOLUME COVERED BY CUAS: < €10,000



At Klagenfurt General Hospital, a geriatric consultation service (GEKO) will be established and rolled out, step by step, to include care homes in Carinthia. The task of Carinthia University of Applied Sciences is to scientifically accompany this project.



GIB 2.0 – Health in Motion 2.0

IMPLEMENTATION AND EVALUATION OF A TRANSDISCIPLINARY
MOBILITY INTERVENTION FOR PEOPLE SUFFERING FROM DEMENTIA

PROJECT MANAGEMENT: Doris Anna Gebhard

DURATION: 10.08.2015–31.01.2017

FUNDING PROGRAMME: FGO – Practice-oriented project

PROJECT VOLUME COVERED BY CUAS: < €100,000



In the interdisciplinary project “Health in Motion”, a systematic literature analysis and demand analysis were used to prepare a practical framework concept for a mobility intervention that was especially geared towards people suffering from dementia. The concept was based on a multi-component intervention. It lasted 12 weeks and had a modular structure. This framework concept will be completed and developed further during the GiB 2.0 practical project with the participation of the target group and those working in the intervention setting. It will also be implemented and evaluated in four retirement and nursing homes operated by the cooperation partners, Caritas Kärnten and Diakonie de La Tour.

GUTE_IDEE I+II+III

PROJECT MANAGEMENT: Kai Brauer

DURATION: 28.11.2016–31.08.2018

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



Scientific support and evaluation of the “Gute Idee” (“Good idea”) diabetes prevention programme. By employing the approach of “action-based integrated accompanying research”, a multi-stage impact analysis was carried out in the form of standardised interviews, expert interviews and validation rounds.

IATLAS – Towards valid brain iron quantification using magnetic resonance imaging

DEVELOPMENT OF A HISTOLOGICALLY BASED 3D IRON AND MYELIN VALIDATION
MAP AND ITS COMPARISON TO QUANTITATIVE SUSCEPTIBILITY MAPPING

PROJECT MANAGEMENT: Günther Grabner

DURATION: 01.06.2015–31.12.2018

FUNDING PROGRAMME: Research cooperation

PROJECT VOLUME COVERED BY CUAS: < €50,000



The aim of this project was to create a 3D iron atlas and a myelin atlas of the entire human brain in order to evaluate QSM and R2* mapping. The iron atlas and the myelin map will be based on 2D histological analysis and the ferrozine assay will be used to calculate a quantitative iron map. In order to create a 3D map of the iron and myelin concentrations, the 2D iron and myelin stains will be reconstructed to a 3D volume referred to as atlas.



ICMALGERIA

INTERNATIONAL CREDIT MOBILITY WITH ALGERIA

PROJECT MANAGEMENT: Hubert Höllmüller

DURATION: 10.01.2017–31.07.2018

FUNDING PROGRAMME: EACEA – Erasmus+ Key Action 1: Learning Mobility of Individuals

PROJECT VOLUME COVERED BY CUAS: < €100,000



In this project, mobilities between Algeria and Austria were supported. In summer 2018, the experiences gained from the project were presented at the University of Ljubljana, Faculty of Social Work, during an international conference. A book on this is currently in preparation and will be published by the Drava publishing house (planned publication in January 2019).

ICM18KOSOV

INTERNATIONAL CREDIT MOBILITY WITH KOSOVO 2018

PROJECT MANAGEMENT: Regina Klein

DURATION: 18.09.2018–31.07.2020

FUNDING PROGRAMME: EACEA – Erasmus+ Key Action 1: Mobility of Individuals

PROJECT VOLUME COVERED BY CUAS: < €50,000



The ICM project adds the exchange of teachers and students to the previously more research-based partnership with the Heimerer College in Kosovo. Over the course of four semesters, a total of at least three teachers and two students from the Health Management study programme can go on a study visit in Kosovo. In return, two teachers and four students from the Heimerer College will visit Carinthia University of Applied Sciences.

IRING

THE INFLUENCE OF IRON RINGS AROUND MULTIPLE SCLEROSIS LESIONS ON LESION GROWTH, BRAIN ATROPHY AND DISEASE PROGRESSION IN MULTIPLE SCLEROSIS PATIENTS

PROJECT MANAGEMENT: Günther Grabner

DURATION: 01.03.2018–31.12.2019

FUNDING PROGRAMME: Research cooperation

PROJECT VOLUME COVERED BY CUAS: < €50,000



Multiple sclerosis is a chronic disease of the central nervous system. Some magnetic resonance imaging (MRI) markers for disease activity such as the number of Gadolinium-enhancing lesions work well to predict the conversion from clinically isolated syndrome to MS. MRI and pathological studies report iron accumulation around a subset of chronically demyelinated MS plaques forming characteristic iron ring lesions. In this longitudinal imaging study on MS patients, we will analyze the presence or absence of hypointense rings around lesions in susceptibility-weighted imaging (SWI). If the presence or absence of the respective lesion types is indeed related to faster or slower atrophy development, we will be able to establish a highly practical novel imaging marker for disease progression in multiple sclerosis.



JEKI – Young people researching children's rights

A MULTI-PERSPECTIVE APPROACH ON GENERATIONS, SCHOOLS, VOCATIONAL TRAINING AND ACADEMIC TEACHING

PROJECT MANAGEMENT: Waltraud Grillitsch / Christian Werner Oswald

DURATION: 18.11.2014–01.02.2017

FUNDING PROGRAMME: BMBWF – Sparkling Science

PROJECT VOLUME COVERED BY CUAS AS LEAD PARTNER: €100,000–€500,000



The Sparkling Science project aimed at developing scientific approaches to children's rights, based on cultural and political participation by using specific examples. Children and teens were inspired and supported to become researchers themselves. "JeKi" considered itself to be an empowerment strategy to encourage children and teens to see children's rights as a valuable commodity, but also to stand up for themselves and to develop the necessary skills for action.

KABEG

ANALYSIS OF INNOVATION SUCCESS FACTORS AT KABEG HOSPITALS

PROJECT MANAGEMENT: Peter Granig

DURATION: 20.02.2013–31.12.2017

FUNDING PROGRAMME: Research cooperation

PROJECT VOLUME COVERED BY CUAS: < €10,000



The goal of this research cooperation between KABEG and Carinthia University of Applied Sciences was to implement an innovation management programme at KABEG hospitals in the medium term.

KGKK-EVA

EVALUATION OF THE DEVELOPMENT OF CORPORATE HEALTH PROMOTION OF THE CARINTHIAN REGIONAL HEALTH INSURANCE FUND

PROJECT MANAGEMENT: Sibylle Barbara Kohlmayr

DURATION: 26.09.2016–30.11.2017

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



The Health Department of the Carinthian Regional Health Insurance Fund (KGKK) has initiated a pilot project on the development of services in connection with corporate health promotion. This development includes the creation of an "external pool of advisors" which is designed to provide consulting services for businesses on behalf of the KGKK with respect to corporate health promotion. In the course of this project, which is also funded by the Carinthian Health Promotion Fund, an internal evaluation should be made of the external advisors and of the sustainability training offered. In addition, a result evaluation of the degree of target attainment of specific issues should be performed.



KOHAK

KOLPINGHAUS KLAGENFURT HOME FOR THE ELDERLY – INITIATIVE

PROJECT MANAGEMENT: Kai Brauer

DURATION: 01.05.2017–2.05.2018

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €10,000



By means of an “action-based, integrated accompanying research” approach, the creation of the “Kolpinghaus – home for the elderly” living concept was scientifically accompanied in the form of participatory processes. Research was used to observe the start of a new residential project right from the beginning. The input was useful for planning tasks to be carried out by the funding bodies (Medical Chamber), and the idea is that it will lead to more comprehensive academic research and potentially also third-party funded projects.

MT-Band

PRODUCT STUDY FOR IMPROVING POSTURE AND ALLEVIATING NECK PAIN

PROJECT MANAGEMENT: Martin Schusser

DURATION: 01.02.2017–31.12.2017

FUNDING PROGRAMME: Internal project

PROJECT VOLUME COVERED BY CUAS: < €50,000



Based on this investigation, it was found that wearing an MT band in an office workplace improves people’s posture and alleviates existing back and neck pain.

NWH2020

SCIENTIFIC SUPPORT FOR “NEW HOUSING HARBACH 2020 – QUALITY ASSISTED LIVING FOR ALL”

PROJECT MANAGEMENT: Kai Brauer

DURATION: 11.10.2016–31.12.2017

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



At the Department for Intergenerational Solidarity, Activity and Civil Society of the IARA of Carinthia University of Applied Sciences, a pilot study was carried out on socio-scientific support for the Harbach 2020 construction project in Klagenfurt. Starting with the assumption that the socially sustainable, positive development of urban construction projects requires the early involvement of future tenants, ideas and concerns from potential future residents were integrated in the planning process by using activating, participative social research methods.



PATHWAYS

PARTICIPATION TO HEALTHY WORKPLACES AND INCLUSIVE STRATEGIES IN THE WORK SECTOR

PROJECT MANAGEMENT: Susanne Dungs

DURATION: 01.05.2015–30.04.2018

FUNDING PROGRAMME: CHAFEA – 3rd Health Programme

PROJECT VOLUME COVERED BY CUAS: < €100,000



The aim of the project was to develop recommendations for innovative approaches for the professional (re-)integration of people with chronic diseases. The focuses of research were the depiction of existing strategies for (re-)integration, the evaluation of their effectiveness and inquiries on work-related requirements of people with chronic diseases, as well as the perspectives of national and European stakeholders.

POSADEM

JOINT MASTERS POSITIVE ABOUT DEMENTIA

PROJECT MANAGEMENT: Eva Mir / Doris Anna Gebhard

DURATION: 01.10.2013–30.09.2016

FUNDING PROGRAMME: EACEA – Lifelong Learning Programme: Erasmus Multilateral Projects

PROJECT VOLUME COVERED BY CUAS: < €100,000



The development of an international study programme focusing on dementia care was at the centre of the POSADEM – Joint Masters POSitive About DEMentia – project. The EU project created the prerequisites for a cross-border, demand-based programme for the education of professionals. A positive, resource-oriented view and treating people who suffer from dementia with respect were of key importance for the study programme.

PRECONET

PRECONCEPTION HEALTH OF YOUTH, BRIDGING THE GAP IN AND THROUGH EDUCATION

PROJECT MANAGEMENT: Birgit Münzer

DURATION: 24.10.2018–30.09.2021

FUNDING PROGRAMME: EACEA – Erasmus+ Key Action 2: Capacity building in the field of higher education

PROJECT VOLUME COVERED BY CUAS: < €100,000



This “Erasmus+” project is scheduled to last three years and is based on the fact that having children is occurring later and later in life in Europe due to lifestyle factors, among other things. The project focuses on the health of women and men before pregnancy. On this subject, efficient education concepts will be defined in this project, and innovative, digital teaching packages will be devised. The Tampere University of Applied Sciences in Finland has created this Education, Audiovisual and Culture Executive Agency (EACEA) project together with the Midwifery degree programme and the Nursing degree programme at Carinthia University of Applied Sciences, as well as the Midwifery degree programme at the University of Ljubljana (Slovenia), the Nursing and Midwifery degree programmes at the VIVES University College (Belgium) and the Faculty of Health Sciences at the University of Primorska (Slovenia).



PROSOWO II

PROFESSIONAL SOCIAL WORK IN EAST AFRICA –TOWARDS SUSTAINABLE IMPACT

PROJECT MANAGEMENT: Helmut Spitzer

DURATION: 28.01.2016–31.03.2019

FUNDING PROGRAMME: OEAD –Appear 2014–2020

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



PROSOWO II is an extension of activities that were successfully implemented under the PROSOWO project (2011–2014) in order to promote professional social work in East Africa. The overall objective of the international cooperation between partner institutions from Austria, Burundi, Kenya, Rwanda, Tanzania and Uganda is directed towards the formation and strengthening of mechanisms for social work education and practice to more effectively contribute to poverty reduction and social development in countries of the East African Community. Key components of the project are practice research, curriculum review, policy advocacy, joint publications and conferences, as well as the establishment of a regional centre for research and innovation in social work.

SLIKH

SMART LIVING IN KLAGENFURT HARBACH

PROJECT MANAGEMENT: Kai Brauer

DURATION: 01.02.2017–31.01.2018

FUNDING PROGRAMME: BMVIT – Climate and Energy Fund, Smart Cities Demo

PROJECT VOLUME COVERED BY CUAS: < €100,000



The result of this project is a comprehensive guide and list of action for smart residential areas that is used as the basis for the detailed planning of “hi Harbach”. Next to mobility, the design of green areas and open spaces, building technology, new information technologies and smart home applications, the social innovation and the development of an innovative social space concept were the focus of this project.

SOZ_KONGO

STRUCTURAL IMPROVEMENT OF SOCIAL WORK FOR A SUSTAINABLE FIGHT AGAINST POVERTY IN EASTERN CONGO

PROJECT MANAGEMENT: Helmut Spitzer

DURATION: 01.01.2018–30.06.2019

FUNDING PROGRAMME: Office of the Provincial Government of Carinthia –
Developmental projects

PROJECT VOLUME COVERED BY CUAS: < €50,000



This project aims at improving social work in the crisis-torn region in the east of the Democratic Republic of Congo. The primary objectives are: 1. Short-term: foundation and institutional anchoring of a professional association for social work for structural influence on social politics and the fight against poverty in Eastern Congo; 2. Medium-term: foundation of an educational institution for social work in cooperation with the University of Bukavu; 3. Long-term: provision of qualified social workers to support poor and vulnerable population groups.



Health Sciences & Social Work – projects

SURAAA

AUTONOMOUS DRIVING IN PÖRTSCHACH

PROJECT MANAGEMENT: Peter Granig

DURATION: 06.09.2017–31.03.2020

FUNDING PROGRAMME: Research cooperation

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



The goal of the SURAA project is to provide an efficient, environmentally sound and affordable mobility system for the future, which supports a specific development in the field of autonomous driving, and, at the same time, to develop the relevant business models and foundations for decision-making. It is the task of Carinthia University of Applied Sciences to provide scientific assistance during the organisation and implementation of autonomous driving and the test environment for autonomous driving in Pörschach.

Synaptos

PHYSIOTHERAPY PLATFORM

PROJECT MANAGEMENT: Miriam Friede

DURATION: 01.01.2016–28.02.2017

FUNDING PROGRAMME: KWF – UIG: Implementation of innovative startup projects

PROJECT VOLUME COVERED BY CUAS: < €100,000



In order to simplify the paperwork for self-employed physiotherapists, a novel concept has been developed: a stand-alone software solution that saves freelance therapists valuable time while improving the quality of their record keeping. Smart Therapy handles digital medical statements with an interactive body map and allows therapists to quickly process all documentation and administrative tasks.

TOBP

TRANSCULTURAL OPEN BADGES PLATFORM FOR MIGRANT'S TRANSITION MENTORING IN EARLY LIFE FAMILY CARE

PROJECT MANAGEMENT: Regina Klein

DURATION: 03.10.2018–31.08.2021

FUNDING PROGRAMME: EACEA – Erasmus+ Key Action 2: Capacity building in the field of higher education

PROJECT VOLUME COVERED BY CUAS AS LEAD PARTNER: < €100,000

TOTAL PROJECT VOLUME: €200,000



With the “Erasmus+” project ToBP (Transcultural Open Badge Platform for Migrant's Transition Mentoring in EARLY LIFE FAMILY CARE), Carinthia University of Applied Sciences has been approved as coordinator for a project for the first time in this EU call for proposals. The project deals with the lack of recognition of foreign formal and informal qualifications as a central migration topic in post-industrial societies of the 21st century (UN 2016). For the first time, new standards for the recognition of skills of migrants in the field of Early Life Family Care (ELFC) have been developed. “Open Badges” is used as a flexible yet visible recognition system. The aim is to establish a new job profile called Transition Mentor.

This project is implemented in five countries, i.e. Austria, Finland, Germany, Kosovo and Switzerland. In each country, universities and research institutes cooperate closely with professional partners from the areas of early assistance, health and social care, IT and networks. Carinthia University of Applied Sciences acts as a lead partner.



Transpro3

SUPPLY OPTIMISATION IN CARINTHIAN NURSING HOMES –
SIMULATION OF REGULAR OPERATION

PROJECT MANAGEMENT: Olivia Kada

DURATION: 01.04.2015–24.05.2017

FUNDING PROGRAMME: Research cooperation

PROJECT VOLUME COVERED BY CUAS: < €50,000



Within the two-year project duration of this cross-institutional cooperation project, measures consisting of geriatric consulting (GEKO), further education, and case report conferences for nursing staff and general practitioners were implemented in 17 nursing homes in Carinthia, with the aim of optimising on-site care and reducing avoidable hospital transfers that are stressful for residents. The main target criterion of the evaluation was the hospital transport rate (interrupted time series analysis), ancillary target criteria were, primarily, the polymedication rate, places of death, as well as knowledge and self-efficacy expectation of nursing staff (pre- and post-test). In addition, all case report conferences were evaluated by the participants. The implementation of the content was analysed in terms of quality, and all GEKO consultations were documented by the responsible physicians and appraised with regard to success and the avoidance of hospital transfers. Overall, the findings give a positive picture of the effectiveness of the set of measures.

*... treat effectively, optimise economically, and review
new developments: this is how research can modernise
the health sector ...*



WAik

GROWING OLD WITH DIGNITY IN CARINTHIA

PROJECT MANAGEMENT: Kai Brauer

DURATION: 23.07.2014–31.03.2016

FUNDING PROGRAMME: Internal project

PROJECT VOLUME COVERED BY CUAS: < €50,000



The purpose of this project was to find and evaluate funding sources and European networks that can support the age-adapted development of social spaces in Carinthia. It focussed on developing a holistic view of ageing that understands the potentials of older age and specifically addresses younger people as tomorrow's older generation, employing the potential of Carinthia University of Applied Sciences to stimulate long-term collaborations between scientific promotion and regional, rural development.



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ARCHIVER

ARCHITECTURAL INTERVENTION

PROJECT MANAGEMENT: Jasmin Kindler
DURATION: 09.02.2017–18.12.2017
FUNDING PROGRAMME: Internal project
PROJECT VOLUME COVERED BY CUAS: < €50,000



Architectural intervention builds a bridge between architecture and the public. It is less of a one-off activity with pre-defined results and more of a process of intensive discussion, perception, assessment and participation. As part of the ARCHIVER research project, Carinthia University of Applied Sciences has established its position as a reliable place of architectural intervention for different age groups in Upper Carinthia and a central point of the Carinthia-wide, national and international intervention network.

AUFBET_HS2

HIGH STRENGTH CONCRETE AS A TOP CONCRETE LAYER IN EXISTING BUILDINGS AND AS A MONOLITHIC TOP LAYER IN NEW BUILDINGS – 2ND PROJECT YEAR

PROJECT MANAGER FROM CUAS: Norbert Randl
DURATION: 17.09.2015–31.12.2016
PRINCIPAL: öbv (Austrian Society for Construction Technology)
RESEARCH PARTNER: Smart Minerals GmbH
FUNDING PARTNERS: ASFINAG, ÖBB-Infrastruktur, PORR, STRABAG, RTB Rohrdorfer Transportbeton
FUNDING PROGRAMME: FFG – Basic programme
PROJECT VOLUME COVERED BY CUAS: < €100,000



In this research project, the composite load-bearing behaviour in longitudinal shear stressed joints between high strength concrete as a top layer and normal strength cured concrete was tested and experimentally verified in small body and component experiments.



BAUMIT

REALISATION OF IN-SITU ANALYSES ON A MULTI-FUNCTIONAL FAÇADE IN OUTDOOR TESTS

PROJECT MANAGEMENT: Christoph Buxbaum
DURATION: 26.06.2015–10.05.2017
FUNDING PROGRAMME: Contract research
PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



In the context of this project, the in-situ analyses were performed on novel multi-functional façades and energy-saving façades in outdoor tests, accompanied by scientific consultation for the business partner. The primary goal of this project was to analyse the hygrothermal behaviour of novel multi-functional façades and energy-saving façades under natural weathering in long-term tests.

ENERGEN

ENERGY-EFFICIENT BUILDING IN NAMIBIA – REMEDY OF DEFECTS OF THE EEBN HOUSE – DATA PROCESSING – PRACTICAL IMPLEMENTATION

PROJECT MANAGEMENT: Martin Schneider
DURATION: 01.05.2018–31.12.2019
FUNDING PROGRAMME: Internal project
PROJECT VOLUME COVERED BY CUAS: < €10,000



In this project, a sustainable building concept for cost-efficient and energy-efficient small houses for the south of Africa was developed. A prototype was set up at Namibia University of Science and Technology in Windhoek. It was evaluated for two years with measurements and observations while being used for regular housing. The final goal is to develop a building concept for the urgent housing demand of the population, which is adjusted to the local climate and situation and can be duplicated.

FIREEXPERT

CONSTRUCTION OF A NEW, CROSS-BORDER LIVING LAB FOR THE EXAMINATION AND SIMULATION OF THE FIRE BEHAVIOUR OF COMPOSITE MATERIALS DURING AND AFTER A FIRE

PROJECT MANAGEMENT: Martin Schneider
DURATION: 01.05.2018–31.10.2020
FUNDING PROGRAMME: Interreg SI-AT 2014–2020
PROJECT VOLUME COVERED BY CUAS AS LEAD PARTNER: €100,000–€500,000



The aim is to create an expert and innovation centre for building materials and the building industry that will work in the form of a "Living Laboratory" (Living Lab, LL) in the field of fire protection.



GRAD

DEVELOPMENT OF A COMPUTER-AIDED MATERIAL MODEL ON THE POROSITY DISTRIBUTION IN CONCRETE COMPONENTS – “GRADIENT CONCRETE”

PROJECT MANAGEMENT: Christoph Huber
DURATION: 17.02.2016–31.12.2016
FUNDING PROGRAMME: Central Research Funding
PROJECT VOLUME COVERED BY CUAS: < €50,000



The field of research of gradient concrete deals, amongst other things, with the production and gradation, material law and the dimensioning of building components. As a first step, experimental investigations were performed on punched plastic discs (perforated fields). The results were verified with linear, analytic models using FEM software. The findings were used to perform further analytic tests on perforated concrete fields (according to the non-linear material law). These findings will be used for the upcoming tests on perforated concrete discs.

Green-LOGIX

VEGETATION CONTROL ON ROADS AND RAILWAYS

PROJECT MANAGEMENT: Martin Schneider
DURATION: 01.07.2017–30.09.2020
FUNDING PROGRAMME: BMVIT – Future Mobility: Transport Infrastructure Research, Contract research
PROJECT VOLUME COVERED BY CUAS: < €100,000



The aim of the project is to control vegetation on transport infrastructure surfaces, with a balanced consideration of traditional and effective, alternative ecological methods. Ecological, chemical, mechanical and thermal alternatives to existing systems of vegetation control are developed, and the existing systems are analysed and evaluated.

HOBK

TIMBER CONSTRUCTION IN CARINTHIA

PROJECT MANAGEMENT: Andrea Lambea
DURATION: 01.03.2017–31.12.2017
FUNDING PROGRAMME: Internal project
PROJECT VOLUME COVERED BY CUAS: < €10,000



The structural and design principles of timber construction architecture in Carinthia is documented in a catalogue of timber constructions in Carinthia.



OMN_ZIN

OPTIMISED MONITORING SYSTEMS FOR STANDARD-BASED RELIABILITY ASSESSMENT OF ENGINEERING STRUCTURES



PROJECT MANAGEMENT: Jörg Störzel

DURATION: 10.07.2013–17.06.2016

FUNDING PROGRAMME: FFG – BRIDGE

LEADPARTNER: University of Natural Resources and Life Sciences – Institute of Structural Engineering

PROJEKTPARTNER: iC consulenten Ziviltechniker GesmbH, Schimetta Consult

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000

Recording the current state of a building by way of specific monitoring measures, assuming the future loads and taking into consideration experiences with the life-cycle behaviour of other buildings facilitates the simulation of the future status development of a building and the prediction of its residual useful life. In the course of the project, the monitoring tasks were analysed with regard to standard-specific limit states, and the selected monitoring systems were optimised. Due to the further development of monitoring systems, their future potential for prognosis models can be used more efficiently.

RESBYDE

RESEARCH BY DESIGN



PROJECT MANAGEMENT: Alexander Hagner

DURATION: 01.04.2017–21.12.2018

FUNDING PROGRAMME: Municipal authorities of Klagenfurt

PROJECT VOLUME COVERED BY CUAS: < €50,000

Research by Design dealt with the editing and presentation of the project by master's students on the topic of social housing construction on the Siebenhügelstrasse in Klagenfurt.

SSUHPC

SUBSTITUTION OF STEEL BY UHPC



PROJECT MANAGER FROM CUAS: Norbert Randl

DURATION: 15.10.2014–31.03.2018

OVERALL PROJECT MANAGEMENT: Viet Tue Nguyen, TU Graz

CONSORTIUM: TU Graz – Institute of Structural Concrete (leader of the consortium); Carinthia

University of Applied Sciences; TU Graz – Institute of Technology and Testing of Construction

Materials; voestalpine Special Wire GmbH; Kirchdorfer Fertigteilholding GmbH

FUNDING PROGRAMME: FFG – BRIDGE

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000

The goal was to provide the essential foundations for a product-related substitution of steel by ultra-high performance concrete (UHPC). This was to make an essential contribution to sustainable building, because UHPC has advantages over steel with regard to costs and CO₂ emissions.



THERMOSYS

ANALYSIS OF THE REAL HYGROTHERMAL MATERIAL BEHAVIOUR OF CONSTRUCTION INSULATION MATERIALS IN CHANGING CLIMATIC EXPOSURES

PROJECT MANAGEMENT: Christoph Buxbaum
DURATION: 01.11.2017–30.04.2018
FUNDING PROGRAMME: Internal project
PROJECT VOLUME COVERED BY CUAS: < €50,000



The content and goal were to carry out laboratory analyses in the double climate chamber of the construction laboratory at Carinthia University of Applied Sciences, to study the authentic hygrothermal behaviour of different construction insulation materials in dynamic marginal climatic conditions.

ZFF_FI_TUC

FILIGREE BUILDING WITH TEXTILE-REINFORCED UHPC

PROJECT MANAGEMENT: Sandra Ofner
DURATION: 01.03.2017–30.06.2018
FUNDING PROGRAMME: Central Research Funding
PROJECT VOLUME COVERED BY CUAS: < €50,000



This follow-up project focused on the further development of the available ultra-high performance concrete (UHPC) recipe at Carinthia University of Applied Sciences construction laboratory with regard to its workability in combination with textile fabrics used for reinforcement. Numerous tests have confirmed the suitability of UHPC for combinations with textile reinforcement. In addition, tests were performed with regard to the usability of the new composite material as a reinforcement measure in the form of a top concrete layer with a very high bonding strength between cured concrete and later applied UHPC. The conditions observed in the project will be examined in greater detail in subsequent research applications, e.g. in a project funded by the FFG (CON_FIT) for a holistic discussion on the topic.

ZFF_WOOD WoodWatch

ANALYSIS OF THE PRACTICAL USABILITY OF SELECTED MEASURING SENSORS TO BE APPLIED WITH WOOD IN AGGRESSIVE ENVIRONMENTS

PROJECT MANAGEMENT: Martin Schneider
DURATION: 03.02.2017–30.06.2018
FUNDING PROGRAMME: Central Research Funding
PROJECT VOLUME COVERED BY CUAS: < €50,000



As a rule, wood is quite resilient against chemicals. There are, however, some environments that can cause considerable damage. In this project, measuring systems are analysed so that technical measuring fundamentals can be determined for timber constructions in special climatic conditions.



ZUWO

LIVING TOGETHER

PROJECT MANAGEMENT: Andrea Lambea

DURATION: 13.04.2017–31.12.2018

FUNDING PROGRAMME: Internal project

PROJECT VOLUME COVERED BY CUAS: < €50,000



“LIVING TOGETHER” deals with analyses and drafts for the future of residential buildings, taking matters of design, urban development and social considerations into account.

*... today's research for
tomorrow's challenges ...*





Management – projects



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The future working world

PROJECT MANAGEMENT: Ursula Liebhart

DURATION: 01.04.2016–31.12.2017

FUNDING PROGRAMME: Internal project



Digitalisation, dynamic development, diversity and democratisation are significant trends and developments for the working world in Central Europe. They are highly relevant for companies, to prepare them for future working and learning conditions and challenges. Based on a meta-analysis of over 150 future-oriented studies and forecasts, the four trend dimensions with a number of sub-dimensions were devised. The results of the study show how trends are perceived by 206 Carinthian decision-makers.

ASIS

ALPINE SOCIAL INNOVATION STRATEGY

PROJECT MANAGEMENT: Rahel Schomaker

DURATION: 17.04.2018–16.04.2021

FUNDING PROGRAMME: Interreg Alpine Space 2014–2020

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



The ASIS project objective is to initiate, develop and promote a new vision of innovation in the Alpine area, i.e. social innovation, in order to increase the innovation capacity of Alpine regions by answering new challenges as they arise. ASIS stands for "Alpine Social Innovation Strategy". The ASIS consortium goal is to develop a new, innovative approach that meets the economic and societal challenges faced by each Alpine region.



BH KL CAF

2nd IMPLEMENTATION

PROJECT MANAGEMENT: Benedikt Speer

DURATION: 21.01.2016–31.01.2017

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



The Common Assessment Framework (CAF) is a quality management tool designed specifically for public administration bodies. The number of CAF users is constantly growing in Europe. The District Commission of Klagenfurt-Land has been chosen by the Office of the Provincial Government of Carinthia as the pilot authority. The processes were specifically adjusted to the requirements/wishes of the organisation by the project team at Carinthia University of Applied Sciences, and have led to specific improvement measures.

BMFWF-STAT

SYSTEM EVALUATION AND PROCESS MODELLING OF THE EXISTING SYSTEM OF TOURISM STATISTICS

PROJECT MANAGEMENT: Benedikt Speer

DURATION: 28.11.2014–25.01.2016

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



During this project, the existing system of tourism statistics (accommodation/overnight stay statistics including the electronic guest reporting system/e-guest sheet) was evaluated and its processes were modelled, including the legal, organisational, procedural and financial aspects.

3rd CAF KL

3rd IMPLEMENTATION OF THE CAF (COMMON ASSESSMENT FRAMEWORK) DISTRICT COMMISSION OF KLAGENFURT-LAND

PROJECT MANAGEMENT: Benedikt Speer

DURATION: 01.10.2018–28.02.2019

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



The focus of the repeated CAF project is on a mixture of employees and executives. The organisation will be repeatedly evaluated with regard to its strengths/weaknesses, and the results can be compared with the first two CAF evaluations. In a final workshop, a comprehensive action plan will be laid out for the optimisation of the entire organisation on the basis of the devised improvement measures.



Management – projects

COST

LOCAL PUBLIC SECTOR REFORMS: AN INTERNATIONAL COMPARISON

PROJECT MANAGEMENT: Benedikt Speer

DURATION: 22.03.2013–06.06.2017

FUNDING PROGRAMME: COST– European Cooperation in Science and Technology

PROJECT VOLUME COVERED BY CUAS: < €50,000



In recent comparative research concerning public sector modernization, the local level of government was blatantly absent. Databases regarding local public sector reforms were found to be fragmented, incomparable, incoherent, nationally scattered and confined in their methodological approach. This action was intended to remedy those deficits. It generated coherent databases for a systematic comparison with the goal to streamline analytical approaches and to synthesize research outcomes using methodological triangulation (qualitative/quantitative techniques). The action provided a platform for establishing a new set of comparative parameters (descriptive, explanatory and evaluative) on local public sector reforms and for integrating the fragmented research activities in this neglected area of investigation. It aims to enhance the scope of the conceptual foundations as well as the methodological rigor of comparative public administration.



... our profile is characterised by practice-oriented study structures and applied research ...

DEMOKRAT 1 + 2

CONCEPTION, IMPLEMENTATION AND FURTHER DEVELOPMENT OF A DEMOCRACY WORKSHOP IN THE CARINTHIAN PROVINCIAL PARLIAMENT

PROJECT MANAGEMENT: Kathrin Stainer-Hämmerle

DURATION: 26.08.2015–01.04.2018

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



In the course of the project, a platform was created for the professionalisation of political education at all levels of Carinthian schools, to find materials for lessons and to network different projects. The content was a draft of preparatory materials for teachers and exercise sheets for lessons on the topics of: basic concepts of political education; the Carinthian Provincial Parliament; old and new minorities; and local communities.



DEVCORE

DEVELOPMENT OF LEARNING OUTCOMES APPROACH – A WAY TO A BETTER COMPARABILITY, RECOGNITION AND EMPLOYABILITY AT THE LABOUR MARKET

PROJECT MANAGEMENT: Dietmar Brodel

DURATION: 01.02.2014–05.12.2016

FUNDING PROGRAMME: EACEA – TEMPUS IV / 6th Call for Proposals – Joint Projects

PROJECT VOLUME COVERED BY CUAS: < €100,000



The DEVCORE TEMPUS project was a national structural project aimed at providing support to universities in Montenegro to develop an action plan and methodology for defining the learning outcomes of study programmes. Moreover, students and teachers were trained how to define learning outcomes. The cooperation between universities and the world of labour was further developed, and the number of ECTS credits for different universities was revised. This contributed to the further alignment of the study programmes to meet labour market needs and enabled their continuous and transparent assessment by employers, students and the respective governmental authorities.

EVAAL

DEVELOPMENT OF A SET OF INDICATORS FOR MEASURING THE EFFECTS AND INCREASES IN EFFICIENCY OF AAL SOLUTIONS

PROJECT MANAGEMENT: Birgit Aigner-Walder

DURATION: 01.10.2016–01.06.2017

FUNDING PROGRAMME: BMVIT – benefit: ICT of the Future – Demographic Change as an Opportunity

PROJECT PARTNERS: AIT Austrian Institute of Technology GmbH, SOLGENIUM OG

PROJECT VOLUME COVERED BY CUAS: < €50,000



The aim of the study was to develop a set of indicators for measuring the effects and increases in efficiency by using Active & Assisted Living solutions. The set of indicators that was to be developed was designed to address efficiency and impact verifications in various dimensions (subjective, institutional, societal). The close involvement of and interaction with relevant stakeholders also created the basis for the best possible operational applicability in the framework of an iterative process.

Export Initiative 2016

PROJECT MANAGEMENT: Melanie Krenn

DURATION: 01.01.2016–31.12.2016

FUNDING PROGRAMME: WKK – Carinthian Export Initiative 2016

PROJECT VOLUME COVERED BY CUAS: < €100,000



The goal of this project was to support SMEs in marketing their products and services abroad via the Internet. The focus was on the conception of international internet marketing cooperation. Companies within an industry cooperate to offer their products online.



Management – projects

Export Initiative 2017

EXPORT STRATEGIES FOR STARTUPS

PROJECT MANAGEMENT: Melanie Krenn

DURATION: 01.01.2017–31.03.2018

FUNDING PROGRAMME: WKK – Carinthian Export Initiative 2017

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



This project devised the scientific foundations for the best possible support for startups with their marketing and distribution activities abroad. In addition, the project contributed towards sending a positive signal in Carinthia, and it helped to shift the focus within the startup province of Carinthia onto export markets.

Export Initiative 2018

EXPORT OF SERVICES

PROJECT MANAGEMENT: Petra Gollner

DURATION: 01.04.2018–31.03.2019

FUNDING PROGRAMME: WKK – Carinthian Export Initiative 2018

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



In the context of the “Export of Services” project, as a subproject of the Carinthian Export Initiative 2018–2023, scientific foundations were to be devised for the best possible support for service companies in their internationalisation projects and activities.

Trend Analysis of the Hotel Business in Carinthia

PROJECT MANAGEMENT: Stefan Nungesser

DURATION: 01.11.2017–28.02.2018

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €10,000



The hotel branch of the Carinthian Economic Chamber commissioned the “Hotel Management” branch of study with the implementation of the annual economic situation and trend survey, “Trend Analysis of the Hotel Business in Carinthia”. The online survey deals with the economic results of the previous season and expectations for the upcoming season, the current challenges, as well as investment behaviour. This allows a long-term comparison if the project is implemented over several years. A second set of questions varies from one year to the next and deals with current topics and trends.



ICM18RUSS

INTERNATIONAL CREDIT MOBILITY WITH RUSSIAN FEDERATION

PROJECT MANAGEMENT: Eithne Knappitsch

DURATION: 01.07.2018–31.07.2020

FUNDING PROGRAMME: EACEA – Erasmus+ Key Action 1: Learning Mobility of Individuals

PROJECT VOLUME COVERED BY CUAS: < €50,000



The ICM project between the School of Management, CUAS and St. Petersburg State University of Economics (UN-ECON) aims to develop cooperation ties between the two institutions. The project focuses on staff and student exchange in the fields of international and intercultural management and languages, with a view to developing further projects in these areas.

IIHE

IMMIGRATION AS AN OPPORTUNITY FOR RURAL AREAS – INTEGRATION BY MEANS OF QUALIFICATION

PROJECT MANAGEMENT: Marika Gruber

DURATION: 01.06.2013–21.11.2016

FUNDING PROGRAMME: BMEIA – National Integration Fund

PROJECT VOLUME COVERED BY CUAS: < €50,000



The aim of the project was the integration of non-German-speaking immigrants in the District of Hermagor by means of specifically giving them access to the German language and the regional culture. The primary intention was to tap into the potential of immigrants and to permanently retain these individuals, most of whom are in demand and are largely already employed in the region, and their families, in the region. The project consisted of two core areas: 1. Conduct a German integration course, 2. Accompanying study to research and evaluate the motives of immigrants to settle down in rural areas in the long term.

IMPULS-Q

IMPULSES FOR SUSTAINABLE, QUALITATIVE CORPORATE GROWTH IN CARINTHIA

PROJECT MANAGEMENT: Benedikt Speer

DURATION: 01.01.2017–31.12.2018

FUNDING PROGRAMME: KWF – Regionale Impulsförderung/Regional Impulse Promotion

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



In this interdisciplinary R&D project, complementary competences and resources of two Carinthian research and educational institutes (AAU Klagenfurt and Carinthia University of Applied Sciences) were pooled with the aim of researching strategies, development patterns and necessary framework conditions for sustainable, qualitative corporate growth and to make the results accessible for companies, institutes and students. This way, impulses can be provided for sustainable, qualitative corporate growth in Carinthia, leading to increased added value per performance unit in companies to improve their competitiveness.



Management – projects

KILB

**SCIENTIFIC COORDINATION OF THE
INTEGRATION CONCEPT PROCESS OF THE PROVINCE OF CARINTHIA**

PROJECT MANAGEMENT: Kathrin Stainer-Hämmerle

DURATION: 01.12.2014–31.12.2016

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €100,000



The development of the integration concept for Carinthia is designed as a broad, participative and discursive process in which representatives from politics, management, economy, education, research and civil society, as well as social partners, associations and NGOs deal with various topics in integration conferences, work groups and district events to provide important content for the creation of an integration concept. The scientific coordination office at Carinthia University of Applied Sciences scientifically accompanies the integration concept process.

KOWIST

**COMPETENCE DEVELOPMENT FOR RESULTS-ORIENTED
MANAGEMENT IN SMALL AND MEDIUM-SIZED MUNICIPALITIES**

PROJECT MANAGEMENT: Benedikt Speer

DURATION: 01.10.2015–31.08.2018

FUNDING PROGRAMME: EACEA – Erasmus+ Key Action 2:

Capacity building in the field of higher education

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



In many countries, small and medium-sized municipalities do not have the basic prerequisites for comprehensive modernisation processes in their administrative bodies to be able to design efficient and effective mechanisms for services provided for the public. The key aim of the project was the creation of an open learning platform (open educational resources – OER). The purpose of this platform is to provide meaningful impulses for the education of students of Administrative Sciences and the further education of staff members in administrative bodies, and also of local politicians.

MA-SV

STAFF INTERVIEWS IN THE MUNICIPALITY OF ST. VEIT/GLAN

PROJECT MANAGEMENT: Benedikt Speer

DURATION: 30.08.2016–27.04.2018

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €10,000



Based on the results of the CAF process, staff interviews were conducted to identify the needs and expectations of staff members. This resulted in measures to increase the satisfaction of staff members. Carinthia University of Applied Sciences was responsible for the scientific assistance of the process (questionnaire development and analysis of data).



MIGRA_INT

INTEGRATION PROCESS OF THIRD-COUNTRY NATIONALS WITH LONG-TERM RESIDENCE PERMITS FROM SYRIA, AFGHANISTAN AND IRAQ IN AUSTRIA

PROJECT MANAGEMENT: Vera Ratheiser

DURATION: 01.01.2017–31.12.2018

FUNDING PROGRAMME: BMEIA – AMIF

PROJECT VOLUME COVERED BY CUAS: €100,000–€500,000



This project that evaluated Austria's integration policy on the basis of case studies aimed at increasing the state of knowledge on the integration process, at optimising integration strategies and procedures and making them more efficient through improved transparency. The target group consisted of third-country nationals from Afghanistan, Syria and Iraq who are legal residents in Austria and who plan to be long-term residents in future.

MOME

MONITORING OF MENTORING ENERGY & MENTORING ENERGY SCALE DEVELOPMENT

PROJECT MANAGEMENT: Ursula Liebhart

DURATION: 01.08.2014–30.09.2017

FUNDING PROGRAMME: Kärntner Sparkassenstiftung/Carinthian Savings Bank Foundation

PROJECT VOLUME COVERED BY CUAS: < €10,000



The aim of this project was to develop a Mentoring Energy Scale (MES) for the accompanying "Monitoring of Mentoring Energy" (MOME), along the lines of a formal mentoring relationship. Scales were developed in a two-stage qualitative and quantitative research process. These scales were tested and validated in several mentoring programmes. The result is an item-reduced scale.

NET-VI

IDENTIFICATION OF THE LEVEL OF NETWORKING BETWEEN THE MUNICIPAL AUTHORITIES OF THE TOWN OF VILLACH AND LARGE-SCALE BUSINESSES IN VILLACH

PROJECT MANAGEMENT: Benedikt Speer

DURATION: 01.05.2018–31.12.2018

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



Based on an empirical study, a survey of processes and interfaces between the municipal authorities of Villach and large-scale businesses in Villach was performed within the framework of this networking project. It highlighted potential improvements on both sides.



Management – projects

neWORK FUTURE WORK

PROJECT MANAGEMENT: Ursula Liebhart
DURATION: 01.02.2018–31.12.2018
FUNDING PROGRAMME: Contract research
PROJECT VOLUME COVERED BY CUAS: < €50,000



As regards technological and demographic developments, companies must be aware that the design of an attractive working environment for employees creates a decisive competitive advantage. During this project, the KWF project “Future Work” received content support through webinars on the topics of digital transformation, digital learning and working environments, as well as digital competences, and was accompanied by process evaluation.

PEOP-BA PROCESS IDENTIFICATION/OPTIMISATION OF THE FACILITY PERMIT PROCEDURE

PROJECT MANAGEMENT: Benedikt Speer
DURATION: 01.03.2017–31.12.2018
FUNDING PROGRAMME: Contract research
PROJECT VOLUME COVERED BY CUAS: < €50,000



This project aimed at depicting the processes of the facility permit procedure in Carinthia’s individual district commissions to derive a standardised suggestion on how to optimise the procedure.

PERIVIER PROCESS ASSISTANCE AND MODERATION FOR THE ITAT 4043 ESAR PROJECT ESTABLISHMENT OF STRATEGIC URBAN NETWORKS IN THE SOUTHERN ALPINE AREA, KP INTERREG ITALY-AUSTRIA 2014–2020

PROJECT MANAGEMENT: Benedikt Speer
DURATION: 01.05.2018–31.07.2019
FUNDING PROGRAMME: Contract research
PROJECT VOLUME COVERED BY CUAS: < €50,000



The “periVIER” project includes the assistance for towns in the southern Alpine area (Lienz, Spittal, Hermagor and Bruneck) in establishing a strategic urban network.



PRO-MIGRA

**PROCESS ASSISTANCE ... THOSE WHO (CAME) COME TO STAY ... –
IMMIGRATION AS A POTENTIAL FOR THE HERMAGOR REGION**

PROJECT MANAGEMENT: Marika Gruber

DURATION: 01.01.2017–31.12.2018

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €10,000



Based on the results of the “Migration as an opportunity for rural areas” project, a service portfolio is to be developed to improve the culture of welcoming immigrants from outside and inside Austria in the District of Hermagor, according to regionally adjusted quality criteria. This process starts with the development and introduction of a regional handbook and contains further measures such as awareness raising workshops for administrative staff, the participatory development of a checklist across different administrative levels for standardised information and consulting services, networking meetings between integration actors and the representatives of immigrants, as well as the development of a coordinated information and consulting/assistance process in the District of Hermagor.

RP ST. VEIT

REFORM PROCESS FOR THE MUNICIPALITY OF ST. VEIT/GLAN

PROJECT MANAGEMENT: Benedikt Speer

DURATION: 15.10.2015–30.06.2016

FUNDING PROGRAMME: Contract research

PROJECT VOLUME COVERED BY CUAS: < €50,000



The municipality of St. Veit an der Glan set itself the goal of initiating a structured reform process within its own administration. Some of the members of staff performed a self-evaluation of the organisation, based on the Common Assessment Framework (CAF) grid. This way, the strengths, weaknesses and improvement measures for their authority were identified, which initiated a participatory reform process. The great advantage is that the members of staff consider themselves to be a part of the project and therefore contribute considerably to the successful implementation of the measures.

SPIMT

**DEVELOPMENT OF INNOVATIVE, TRANSNATIONAL TEACHING CONTENTS AND
DIDACTIC METHODS INTEGRATING BLENDED AND PEER LEARNING**

PROJECT MANAGEMENT: Kathrin Stainer-Hämmerle

DURATION: 26.08.2015–07.09.2017

FUNDING PROGRAMME: EACEA – Erasmus+ Key Action 2:

Capacity building in the field of higher education

PROJECT VOLUME COVERED BY CUAS: < €50,000



This 3-year programme, which deals with innovative concepts for the integration of immigrants and ethnic minorities, comprises three topics: “Country-specific problems and new governmental and civil society approaches for integration in the field of education”, “New approaches for intercultural qualifications and open attitudes in national, regional and municipal authorities” and “Development of approaches for integrating immigrants and ethnic minorities into the labour market and for the promotion of the entrepreneurship of immigrants”.



Management – projects

TOP 3 GUEST SURVEY

PROJECT MANAGEMENT: Stefan Nungesser
DURATION: 27.07.2018–31.08.2018
FUNDING PROGRAMME: Contract research
PROJECT VOLUME COVERED BY CUAS: < €10,000



The tourism businesses, Wörthersee Schifffahrt, Minimundus and Pyramidenkogel, cooperate under the name TOP 3. They want to introduce a new ticketing system and improve the way they present their offers by doing so online. This will be achieved in cooperation with the Digital Lab at Carinthia University of Applied Sciences. In a first step in preparation for this project, visitors to the three sights of Lake Wörthersee, Minimundus and Pyramidenkogel were interviewed personally on their needs and wishes regarding their visit, as well as about other options for buying tickets and getting information.

TOURIK INTEGRATION OF ASYLUM SEEKERS AND PEOPLE ENTITLED TO ASYLUM IN TOURIST RESORTS

PROJECT MANAGEMENT: Marika Gruber
DURATION: 01.10.2017–31.07.2019
FUNDING PROGRAMME: BMWFW – Integration and Preservation of Jobs and Business Locations
PROJECT VOLUME COVERED BY CUAS: < €50,000



The aim of this project is the integration of disadvantaged groups in the labour market and to preserve jobs in the tourism sector and in business locations. To this end, unaccompanied minor refugees (UMR) as well as young asylum seekers and people entitled to asylum will be trained for professions in the tourism sector. Vocational and social integration measures should be equally supported so that careers (goal: start of an apprenticeship) in the tourism sector are available after completion of this education programme. Tourism businesses get the opportunity to recruit well-qualified staff on a long-term basis, which in turn secures their business locations. This vocational and social integration process is scientifically accompanied.



Having a University of Applied Sciences in our province that imparts a solid, technically specific education at the highest level puts Carinthia on the right track towards Europe's helm.

DR. PETER KAISER
Governor of Carinthia

WE WOULD LIKE TO THANK OUR FUNDING BODIES

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