

Smart digital transformation of villages in the Alpine Space: Smart Villages

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FACULTY OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

- **University of Maribor:**
19 members, 14.962 students & 1.722 employees
- **Faculty of Electrical Engineering and Computer Science:**
8 Institutes with 26 Laboratories
- Internationally-recognized university education and research institutions within the fields of
 - electrical engineering,
 - computer science,
 - informatics,
 - communications & media,
 - telecommunications and
 - mechatronics.





Smart cities & Communities



Factories of the Future



Smart Mobility



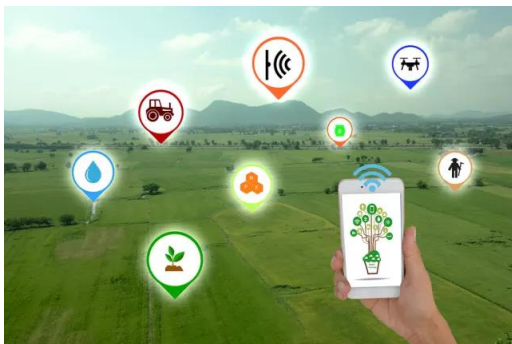
Cyber Security



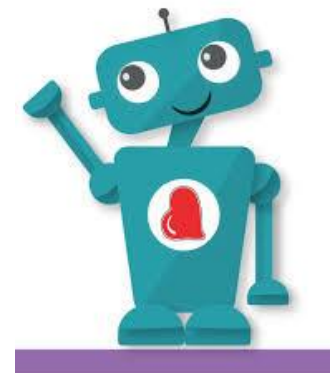
Earth observation



Smart Agriculture



Smart Health



Renewables



Interreg Alpine Space:

Smart digital transformation of villages in the Alpine Space – Smart Villages

The proposed project is a strategic initiative of EUSALP AG5

Priority Area 1 – Innovative Alpine Space

Priority Specific Objective 1.1 – Improve the framework conditions for innovation in the Alpine Space

Duration: April 2018 – May 2021

Budget: 2.689.072,80 EUR (ERDF = 2.065.136,87 EUR)



Faculty of Electrical Engineering
and Computer Science



Consortium

Lead partner:

1. Swiss Centre for mountain regions (Schweizerische Arbeitsgemeinschaft für die Berggebiete – SAB) (CH)

ERDF Lead partner: 2. University of Maribor, Faculty of Electrical Engineering and Computer Science – FERI UM (SLO)

Partners:

3. University of Ljubljana – UL (SLO)
4. SmartiS City, d.o.o. (SLO)
5. Poliedra - Politecnico di Milano (I)
6. Agenzia di Sviluppo Gal Genovese – DAGG (I)
7. Energie und Umweltagentur Betriebs-GmbH Niederösterreich (A)
8. Tiroler Zukunftsstiftung (Standortagentur Tirol) (A)
9. Software Competence Center Hagenberg GmbH (A)
10. Association pour le Développement en REseau des Territoires et des Services – ADRETS (F)
11. Regionalverband Südlicher Oberrhein (D)
12. Bodensee Standort Marketing GmbH (D)
13. Region Luzern West (CH)



Observers

1. Information Society Directorate Ministry of Public Administration (SLO)
2. Ministry of education, science and sport (SLO)
3. Ministry of Agriculture, Forestry and Food (SLO)
4. Development centre Murska Sobota (SLO)
5. Lombardy Region – Directorate General University, Research and Open Innovation, (I)
6. National Union Municipalities, Communities and Mountain Organizations – UNCEM Piedmont (I)
7. Autonomous Province of Trento- Departement of Institutional and legislative Affairs (I)
8. Agency for Energy South Tyrol – CasaClima (I)
9. Tyrolean regional administration (A)
10. Regional Council of Provence-Alpes-Côte d'Azur (F)
11. Auvergne Rhone-Alpes Region (F)
12. Ministry of the Interior, Digitisation and Migration Baden-Wurttemberg, Department for Digitisation (D)
13. German Environment Agency (D)
14. Federal Office for Spatial Development ARE (CH)

Summary

Challenge

Alpine space rural communities are deprived of highly needed jobs, good provision of services as well as a favourable climate for entrepreneurship and social innovation, which result in a brain drain.

Solution

Digitalization is a promising approach to counter the situation. However the digital divide between rural and urban areas has even increased in the last years. A smart village (SV) approach for mountain areas could unlock the potential of local actors to make their region a more attractive place to live and work.

Beneficiaries

Local/regional authorities and administrations, SMEs, public service providers, regional development agencies and NGOs which will receive a concrete guidance to implement the SV approach.

Summary

SV approach

To bring together Regional Stakeholder Groups (RSGs) – policy makers, business, academia and civil society (4H) to improve the framework for innovation through new forms of stakeholder involvement facilitated by Information and Communication Technologies (ICT).

This includes the following elements, involving the RSGs on every step:

- 1) Regional analyses of the SV ecosystem in 9 test areas (TAs)
- 2) Digital exchange platform – DEP for the exchange on the SV approach
- 3) »SV toolbox« to enhance networks and services by means of digital, telecommunication technologies, innovations and the better use of knowledge
- 4) Recommendations to facilitate the transformation of project results into policies

Objective

- opportunities for a smart transition of municipalities and regions in mountainous areas through new forms of stakeholder involvement facilitated by ICT
- two aspects – the organisational/societal part (working with RSGs involving 4H) and the technical part (DEP and SV toolbox)
- transfer of the results to the policy level will contribute to improve the political framework conditions for digital innovation

Project outputs

- **9 Regional Stakeholder Groups** – supported transnational cooperation structures improving the framework conditions for innovation: they will assist the assessment of smartness level of TAs, give input for best practices and test the digital exchange platform (DEP), codesign the toolbox and facilitate the transfer of project results to the policy level
- **Synthesis report:** regional analysis of readiness and needs for a Smart Transition in the Test Areas
- **Digital SV exchange platform:** transnational knowledge sharing of the project findings within the project as well as with the wider public
- **SV toolbox:** access to digital tools, methods and techniques that facilitate user engagement and the development of products with high value for the SV ecosystem in all TAs

Pilot area "Maribor-Pohorje- Pomurje"

- urban area **Maribor** as smart city
- rural areas **Pohorje** and **Pomurje** as hinterlands in terms of food supply chains and shared tourism as new business model

Pohorje is provided to form new tourism packages, engaging new audiences through the joint tourism products

Technology Park of Pomurje is provided to give support in creating catalogue of Short food supply chains in the region (Digital Innovation Hub – AGRIFOOD)

Work plan

- **WP Management** – SAB (CH), FERI UM (SLO)
- **WP1: Regional analysis of readiness and needs for a Smart Transition in the Test Areas** – Poliedra (I)
- **WP2: Open Digital Smart Village Exchange Platform** – ADRETS (F), FERI UM (SLO)
- **WP3: Digital Smart Village Toolbox and pilot activity implementation** – UL (SLO)
- **WP4: Integration of the results on a policy level** – Regionalverband Südlicher Oberrhein (D)
- **WP Communication** – DAGG (I)

Kick off meeting in MARIBOR: 11. & 12. June 2018

Partial potential solutions of the realization of the SV concept

1. **IOT services:** promotion of local products and services that will contribute to the development of short supply chains, thereby making Alpine villages an indispensable hinterland of cities in the wider region
2. **Blockchain:** traceability in the food industry
3. **Automation in agro-food:** sensors and actuators (including sprinkling with drones) to monitor vegetation growth conditions and timely action (weather and microclimate conditions, moisture, pests, etc.) to maximize efficiency
4. **Robotics in the agro-food industry:** the physical relief of farmers = everyone can be a farmer
5. **Smart Health:** remote solutions
6. **Digital 3D terrain & surface model:** analyzes enable identification of energy potentials (biomass, PV potential, wind potential, watercourses, etc.)
7. **E-Tourism:** digitisation of all processes and value chain in the tourism, travel, hospitality and catering industries
8. **Broadband Internet in all villages:** it allows for a better connection of villages with towns, which in addition to good communication enables even work from home, and indirectly also influences the improvement of transport and transport links
9. Etc.

Interreg
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