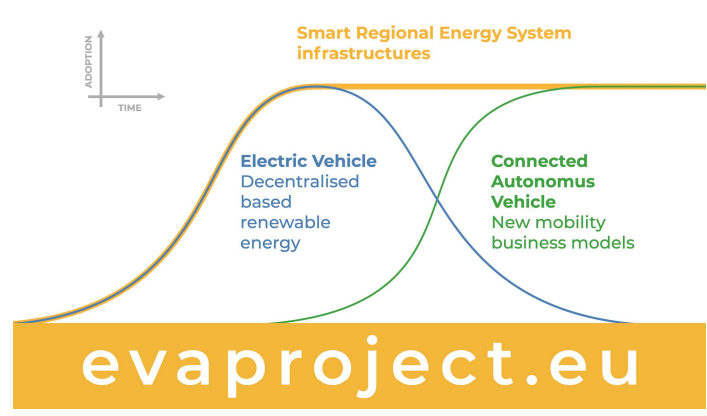


EVA

Optimization of regional infrastructures for the transition to Electric and Connected Autonomous Vehicles (ECAV)

” To support regional institutions to steer the transition towards ECAVs, EVA project aims at exploring innovative technologies and business models capable of effectively coupling transportation and decentralized renewable energy systems.

The emerging technologies of Electric Vehicles (EVs) and Connected and Autonomous Vehicles (CAVs) are both foreseen to undergo a dramatic growth in the near future. Many local administrations are currently fostering innovation by addressing technical challenges towards EVs massive deployment, particularly regarding the charging infrastructure and the grid (communication/management protocols and upgrade of the electrical system, to meet the increased power demand in decentralized renewable energy systems). However, by failing to account for the disruptive impact that the diffusion of CAVs might have in a near future, they risk to invest in fast obsolescing territorial transportation infrastructures and lack the capability to address the radically different needs created by a wide diffusion of ECAVs.



Project Duration

01.09.2019 - 31.08.2022

Project Budget

Total Budget: € 907'498.-
Funding: € 744'258.-

Project Coordinator

- SUPSI (Switzerland)

Project Partners

- EURAC Research (Italy)
- AICO (Austria)
- MINES ParisTech (France)
- Enerti SA (Switzerland)
- AMS Stabio (Switzerland)

Project Website

evaproject.eu

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ERA-Net Smart Energy Systems



This project has received funding in the framework of the joint programming initiative ERA-Net Smart Energy Systems. The initiative has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreements no. 646039 and no. 755970.

ERA-Net Smart Energy Systems Joint Call 2018

This project has been awarded funding within the ERA-Net SES Joint Call 2018 for transnational research, development and demonstration projects.

Pilot Sites

Analyses performed in EVA focus on two regional pilot sites:



The region of Canton Ticino, Southern Switzerland



The province of Bolzano, Northern Italy


Main Objectives

EVA project will explore and assess:

- how future diffusion of ECAVs could affect urban planning and design, particularly under a sharing economy framework;
- how to foresee and manage peaks of power demand due to a wide diffusion of electric mobility in power distribution grids, including vehicle-to-grid (V2G) and vehicle-to-home (V2H) power technologies in decentralized renewable energy systems;
- how to analyze the optimization of EVs charging station infrastructures avoiding investment in fast obsolescing ones;
- how to modify and adapt current business models and regulatory frameworks for energy and mobility providers, in order to better benefit from the new conditions.

Expected Main Results

As a final project outcome in Summer 2022, the project will develop a set of guidelines aimed at supporting regional authorities in the transition towards ECAVs and at optimizing the related infrastructures.



Joint Programming for Flourishing Innovation from Local and Regional Trials towards a Transnational Knowledge

www.eranet-smartenergysystems.eu

Research partners:

University of Applied Sciences and Arts of Southern Switzerland

SUPSI

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