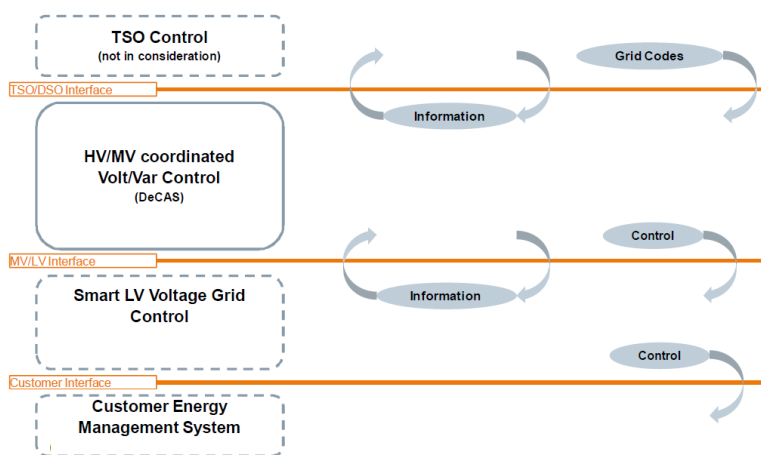


## Project DeCAS

Demonstration of coordinated ancillary services covering different voltage levels and the integration in future markets

” The provision of ancillary services over traditional boundaries and in particular the exchange of related national experiences is essential for the massive integration of renewables in the European power system ”

DeCAS aims to research and analyse system services such as demand response and coordination of individual Volt/Var control concepts crossing traditional boundaries from high voltage, medium voltage to low voltage, as well as the market integration. It will further include the integration of related monitoring and controls in process-control systems.



The result will be an orchestration of the power system via hierarchical and integrated network control, taking into consideration the market integration of flexibility and stakeholder involvement focusing on consumers and networks operators. Three individual innovation cells in three different countries will develop and validate this approach.

### Project Duration

01.01.2016 - 31.12.2018

### Project Budget

Total Budget: € 4,085,124.-

Funding: € 2,821,454.-

### Project Coordinator

AIT Austrian Institute of Technology  
(Austria)

### Project Partners

- Salzburg Netz GmbH (AUT)
- Siemens AG (AUT)
- TU Vienna (AUT)
- RWTH Aachen (GER)
- Hochschule Kempten (GER)
- Allgäuer Überlandwerke (GER)
- ABB (FIN)
- Univerza v Ljubljani (SLO)

### Project Website

[DeCAS Project Website](#)

[AIT DeCAS Link](#)

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## Main Objectives

The main objectives of the DeCAS project are:

To **research and analyse the coordination of ancillary services** such as, aggregated “prosumer” response control reserve, individual voltage control and reactive power management concepts **over traditional boundaries from high voltage, medium voltage to low voltage.**

To **develop approaches and concepts for a coordinated control considering the different objective functions of individual voltage levels.** It will include the integration related to monitoring and controls in process control systems as well as to existing and future flexibility markets. LV grids are usually not automated yet and there are hardly any measurements available. Thus the project will evaluate promising concepts **for LV grid operation tools and processes**, and how they can interface with MV/HV SCADA (supervisory control and data acquisition) DMS (distribution management system).

## Main Results

**Technology Development:** The project DeCAS is going to develop and investigate solutions for the coordinated activation of ancillary services over traditional boundaries from high voltage, medium voltage to low voltage considering the different objective functions of individual voltage levels. The project includes the integration of related monitoring and controls in process control systems as well as to flexibility markets. Through the field tests, it is possible to solve practical implementation issues e.g. due to the interconnection of installed and established products with new solutions from IoT world. Additionally in course of the project existing grid codes are going to be analysed and recommendations for a further development will be derived.

**Market Integration :** DeCAS is researching for solutions gaining flexibility from a large range of resources. A reasonable amount of possible flexibility is not owned by DSOs, but rather by prosumers or independent plant operators. DeCAS will analyse market-based solutions as part of network control in order to involve for instance prosumers, covering both generation and demand side management, in future flexibility markets.

**Stakeholder Integration:** Via demonstration activities and description of best practices the DeCAS project will reduce the barriers for engaging the prosumers in smart grid topics by investigating and evaluating how this unrealized potential of prosumers participation can be realized for the benefit of all stakeholders involved. Business models as well as future roles for prosumers and distribution network operators are important parts of this investigation.

From Local Trials towards a  
European Knowledge Community

<http://www.eranet-smartgridsplus.eu>

ABB SIEMENS AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

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RWTH AACHEN  
UNIVERSITY

University of Ljubljana

AllgäuNetz  
Der Leitungsverbund



Hochschule  
Kempten  
University of Applied Sciences

This project is part of the 1st Joint Call for transnational RDD projects of the ERA-Net Smart Grids Plus initiative. More than EUR 31 million of funding have been made available to 21 projects from 19 regions/countries.

ERA-Net  
Smart Grids Plus