



# ITEA mobilises the right ecosystems



# 03

## Ecosystems and software innovation

The promises of software innovation will only become reality if they are embedded in the right ecosystems. For example, the 'smart road' concept needs car suppliers, local authorities in charge of the roads and service providers to cooperate to develop safer, smoother and more environmentally friendly use of the roads.

## ITEA is the place to build ecosystems

ITEA is an industry-led organisation that has an open and constantly evolving Community. ITEA enables organisations from different horizons to meet, exchange and set-up new research projects through various events, including technical workshops, customer workshops and brokerage events. It is also common practice in ITEA projects to have different industries working together on a similar information technology, with faster progress made possible through the exchange of experience.

## Being part of a winning team

The development of vehicles has become increasingly complex, involving over 50 different suppliers – from different companies and geographical locations - who need to ensure that all components, parts and devices work together. In the ACOSAR project, 16 partners came together in order to accelerate development steps with new simulation technologies. The consortium’s members operated on all levels of the automotive supply chain and included several international original equipment manufacturers (OEMs), suppliers, software tool and real-time system vendors, as well as research and academic partners. Because of its importance, even competitors and non-funded partners collaborated in this project. ACOSAR developed both a non-proprietary 'Distributed Co-simulation Protocol' (DCP) for real-time system integration and a corresponding integration methodology. In the final year of the project, the consortium members decided to pursue standardisation of the DCP with the Modelica Association. Since July 2018, the DCP has been developed as a Modelica Association Project (MAP) and is available as an open-access international standard.

**ACOSAR**  
(2015–2018)



**ENTOC**  
(2016–2019)

## A great success of collaborative spirit



Engineering is the most time-consuming aspect of innovation and products are becoming increasingly complex. The ITEA project ENTOC, gathering 11 partners from Germany and Sweden, minimises the time and effort involved in engineering without compromising on reliability or integrity. The key value of ENTOC is the holistic approach to investing in a level of abstraction that allows the optimised design of production lines in a standardised way, allowing all the value chain stakeholders to join this effort in their own interest. The duration of the engineering process chain across all manufacturing domains can thus be reduced by up to 10% for the creation of virtual production models, leading to greater competitiveness. For all providers, ENTOC also safeguards intellectual property while boosting reputation: formalised descriptions are made for

components, providing a quality guarantee for end users, and a black box set-up prevents the underlying functions from becoming public knowledge. Based on formalised descriptions of component models and various tools that support them, virtual commissioning is now also affordable for SMEs.

