

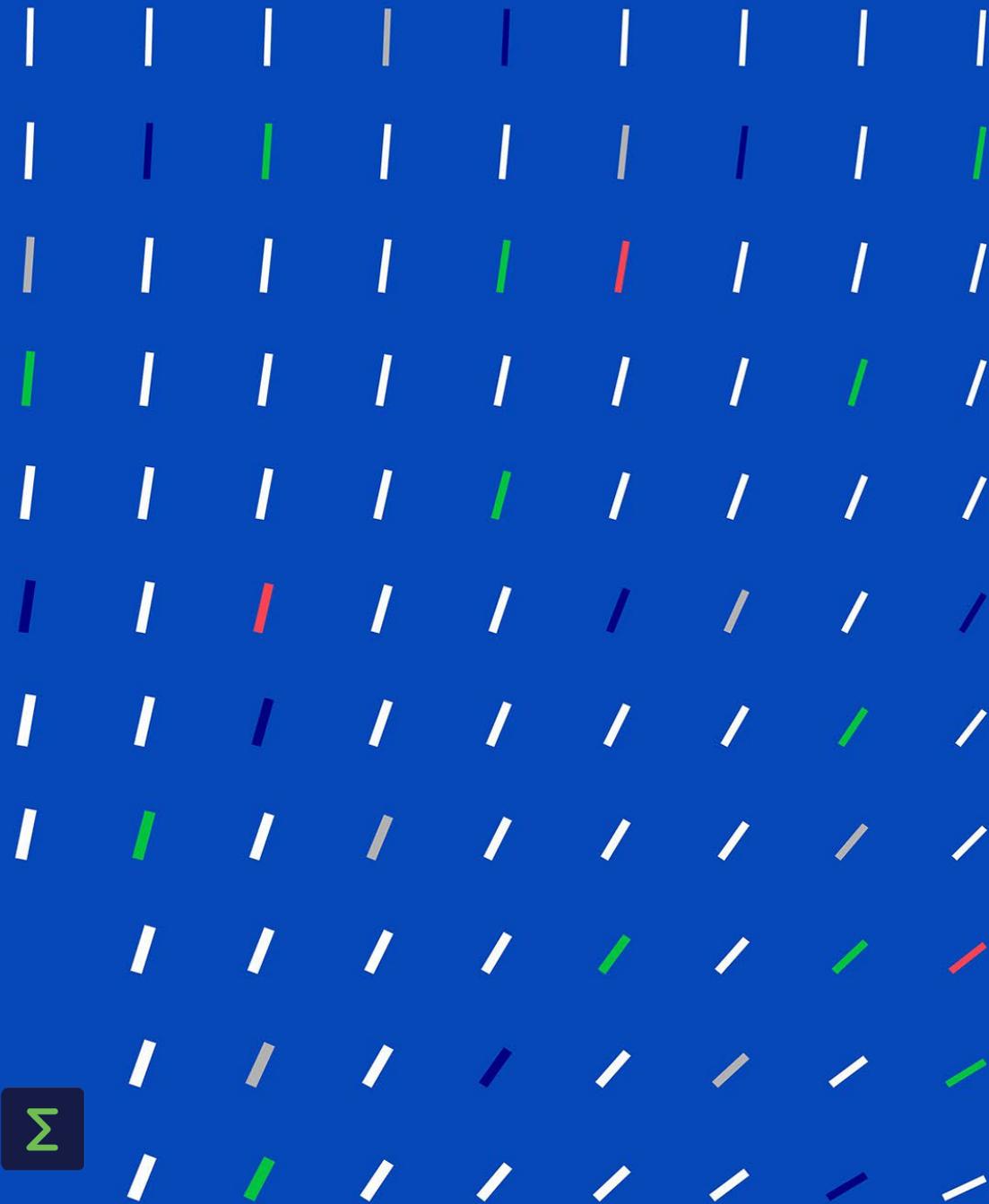
ITEA Award of Excellence winners with Austrian participation

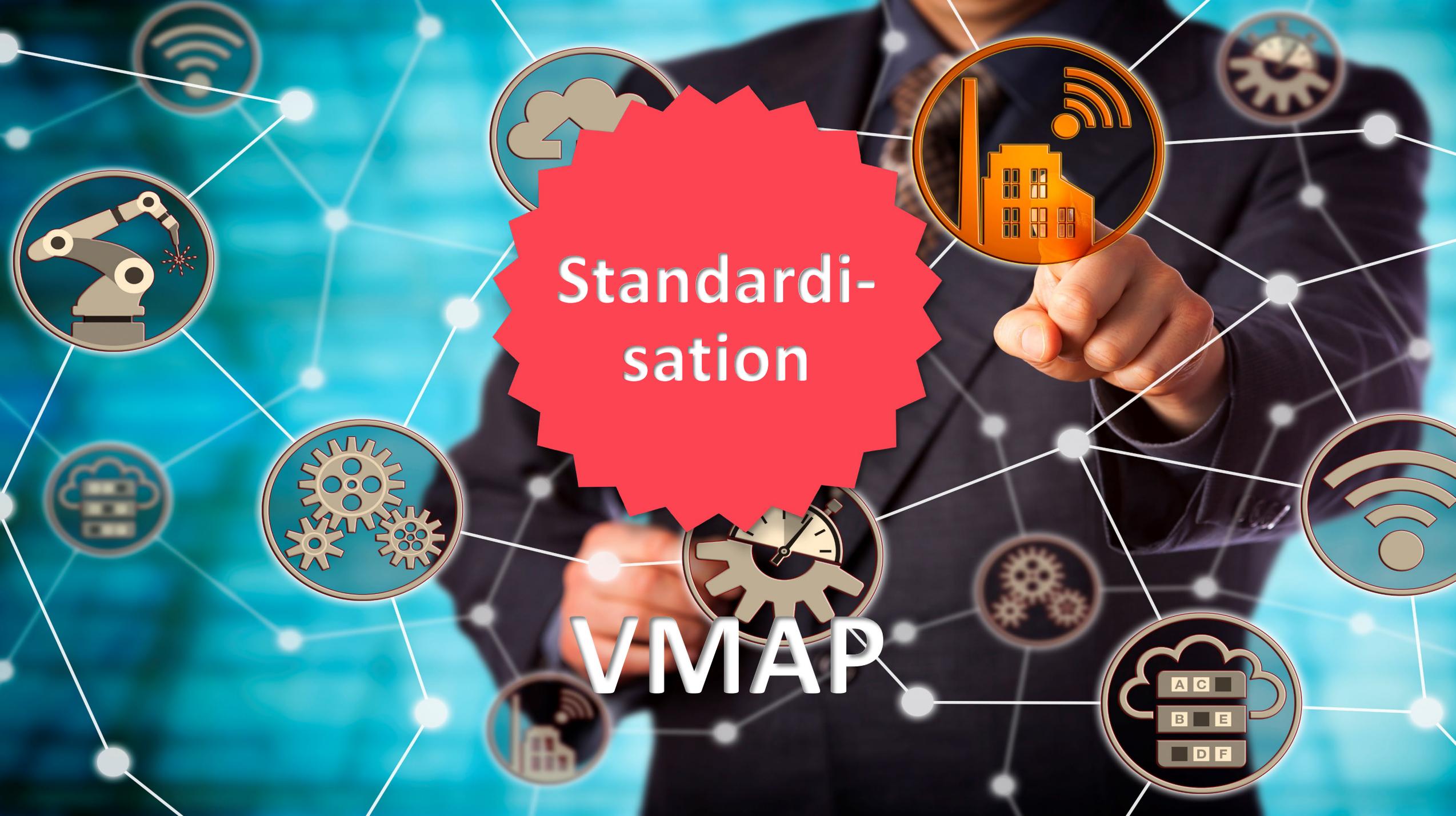


Status March 2024



ITEA is the Eureka Cluster on software innovation



A person in a dark suit and tie is pointing their right index finger towards a central red starburst. The background is a blue-toned image of a person in a suit, overlaid with a network of white lines and dots. Various circular icons are scattered around, including a Wi-Fi symbol, a gear, a factory, a robotic arm, a cloud with a Wi-Fi symbol, a clock with a gear, and a cloud with three server racks labeled A, B, and D.

Standardisation

VMAP

VMAP

Enhances interoperability in virtual engineering workflows

VMAP created a vendor-neutral standard for Computer-Aided Engineering data storage and transfer to enhance interoperability in virtual engineering workflows, increasing innovation speed by 50% and reducing setup time for virtual process chains by 40%. To further disseminate the VMAP Standard and its development, the VMAP Standard Community has been established.

Start date – End date

Sept 2017 – Oct 2020

Website

<https://itea4.org/project/vmap.html>



VMAP

Examples of impact highlights

- The VMAP project has created the world's first CAE workflow interface standard for integrating multi-disciplinary and multi-software simulation processes in the manufacturing industry. This standard is vendor-neutral, cost-free and completely open. The first public version of the standard was announced by the VMAP project in January 2020, before the end of the project.
- As a result of VMAP, Philips boosted the innovation speed of highly complex parts by almost 50%.
- The time spent on strength assessments in the moulding of plastic parts by RIKUTEC Richter Kunststofftechnik in Germany has been reduced by 42%.
- The set-up time for virtual process chains for lightweight automotive components with composites within a prominent German car manufacturer fell by 40%.
- The VMAP Standards Community e.V. (VMAP SC) was created in December 2022 by 16 founding members and it currently contains more than 150 entities, including large players such as Bosch and Philips, and has good links with other standardisation groups such as Modelica/FMI, the European Material Modelling Council and the ISO STEP 242 community.



Standardisation

ACOSAR

ACOSAR

An innovative simulation that saves time and money

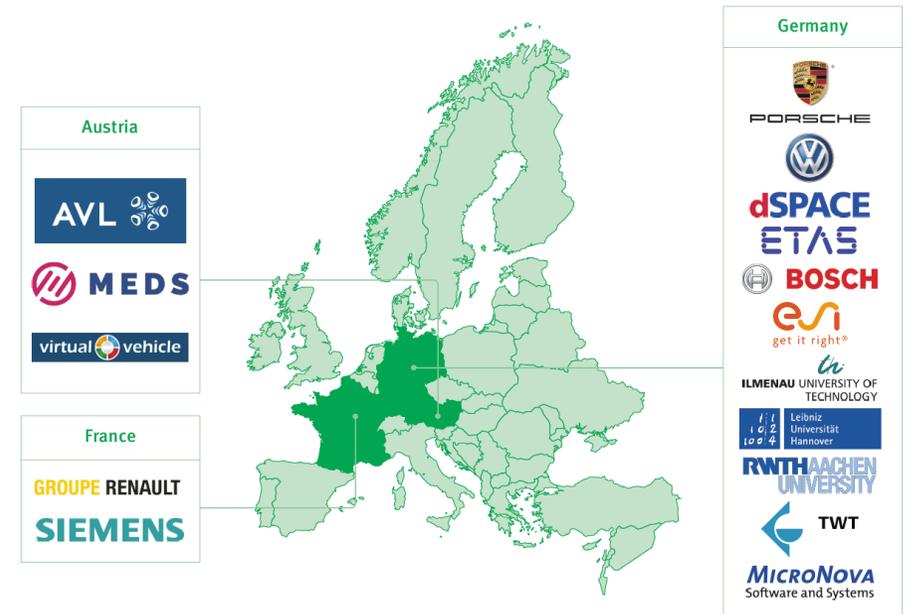
The development of vehicles has become increasingly complex, involving over 50 different suppliers who need to ensure that all components, parts and devices work together. Modelling and simulation represent key methods for a successful development. To facilitate this, the introduction of co-simulation methodologies and the interoperability of simulation tools and infrastructure had already taken root. But there was no standardised way of integrating distributed simulation and test environments back in 2015. In the ACOSAR project was set up to accelerate development steps with new simulation technologies.

Start date – End date

Sept 2015 – Aug 2018

Website

<https://itea4.org/project/acosar.html>



ACOSAR

Examples of impact highlights

- Since July 2018, the main and sustainable project outcome, the Distributed Co-simulation Protocol (DCP), is developed as a Modelica Association Project (MAP) and is available as an open-access international standard.
- Competitors and non-funded partners collaborated in this project because of its importance.
- International technology leaders such as AVL, Volkswagen and Boeing are already applying this solution.
- A prominent German sports car manufacturer reports over 13,000 developer days which could be saved in the next five years thanks to this developed protocol – which corresponds to a value of around five to seven million euros.
- This prominent German sports car manufacturer represents less than 1% of the market share of car manufacturers, thus this clearly shows the huge impact the ACOSAR project results can have in the automotive domain.
- The international partner network of Virtual Vehicle Research GmbH now consists of 30 national and 50 international industrial partners (OEMs, Tier 1 and Tier 2 suppliers as well as software providers) as well as 18 national and 30 international scientific institutions.



Business impact
&
Standardisation



SAFE

SAFE

The integrated modelling of function and safety in automotive processes

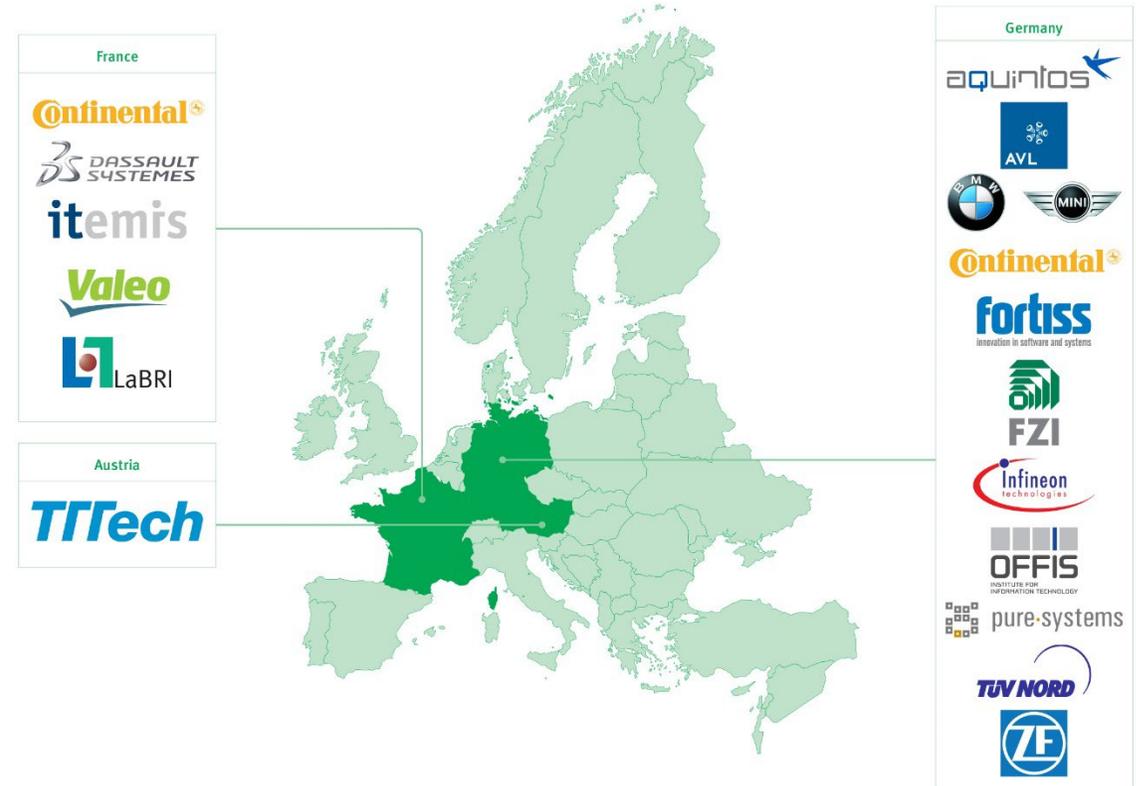
The goal of the SAFE project was to enable effective and compliant application of ISO26262 in the automotive industry processes by providing model-based development processes that integrate functional and safety development based on existing development lifecycle processes.

Start date – End date

July 2011 – December 2014

Website

<https://itea4.org/project/safe.html>



SAFE

Examples of impact highlights

- SAFE was an essential part of the jigsaw in establishing ISO26262, a worldwide standard and one of the most important in the automotive industry.
- SAFE enabled the automotive industry to comply effectively with ISO26262, which is mandatory for all OEMs and suppliers. SAFE realised the first incorporation of ISO26262 in a standardised Architecture Description Language (ADL) while the SAFE guidelines provide an interpretation of the ISO26262 standard to the market.
- SAFE has set the foundation to enable EAST-ADL, AUTOSAR, OMG and other standards to evolve as well as helped to identify limitations of the ISO26262 such that the basic standard itself can also be improved in subsequent iteration.
- Thanks to the SAFE project, Continental established the ISO26262 compliance in two major domains, namely the safety critical domains of powertrains and chassis brake systems. These domains represent 40% of Continental's product share and thanks to the SAFE project, Continental was able to keep its leading role in these domains.