



# VeTeSS

*Verification and Testing to Support Functional Safety Standards*

## EXECUTIVE summary

VeTeSS is developing tools and methods for safety verification and certification of safety-relevant embedded systems in the automotive market. Development costs and time to market will be reduced, even with increased complexity of embedded systems.

## RELEVANCE CALL objectives

VeTeSS will deliver:

- > An integrated and standardised toolchain for safety verification throughout the supply chain.
- > Lower development cost for systems and components by verifying safety more rapidly and earlier within the design process.
- > A more objective certification process to speed validation and certification.

## MARKET innovation

The VeTeSS project will have commercial and practical benefits for companies in the embedded system supply chain, the European automotive industry and other safety-relevant industries. It will provide opportunities for SMEs and start-ups to develop new products and services, including tools, training and consultancy for implementing safety standards.

Objectives:

- > Improved vehicle safety, quality and reliability together with improved functionality
- > More predictable safety qualification and certification processes
- > Reduced time to market, despite the increasing complexity of embedded systems
- > Effective implementation of ISO 26262
- > Greater supply chain flexibility
- > Faster development of electric and hybrid vehicles

## TECHNICAL innovation

VeTeSS is developing improved methods and tools to verify embedded systems against safety goals. The use of quantitative methods and objective data to support verification, certification and qualification will enable accurate communication of the safety case at every level of the supply chain. We will use physical testing, simulation and formal methods to test the response of safety-relevant hardware, software and systems to faults.

One of the key areas of research is the verification of the mechanisms used to ensure robustness against common-cause failures.

Characterising the effect of faults in each part of the system will lead to improved predictability and reusability. This will result in enhanced safety and availability which will improve reliability and quality.



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<b>INSTITUTION</b> Infineon Technologies UK Ltd	<b>DURATION</b> 36 months
<b>EMAIL</b> steve.neill@infineon.com	<b>TOTAL INVESTMENT</b> €18.34 M
<b>WEBSITE</b> http://vetess.eu	<b>PARTICIPATING ORGANISATIONS</b> 22
	<b>NUMBER OF COUNTRIES</b> 8

