



nSafeCer

Safety Certification of Software-Intensive Systems with Reusable Components

PROJECT description

The three-year nSafeCer project (started in April 2012), funded partly by the ARTEMIS Joint Undertaking and partly by national funding, targets increased efficiency and reduced time-to-market by composable safety certification of safety-relevant embedded systems.

RELEVANCE to call

nSafeCer builds on the pilot project pSafeCer, adding specific scientific objectives, including support for product lines and cross-domain certification and reuse. By sharing the same overall goals, the concepts developed in pSafeCer are advanced into the tangible industrial implementation of "project-ready", unified and seamlessly integrated solutions, and demonstrators of the proof of concepts.

MARKET innovation

- > Innovation for process, component models, safety arguments and verification/validation, applicable to multiple domains, targeting cost-efficient reuse which leads to lighter, cheaper and faster certification.
- > Instantiation of methods and tools for automotive, avionics, aerospace, construction equipment and rail domains. Creation of integrated certification and development framework with impact on the markets for the development, verification, and certification of tools, providing direction for methodology, reference architecture and prototype tool environment.
- > Research aimed at extending to an open framework for new (other) domains and for certification for cross-domain use of components.
- > Contribution to standards and regulations. Focus on software components qualified for certification. Impact on European industry, especially SMEs and technology providers, substantially opening up markets for niche components and increase cost-effectiveness.
- > Indirect effects, via adoption and dissemination of nSafeCer results in other projects and activities, including more attention in academic education and research.

TECHNICAL innovation

In nSafeCer there is an extra focus to evaluate the suitability and effectiveness of the processes, methods and tools developed. To demonstrate the applicability of these outcomes for particular domains and across multiple domains, use cases have been chosen that cover automotive and construction equipment, avionics and aerospace, rail as well as cross-domain aspects. These use cases are representative of the challenges industry currently faces. Each of the selected use cases has facets concerning qualification, certification or verification. Work comprises the implementation of demonstrators as well as the demonstration and assessment of the ambition. While SafeCer overall goals are therefore realistic, the suitability and effectiveness of the processes, methods and tools developed must be carefully evaluated and assessed.



PROJECT COORDINATOR Volvo	START April 2012
INSTITUTION Advanced Technology & Research	DURATION 36 months
EMAIL safecer-coordinator@safecer.eu	TOTAL INVESTMENT €15,3 M
WEBSITE www.safecer.eu	PARTICIPATING ORGANISATIONS 29
	NUMBER OF COUNTRIES 6

