EXECUTIVE summary
The ACROSS project will significantly reduce the development cost through a component-based architecture with support for composability and the capacity to fully exploit the economies of scale in the semiconductor industry. It does so by offering domain-independent architectural solutions for the automotive, aerospace and industrial-control domains, addressing common technological challenges such as complexity management and robustness.

RELEVANCE CALL 2009 objectives
The ACROSS project is dedicated to the industrial priority “reference designs and architectures” and will generate a reference platform with methods and tools, which supports the construction of embedded systems of all criticalities up to safety-critical hard-real-time systems.

MARKET incentives
The ACROSS project will contribute to the establishment of a common multi-domain architecture. In detail, ACROSS will
- provide OESMs with a mature cross-domain technology at lower cost;
- ease the introduction of new cross-domain applications;
- enable the exploitation of the economies of scale in the semiconductor industry;
- give the end-user more robust products (e.g., fewer recalls and higher dependability of a car).

TECHNICAL incentives
In the automotive, avionics and industrial application domains no MPSoC-based framework for the component-based development of safety-related embedded systems is available today to support composability, robustness, integrated resource management, diagnosis and model-based development. ACROSS enables such component-based development, thereby reducing design, integration, and validation efforts. The ACROSS MPSoC offers a predictable on-chip interconnect that is free of interference, thus simplifying the integration and operation of independently developed components. ACROSS supports robustness by establishing a framework for fault isolation, the selective restart of components after a transient fault, and the masking of transient and permanent errors by component replication. ACROSS is a platform architecture that provides a minimal set of core services and a plurality of optional service that are predominantly implemented as self-contained system components.

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START
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DURATION
36 months
TOTAL INVESTMENT
16 M€
PARTICIPATING ORGANISATIONS
16
NUMBER OF COUNTRIES
4