

# 15<sup>th</sup> World Congress on Intelligent Transport Systems

## *Testing and Evaluation Methods for ICT-based Safety Systems*

New York, 19 November 2008

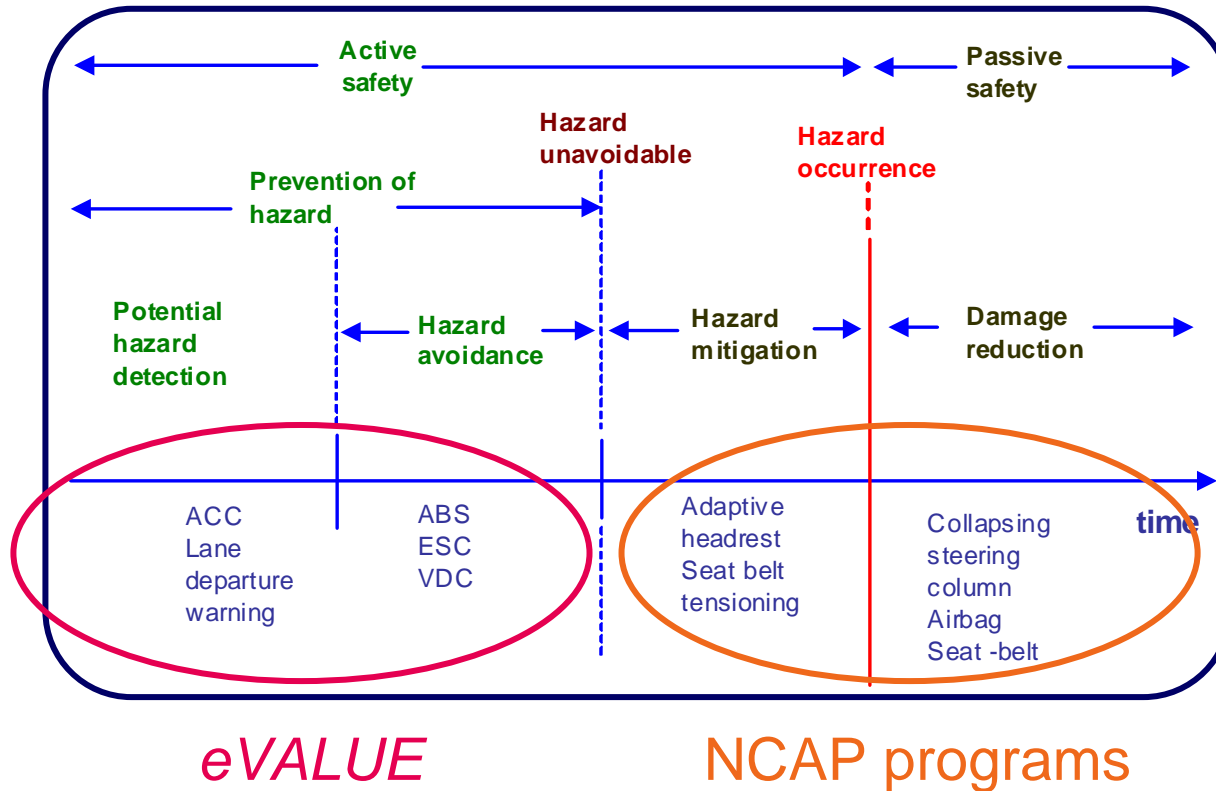
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# Motivation

- More than 40,000 lives are lost every year due to road accidents only in the European Union.
- Passive safety has been improved to a large extent over the past years.
- To decrease the number of accidents further, active safety systems must be massively implemented into cars.
- In opposition to passive safety, no assessment programme is publicly available and accepted.
- To rise the public awareness, the need for objective testing and evaluation methods is apparent.

# Project Scope

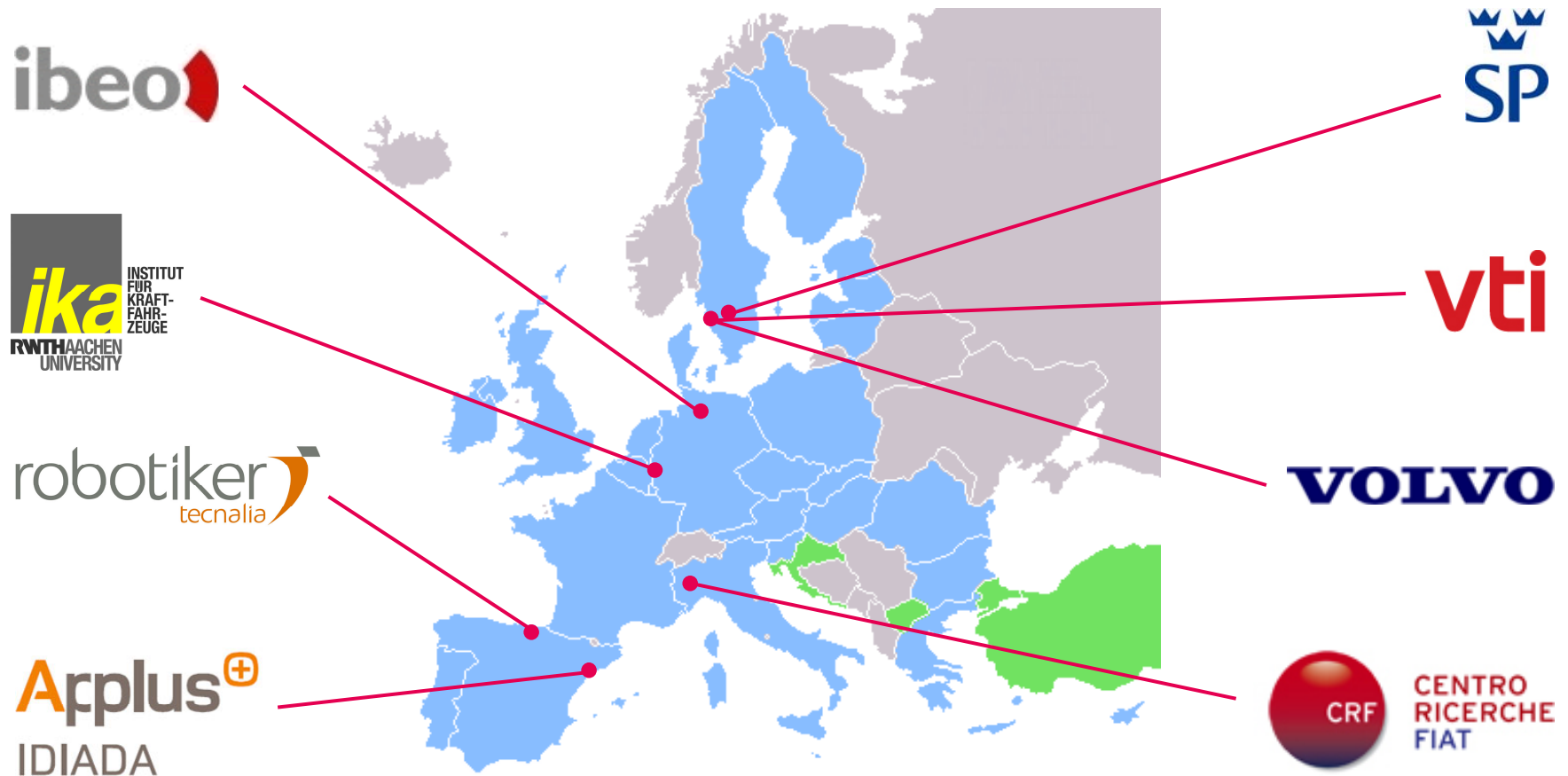


**eVALUE** has a similar goal like NCAP programs, namely the objective and easy-to-understand assessment of safety systems.

## Project Overview

- In the preface of the eVALUE project, a feasibility study on performance testing for ICT-based safety systems has been performed (“ASTE”).
- The study investigated different approaches for performance testing:
  - the system approach
  - **the scenario approach**
  - the document-based approach
- The eVALUE project is a direct follow-up of this pre-study with most ASTE partners now being members of the eVALUE consortium:
  - 2 OEMs
  - 1 Tier-1 supplier
  - 3 Research Organisations
  - 1 University

# Project Consortium



# Research Objectives

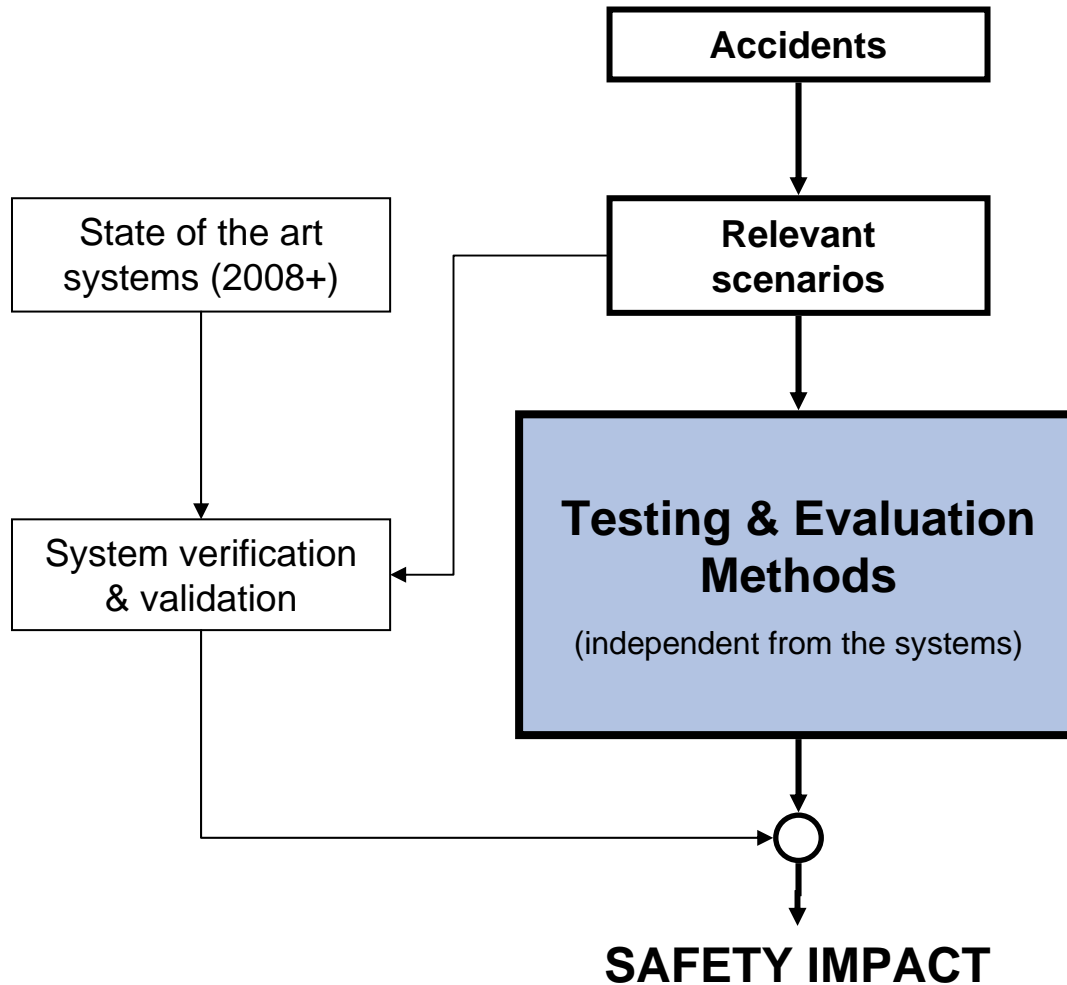
To develop testing and evaluation methods for ICT-based safety systems.

*AND thereby*

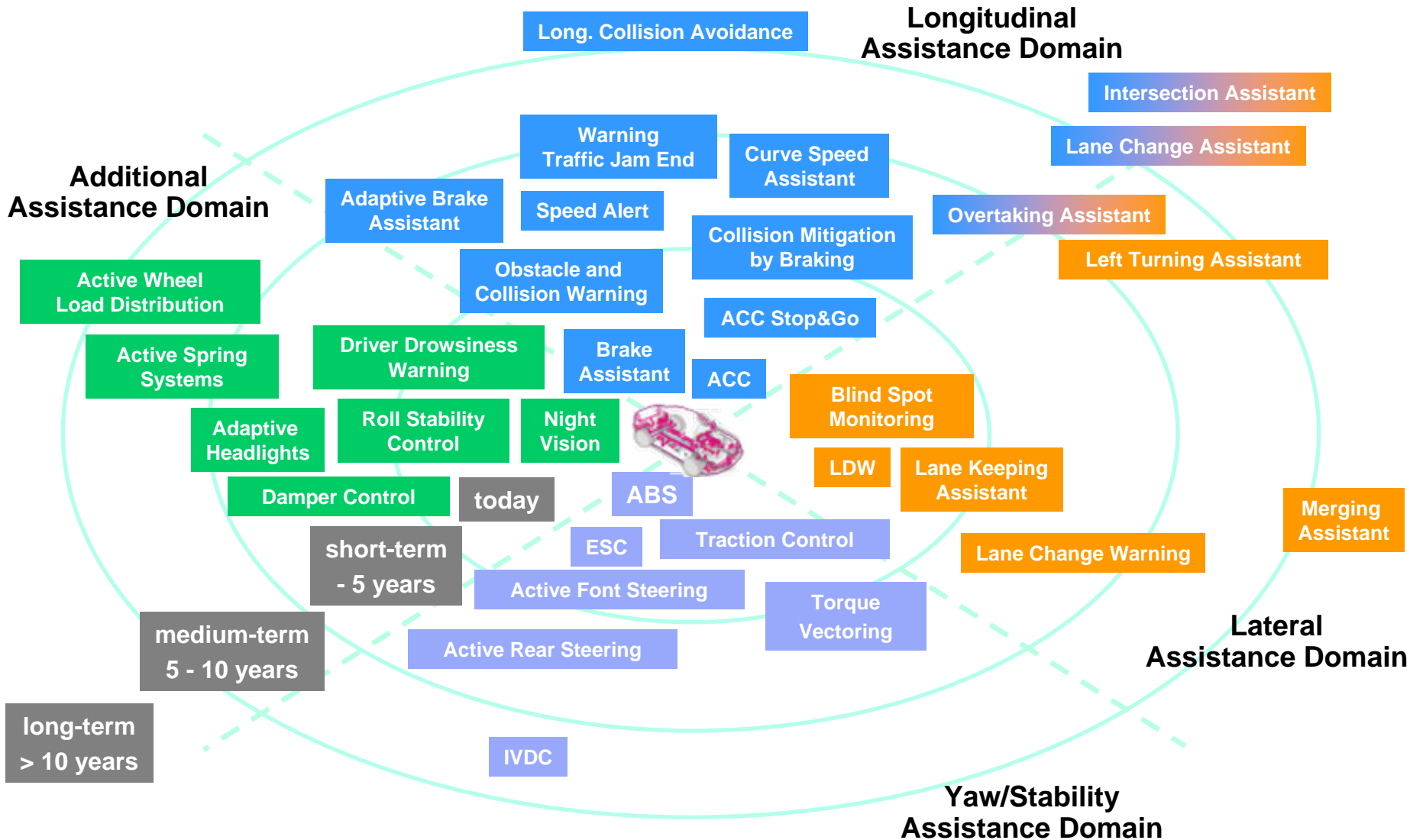
To increase public perception and customer acceptance of ICT-based safety systems.

To support development of ICT-based safety systems at vehicle OEMs and suppliers.

# Scientific Approach



# Roadmap for ICT-based Safety Systems



# System Clusters

- System Cluster 1 (longitudinal assistance)
  1. ACC
  2. Forward Collision Warning
  3. Collision Mitigation, by braking
- System Cluster 2 (lateral assistance)
  4. Blind Spot Detection
  5. Lane Departure Warning
  6. Lane Keeping Assistant
- System Cluster 3 (yaw/stability assistance)
  7. ABS
  8. ESC
- System Cluster 4 (additional assistance)
  - Not defined at this stage

## Challenges and Next Steps

- The derivation of relevant scenarios directly from accident statistics is a challenge.
- No reliable accident statistics representing the whole of Europe are available.
- Relevant scenarios are being defined by the eVALUE partners.
- Based on these scenarios, the actual test methods will be developed. They are divided in:
  - physical testing
  - lab testing
  - documentation review
- For each criterion, the best fitting method is chosen.

## Conclusion and Outlook

- In the development of automotive ICT-based safety systems, no generally accepted standards are available today.
- Test results acquired in different manufacturer-specific tests cannot be compared by customers and authorities.
- The outcome of the eVALUE project will be explicit testing procedures/protocols for active safety systems.
- To increase the acceptance of all relevant stakeholder groups, a dialogue is very welcome.
- Latest results of the project are continuously published on the website [www.evalue-project.eu](http://www.evalue-project.eu).

**Thank you for your kind attention!**

[www.evaluate-project.eu](http://www.evaluate-project.eu)



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