



New Assessment and Test Tools

Generic assessment methodology for advanced safety systems

FUNCTIONALITY

Generic methodology to evaluate advanced safety systems consisting of remote sensing systems and adaptive actuator systems

EXPLOITATION

- Improved regulation
- Beyond NCAP
 - Improved protocol
- Industry
 - Assess and evaluate adaptive systems

SOCIO-ECONOMIC IMPACT

- Increase development and market launch of advanced systems
- Increase vehicle safety through consideration in regulation/consumer testing

TECHNICAL DESCRIPTION

Objective

To develop a generic methodology to assess advanced safety systems that can be used by different stakeholders, e.g. industry, consumer testing organisations and regulators.

Approach

A draft evaluation method was developed. To verify the methodology it was applied to two pre-crash systems. Based on the results of this work the method was updated to its final version.

Proposed method

The method is suitable to assess complete safety applications.

The system specific test conditions and assessment criteria are defined using relevant accident and traffic scenarios.

The evaluation of the technical performance is split in the three steps

- pre-crash performance
- crash performance
- driver-in-the-loop performance

The test results, together with the optional supporting information on the system, are combined to provide the overall system performance; this can be related to the target population to estimate the safety benefit of the system.

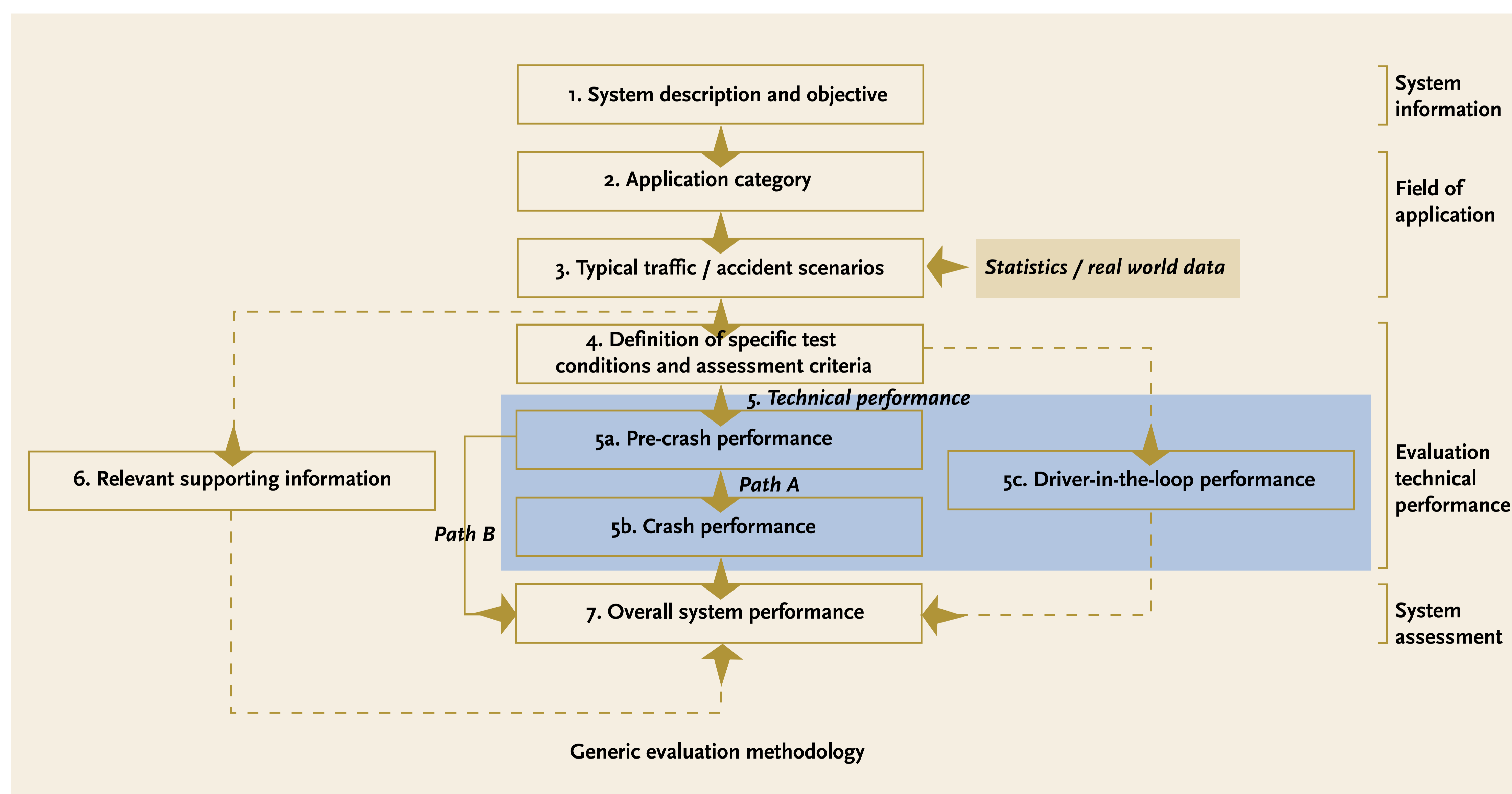
Verification

To verify the proposed evaluation methodology, the method was applied to two different pre-crash safety systems:

- a pre-crash pedestrian protection system
- a pre-crash side protection system developed within APROSYS.

Further work

Further research is required to address issues identified in the verification of the methodology, e.g. the need for a detailed European accident database; and application of the methodology to other pre-crash safety systems.



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