

# CASPER

## Child advanced safety project for European roads



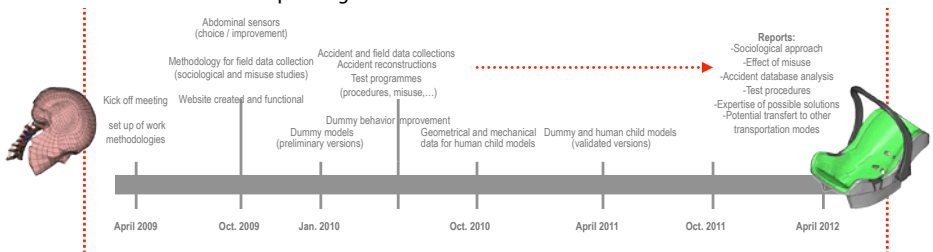
### ■ Motivation and Objectives

The objective of CASPER is further reducing the number of fatalities on the EU roads. Activities are mainly supported by research addressing many fields (in depth road accidents data, influence of the impact of societal behavior of adults,...) and technological based solutions to improve the safety of children (dummies, human models,...). CASPER is aiming to improve both, the rate of correctly restrained children travelling in cars and the tools that will allow the design of better child protection, all based on real road observations.

### ■ Project Plan, Milestones and Deliverables

Work dedicated to the improvement of tools for the evaluation of child safety in cars has been done, FE models of Q dummies and of Child human models have been developed, test procedure work has been conducted.

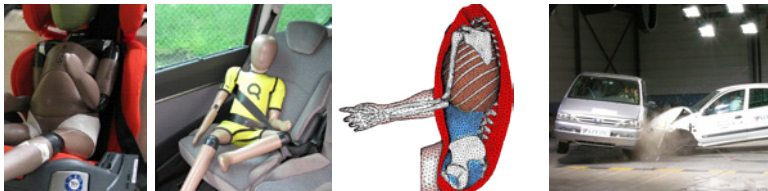
Reports on the conditions of use of Child Restraint Systems (CRS) and consequences in accidents for children involved as vehicle passengers in traffic accidents will be made.



### ■ Technical Approach

CASPER has defined two main axes of progress to improve the child safety in cars:

- Improvement of CRS through the development of innovative tools, and by the definition of realistic test procedures that consider both updated tools and injury criteria. CRS and car manufacturers will be then able to improve the protection of children while travelling in cars;
- Understanding of real conditions of transportation of children in cars by the analysis of the reasons and consequences of misuse. Investigating the influence of the conditions of transportation of children, as compared to the certification test procedures.



### ■ Achievements

**WP1-tools for dummy approach:** Q dummy models developed, update for dummy behavior, abdominal sensor improvement - done. Physical accident reconstructions still on-going for injury criteria definition.

**WP2-child human body modelling:** based on geometrical and mechanical properties work partners have developed and validated different body segments of children of different ages. Meshing work is on-going and a validation of the complete child human models is planned.

**WP3-diagnosis of child safety:** misuse and sociological surveys took place. Testing programmes for misuse situations and seating postures are on-going. New accident data were collected.

**WP4-demands and applications:** work on side impact test procedure was conducted. Models of generic CRSs were created. Expertise of the solutions for the top list issues of child safety is on-going.

**WP5-dissemination and knowledge exchange:** web site, co-operations with other groups are on-going. Mid-term workshop took place. Final dissemination workshop will be held on 13<sup>th</sup>-15<sup>th</sup> of March in Berlin.

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Partners	15 partners, among them Renault, PSA, CRF		
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