

PROJECT PARTNERS

The OSCCAR project assembles 21 partners, including 19 from Europe and 2 from China. The project is coordinated by VIRTUAL VEHICLE Research Center in Graz/Austria and will run for 3 years, from June 2018 until May 2021.



OSCCAR

FUTURE OCCUPANT SAFETY
FOR CRASHES IN CARS

PROJECT COORDINATOR
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DURATION
June 2018 to May 2021

21 PARTNERS FROM 8 COUNTRIES
4 OEMs
6 Tier suppliers
4 Research organizations
7 Universities

9 Associated partners from Europe,
Canada, Japan, South Korea, USA



OSCCAR has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 68947.

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Future Accident Scenarios **Integrated Assessment**
Automated Driving
Omnidirectional Human Body Models
Advanced Occupant Protection Systems
Relaxed Sitting Positions **Virtual Testing and Homologation**

**Understanding future accident scenarios
involving passenger cars**

**Demonstration of new advanced occupant
protection principles and concepts**

**Contribution to the development of
diverse, omnidirectional, biofidelic
and robust HBMs**

**Contribution to the standardization
of virtual testing procedures**

**Development of an exploitation strategy
towards large scale implementation of
virtual testing methods**

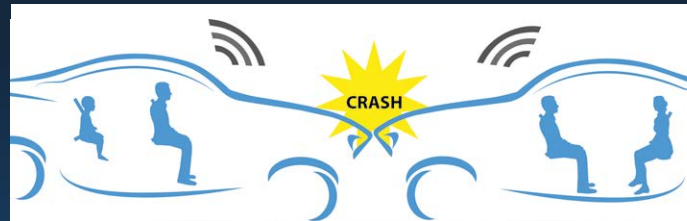
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The EU Horizon 2020 research project “OSCCAR - Future Occupant Safety for Crashes in Cars” - develops a novel, simulation-based approach to safeguard occupants involved in future vehicle accidents.

RELEVANCE AND IMPACT

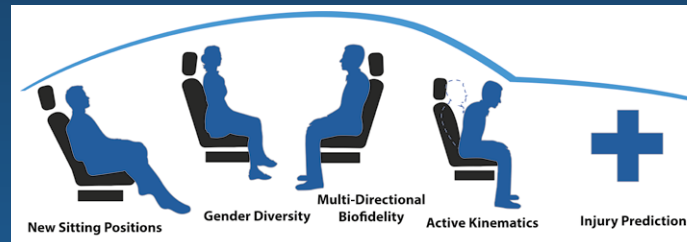
OSCCAR will contribute to the **reduction of**

- the **amount of road fatalities**
- the **severity of injuries**
- the **number of injured persons** for decades to come
- Provide a future accident & conflict scenario database for public use, in particular for OEMs, Tier suppliers and road operators/ infrastructure providers
- Establish protection principles for future occupant protection
- Lay the base for virtual assessment of advanced protection systems for conventional vehicles and HAVs
- Facilitate the evaluation and therefore the implementation of new and innovative safety solutions and related enabling tools that could boost the R&D of services and industries
- Pave the way for virtual homologation of future sitting positions for HAVs
- Define an accepted procedure for harmonized and more biofidelic HBMs allowing for an improved occupant safety for conventional vehicles and HAVs
- Enable a broad coverage of heterogeneous occupant population (gender, age, height, weight for conventional vehicles and HAVs)
- Show the applicability/usefulness of the developed framework for future safety systems by several selected demonstrators
- Secure the required full-scale manufacturing of critical products developed in the project in Europe by key players from European industry
- Boost harmonization and standardization on global level (Europe, US, Canada, South Korea, India, China)



FUTURE ACCIDENT SCENARIOS:

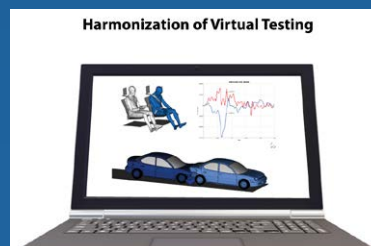
- HAVs
- Mixed traffic
- Traffic simulation
- Driving situation
- Accident / collision parameters
- Future relevant accident matrix



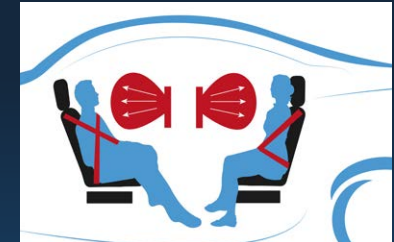
HBM DEVELOPMENT:

- Soft tissue
- Multidirectional biofidelity
- Biofidelic kinematics during pre- and in-crash phase
- Occupant heterogeneity
- Safety assessment capability of new sitting positions
- Agreed injury criteria

HARMONIZATION AND RECOMMENDATIONS FOR VIRTUAL TESTING:

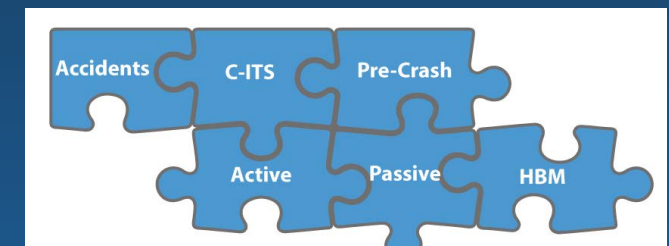


- Simulation comparability and harmonization
- Virtual testing validation requirements
- Injury criteria harmonization
- Volunteer testing for pre-crash kinematics



NEW RESTRAINT PRINCIPLES DEVELOPMENT:

- Vehicle interior uses cases
- Future sitting positions in HAVs
- Study on user expectations of future interior concepts
- New restraint principles
- Hardware and virtual testing
- Safety assessment with HBMs



ROBUST AND EFFICIENT CRASH SIMULATION TOOLS FOR INTEGRATED ASSESSMENT & OVERALL IMPACT DEMONSTRATION:

- Simulation quality assessment
- Common boundary conditions
- Fully integrated assessment toolchain
- Common post processing for comparability
- Homologation path demo
- Benefit and impact demo of virtual testing with HBMs



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