OSCCAR

Future Occupant Safety for Crashes in Cars

Werner Leitgeb

Virtual Vehicle

www.osccarproject.eu

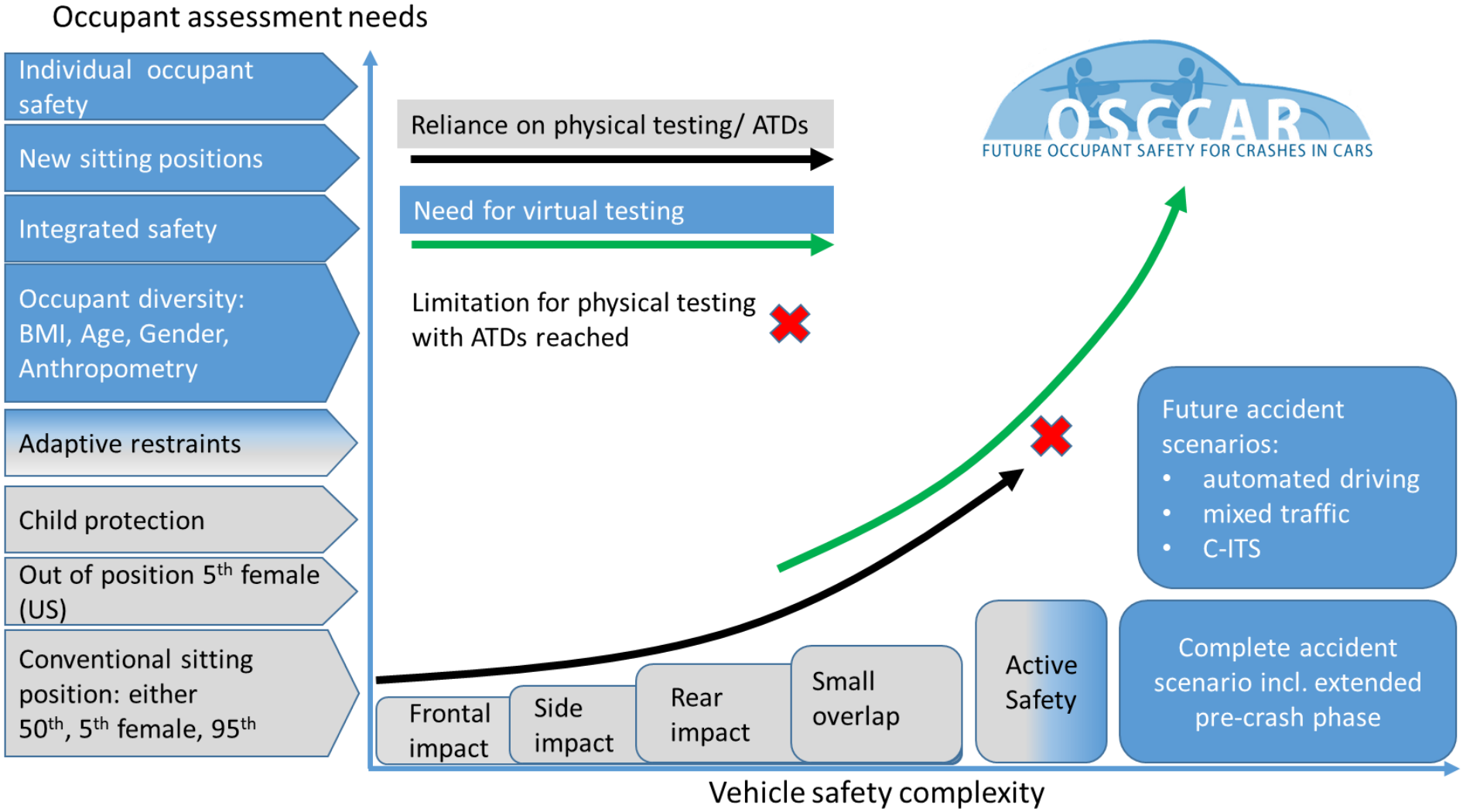
OSCCAR has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 768947.

OSCCAR – Main Objectives

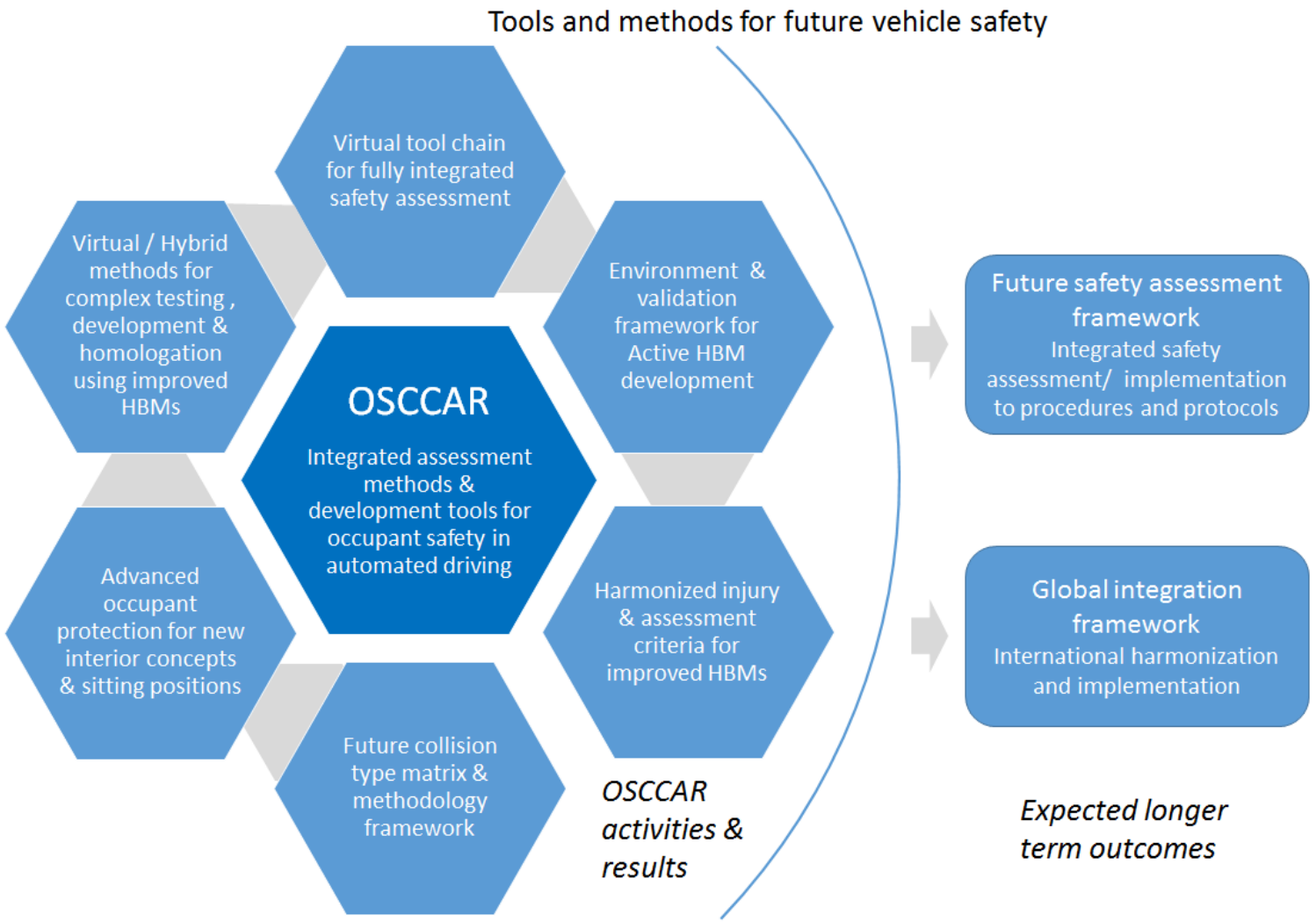
- Understanding **future accident scenarios involving passenger cars**
- Demonstration of **new advanced occupant protection** principles and concepts addressing future desired sitting positions made possible by HAVs
- Contribution to the development of **diverse**, **omnidirectional**, **biofidelic** and **robust HBMs**

- Establishment of an **integrated, virtual assessment framework** for complex scenarios as needed for the development of advanced protection systems for all occupants
- Contribution to the **standardization of virtual testing procedures** and promotion of HBMs acceptance in order to pave the way for virtual testing based homologation
- Development of an **exploitation strategy** towards large scale **implementation of virtual testing methods** for advanced occupant safety solutions created during this project.

OSCCAR – Accident scenario complexity

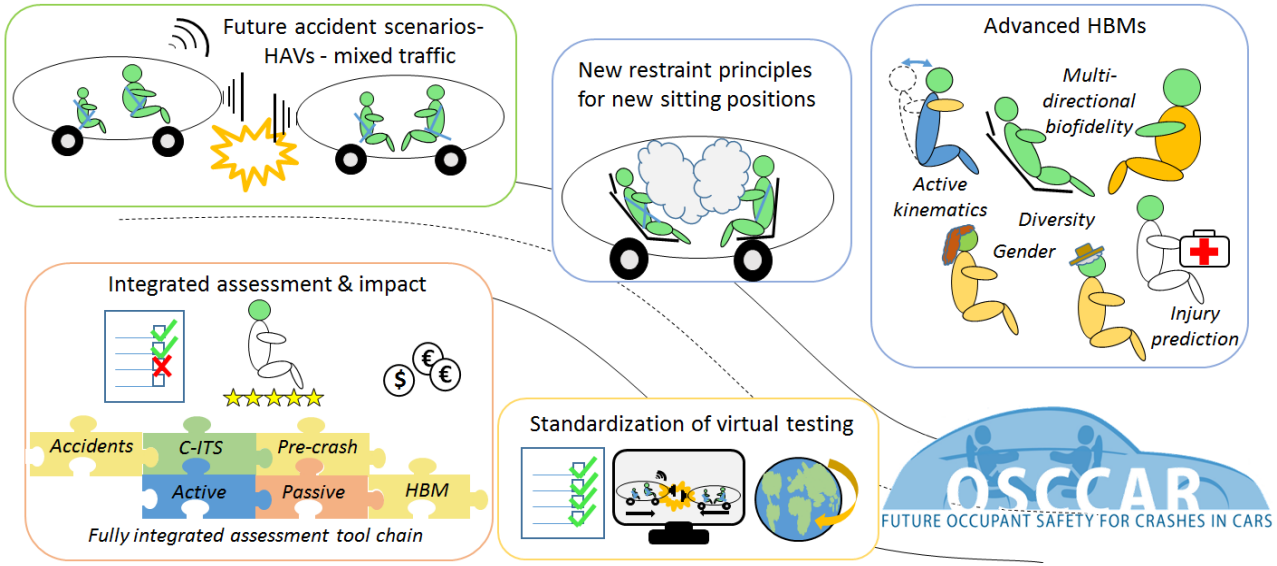


OSCCAR – Concept and project delineation



OSCCAR – Areas of impact (I)

- contribute to the **reduction of**
  - the **amount of road fatalities**
  - the **severity of injuries**
  - the **number of injured persons** for the decades to come



- provide a **future accident & conflict scenario database** for public use, in particular for OEMs, Tier suppliers and road operators/ infrastructure providers; (road operators/ infrastructure providers can use this database for improving the safety of infrastructure)
- establish **protection principles for future occupant protection**
- **lay the base for virtual assessment of advanced protection systems** for conventional vehicles and HAVs

OSCCAR – Areas of impact (II)

- **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 not only inside the automotive domain but also in other fields of application such as two-wheelers, VRU and even sports
- **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
- **boost harmonisation and standardization on global level** (Europe, US, Canada, South Korea, India, China) and therefore speed up the implementation of the projected integrated assessment framework

OSCCAR – Key figures

- 21 Partners from 8 countries (AT, BE, CN, DE, ES, FR, NL, SE)
  - 6 Tier 1 suppliers
  - 4 OEMs
  - 4 Research organizations
  - 7 Universities
- 9 Associated partners from EU, South Corea, Canada, Japan, USA
- Coordinator: Virtual Vehicle Research Center
- ~720 PM Effort
- ~7.5M€ Budget
- Project start: 2018-06-01
- Project end: 2021-05-31

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