



IMPROVA – Injury Mitigation to Promote Vision-Zero Achievement

Scientific Responsible
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Until now, the approach to road safety has primarily focused on analyzing the most common types of injuries based on road user types and crash characteristics. However, recognizing the need for a more comprehensive and proactive strategy, there is a growing consensus to shift the paradigm towards a user-centric approach that considers the specific needs (incl. their diversity) and behaviors of road users. IMPROVA project will focus on current knowledge regarding the conditions and mechanisms leading to serious injuries of all road user types, and both physical and psychological long-term consequences as well as future scenarios regarding the overall crash occurrence considering changes due to vehicle automatization.

IMPROVA will introduce a formula that will predict a likelihood of sustaining LTC. This will allow stakeholders to estimate physical and psychological long-term consequences due to road traffic accidents in a compact manner directly after the crash. HBMs will be specifically upgraded in their capabilities to depict LTC-relevant injury mechanisms. This will be achieved through validation of mode responses against experimental tests and through the development and tailoring of risk curves, using the latest available biomechanical data. Virtual Testing procedures will be developed and demonstrated for future application environments, specifically through the involvement of industrial partners and NCAP labs.

IMPROVA network consisting of NCAPs, US, Australian and Asian entities and medical and psychological expert panel group will help the harmonization not only of the knowledge of the long-term consequences but also to harmonize the data collection, evaluation of such injuries leading to LTC and to use appropriate tools validated for this purpose. The communication with regulatory authorities, NCAPs, rescue team and end-user will enable the awareness of the topic and implementation of appropriate countermeasures.