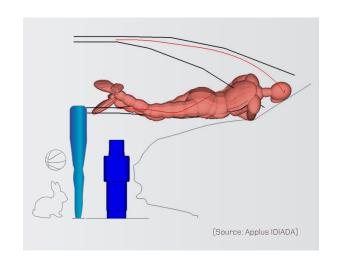


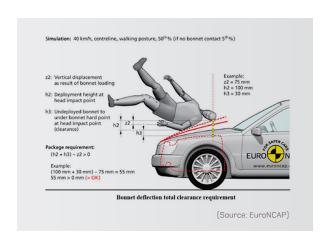
Active Bonnet System Integration for Pedestrian Protection

- Comprehensive know-how in Pedestrian safety and Front-end development
- Engineering support for development of active bonnet systems and bumper module integration from concept to production
- Integration of individual components into the overall vehicle safety performance to achieve effective pedestrian protection for all accident scenarios
- Project Management capabilities for the coordination and supervision of component suppliers (bonnet, latches, hinges, actuators, sensors, ECUs)
- Know-How in Design, Simulation and Testing for turnkey development projects



Design

- Design of the individual components of the vehicle front-end involved in the pedestrian protection performance
- Design of the bonnet in active and passive situations considering the trade-off in the part stiffness
- Interface to the surrounding vehicle front-end components
- Benchmarking activities for target setting support at both system and component level



Simulation

- Recognition and sensing of pedestrians / Hardest to detect (HTD)
- · Verification of head impact time and location (Head Impact Time - Determination)
- Assessment of the bonnet deflection stiffness in terms of deformation and benefits for pedestrian safety
- · Adjustment and securing of the lower trigger threshold for closed/passive bonnets situation



- · State-of-the-art testing laboratories and test tracks for the evaluation of pedestrian protection performance (passive & active systems)
- · Shooting and Driving tests for calibration of sensing systems for active bonnet and pedestrian airbags (testing at low/high/room temperature using full-vehicle climatic chamber)
- Handling of large testing volumes maximizing testing quality and time-efficiency without year-season weather dependency













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