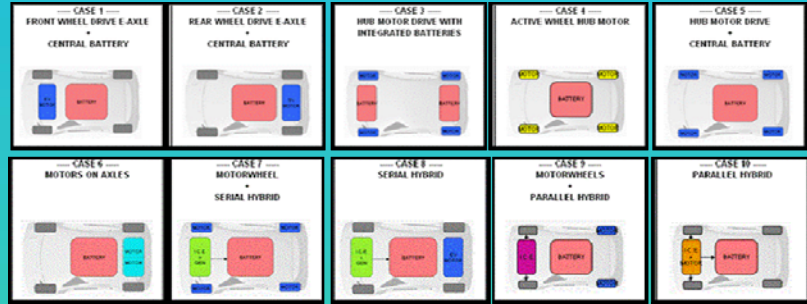
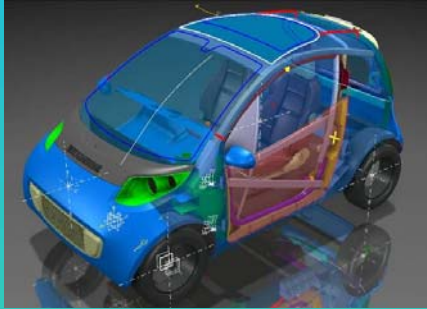


Advanced Structural Light-Weight Architectures for Electric Vehicles

FP7 - 266284



E-light targets urban electric vehicles (EV). The project explores all aspects of the problem and investigates the requirements for designing optimal EV architectures. The consortium proposes a methodology that will support designers in achieving lightweight design. The project will consider advanced metallic materials, reinforced composites, novel joining and manufacturing technologies, as well as modularity, ergonomics and safety.



EV have a different cost-benefit ratio when compared to internal combustion (IC) vehicles. since decrease in weight means a direct increase of battery range, and batteries are the most expensive component of EV. The project will develop a design methodology for EV by substantially decreasing the weight of the NIDO's architecture, while maintaining safety, modularity and ergonomics. This will be achieved by analysing new materials and technologies and determining the lightest combination of materials which is both cost-effective and safe. The body design will then be optimised for these material combinations, leading to further weight savings.

This methodology, together with the testing requirements for components, materials and joining technologies, will be the core for the design guidelines.

The e-light design guidelines will allow companies working in the automotive supply chain, who are mostly SMEs, to increase their knowledge of EV manufacture and optimise component design. This will increase their competitiveness.



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