

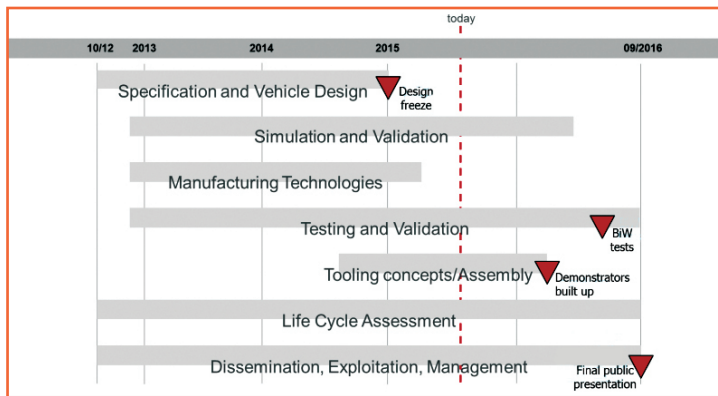
ALIVE

Advanced high volume affordable lightweighting for future electric vehicles

MOTIVATION AND OBJECTIVES

- The ALIVE project concept aims to advance both the lightweight design capabilities of automotive industry as well as their lightweight manufacturing & joining capabilities for high volume affordability, reliability and safety.
- ALIVE advances computer-based as well as experimental validation approaches (and their combinations) to enable fast and reliable design & optimisation loops to be run on component, sub-assembly, assembly and full vehicle-body-in-white level.
- Build up full-scale demonstrators to validate noise, vibration and harshness (NVH) and crash performance.

PROJECT PLAN, MILESTONES AND DELIVERABLES



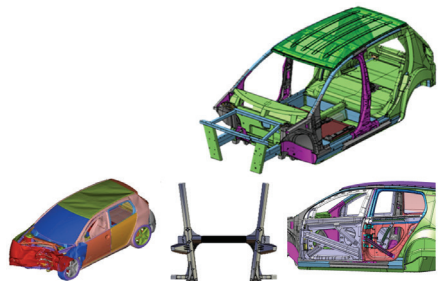
TECHNICAL APPROACH

Realisation of a highly innovative vehicle-body-in-white incorporating highly advanced materials and their respective manufacturing technologies in a real context. Thus the dialogue between design and materials/manufacturing research will be developed both the virtual (simulation) and the experimental (testing & validation) platform. By running in parallel, both testing and simulation capabilities will advance:

- WP1** Vehicle design: Body-in-white design and optimisation, design and optimisation of chassis, Hang-on parts, closures and front seats
- WP2** Simulation: Virtual performance assessment and validation of vehicle design options
- WP3** Manufacturing technologies: Characterise and adapt selected material classes, develop manufacturing, joining and bonding technologies, realise manufacturing and assembly strategies
- WP4** Testing and validation: test strategies, characterisation test coupons, sub-systems, full vehicle testing an validation
- WP5** Demonstrator and Assembly
- WP6** Life cycle analysis

ACHIEVEMENTS

- Design for electric vehicle concept completed
- Bill of materials and joining techniques defined
- New joining simulation models generated
- Simulated proof of NVH and crash performance
- CA prepared for components
- Build up of body-in-white demonstrators to be started in December 2015



Multimerial-subframe Lightweight doors

Budget	13.1 M€	Funding	7.6 M€
Duration	48 months	Start	October 2012
DG	Research & Innovation	Contract n°	312434
Coordinator	Jens Meschke, Volkswagen AG	Contact	jens.meschke@volkswagen.de
Partners	22 partners among them CRF, Daimler, Magna, Voest, AMAG, Renault, Volvo		
Website	www.project-alive.eu		

