

Motivation and Objectives

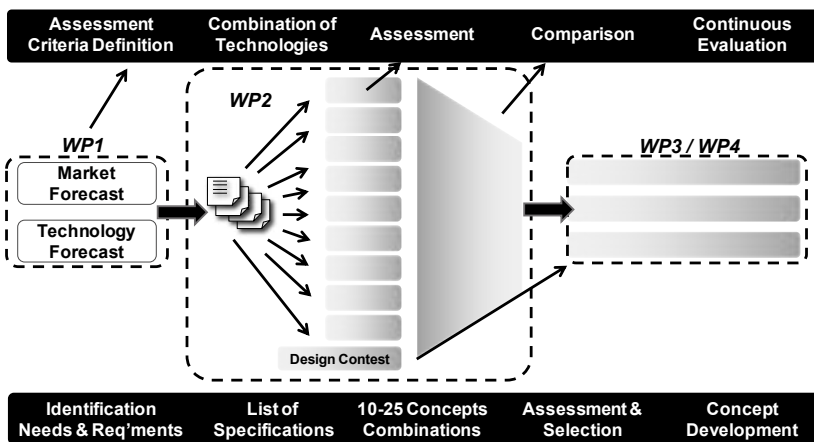
The full exploitation of new design freedoms for battery electric urban vehicles is the aim of the ELVA project. Currently various concept architectures, specific for the electric drive, are being developed.

In the first phase of the project the focus was set on getting a better understanding of the customer requirements for electric vehicles (EV) and generating a detailed overview of technologies for electric vehicle drives available from and beyond 2020. On this basis, main concepts for battery-driven city cars are at the moment developed in a creative phase. Three of these concepts will be chosen, designed in detail and afterwards analysed and evaluated with regard to several key requirements.

In the end, general guidelines on how to design an urban electric car will be the outcome of the project. A special feature is a design competition in which free-lance designers and design studios as well as students can take part.

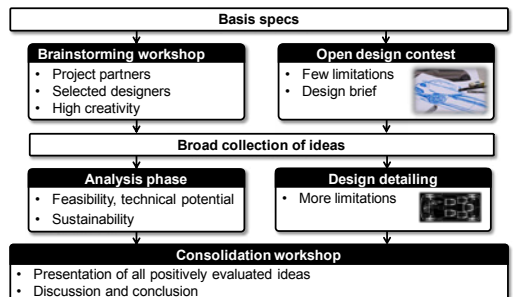
Project Plan, Milestones and Deliverables

The figure shows the workflow of the project which will lead to three detailed electric vehicle concepts.



Technical Approach

The concept definition approach is characterised by two separate threads, which are synchronised at specific points of time. One thread happens within the project, involving technical experts and designers. The second thread allows additional feedback from outside of the consortium, mainly by means of an open design contest addressing design students, free lance designers and also other interested persons.



Achievements

- Detailed understanding of future EU customer preferences and expectations, and market segmentations.
- Consistent set of roadmaps quantifying all design relevant parameters of the key EV components and their enabling technologies.
- Comprehensive library of EV concepts for urban use and their qualitative assessment.
- Selection of three detailed concepts for urban EVs allowing for derivatives both for passenger as well as delivery use, optimized by quantitative multi-parameter optimization iterations.
- Expert guidance documents for EV concept design, including evidence based design rules.

Budget 4.8 M€
 Duration 30 months
 DG Research / H2 – SST
 Coordinator Micha Lesemann, fka
 Partners ika/fka, CRF, Renault, VW, Continental, IDIADA, SAFER
 Website www.elva-project.eu

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