Increasing energy costs and stringent CO2 emission targets drive the growing market opportunity (and societal need) for fully electric vehicles (EVs). The ELVA project focuses on electric cars for city passengers and urban delivery where traffic volume is high and the impact on the local environment is most significant. Knowledge transfer to other vehicle types will be facilitated by a novel design approach to be developed by ELVA.

The change in propulsion technology from internal combustion engines (ICE) to electric powertrains will lead to the integration of new components and systems, while others undergo changes or become obsolete. This opens up new freedom in design and clears the way for new vehicle concepts. ELVA is to deliver results that allow for full exploitation of this new freedom, while responding to changing future market demands.

To achieve this key objective, the ELVA project generates, investigates and analyzes innovative design concepts for EVs. It delivers a wide range of advanced modular architectures which enable at least the same high level of intrinsic safety as known from current best in class conventional vehicles at minimal weight, maximised energy efficiency, optimized ergonomics & loading space at affordable costs as well as acceptable levels of comfort and driving performance.

In particular ELVA delivers best practices and evidence based design rules for modular lightweight and safe architectures specific to EVs. These practices and design rules will feed into and partially replace existing experience-based design methodologies, which have been developed over more than a century of vehicle design around the internal combustion engine.

ELVA will achieve a substantial impact with regard to a greener road transport system and a competitive car industry due to the strong involvement of leading industrial partners including 3 car makers that together are expected to produce a substantial part of all EVs sold in Europe in the next decade.
Champ scientifique
/ingénierie et technologie/génie de l'environnement/gestion des déchets/rendement énergétique
/social sciences/social and economic geography/transport
/social sciences/economics and business/business and management/commerce

Programme(s)
FP7-TRANSPORT - Specific Programme "Cooperation": Transport (including Aeronautics)

Thème(s)
GC-SST.2010.7-5. - Advanced electric vehicle concepts

Appel à propositions
FP7-SST-2010-RTD-1
Voir d'autres projets de cet appel

Régime de financement
CP-FP - Small or medium-scale focused research project

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