

# FP7 projects eDAS, iCOMPOSE and INCOBAT started – and formed the cluster “4<sup>th</sup> Generation EV”

## *Addressing the challenges of electric vehicles*

*Increased synergies, deepened impact, high visibility – these are the driving forces behind the cluster “4<sup>th</sup> Generation EV” under the headline “Computer on Wheels”. The cluster funding projects are the FP7 ICT projects eDAS, iCOMPOSE and INCOBAT that started on October 1<sup>st</sup> 2013. Having all their own specific orientation to address challenges in the development and acceptance of electric vehicles, they combine their knowledge to the cluster to focus on the topics “comprehensive energy management”, “performance potential of vehicle electrification” and “central computing platform”.*



### ***eDAS - Holistic Energy Management for 3rd and 4th Generation of Electric Vehicles***

Under the lead of Infineon Technologies, eDAS focuses on research to improve the thermal and electric management of the electric vehicle. This includes influence of environment temperatures, bringing the subsystems of the electric vehicle to the optimum operating temperature range and developing new designs and architectures to combine battery, e-motor, electronics, charger and energy management. The consortium comprises 15 partners from five European countries including Valéo, Hutchinson and Daimler. The results of the project eDAS will largely influence the future, 4<sup>th</sup> generation of electric vehicles which is predicted to be a “computer on wheels” between the years 2020 and 2025.



### ***iCOMPOSE – Integrated Control of Multiple-Motor and Multiple-Storage Fully Electric Vehicles***

iCOMPOSE follows a different strategy to address the energy management in the electric vehicle by using cloud-sourced data for multiple motor and multiple storage electric vehicles. To achieve this, iCOMPOSE proposes a change in the control software architecture with particular focus on comprehensive energy management. This will lead to energy savings and extended driving range of the full electric vehicle. The work performed in iCOMPOSE is focused on medium to short term research for exploitation starting from the year 2020. The consortium is led by the Virtual Vehicle in Austria and comprises the partners AVL, Flanders Drive, Fraunhofer, Hutchinson, Infineon, Lotus Engineering, SKODA AUTO, and University of Surrey.



### ***INCOBAT - INnovative CONTROL architectures for improving energy efficiency of next generation HV-BATtery***

INCOBAT focuses on a central element addressing costs and performance of an electric vehicle: the HV battery and more especially its battery management system. Thus, the aim of INCOBAT is to provide innovative and cost efficient battery management systems for next generation HV-batteries. By taking up and enhancing research performed in previous projects, INCOBAT will propose a platform concept to achieve cost reduction, reduced complexity, increased reliability as well as flexibility and higher energy efficiency. The consortium under the lead of AVL comprises Chemnitzer Werkstoff Mechanik, Fraunhofer, Ideas&Motion, Impact, Infineon, and KEMET.

Cluster 4<sup>th</sup> Generation EV

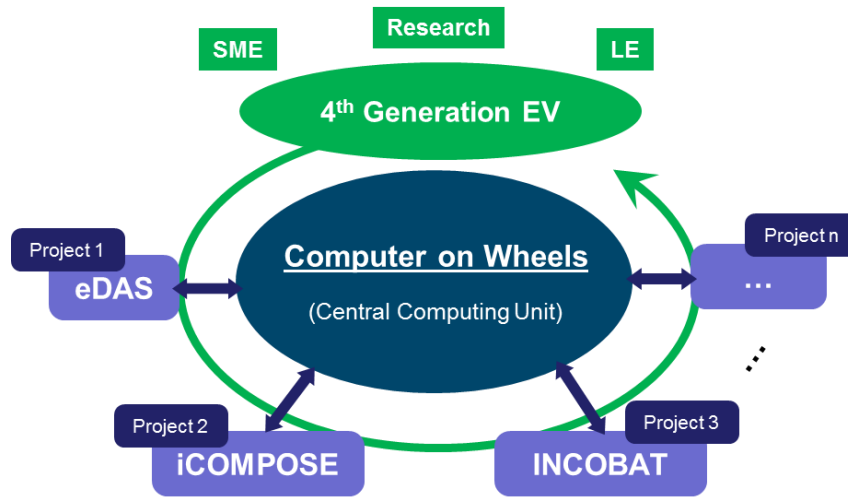


Figure 1: Ecosystem 4th Generation EV

In order to increase the synergies among and impact of all three projects, the consortia decided to form the cluster “4<sup>th</sup> Generation EV”. Having their specific time plans and objectives, the three projects share a number of areas they all contribute to:

- Comprehensive energy management
- Performance potential of vehicle electrification
- Central computing platform

Additionally to these topics where cross-project working groups will be established, the projects cooperate in joint dissemination activities and sustainability strategies. With the three founding projects as a starting point, the cluster is open to further projects joining.

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