



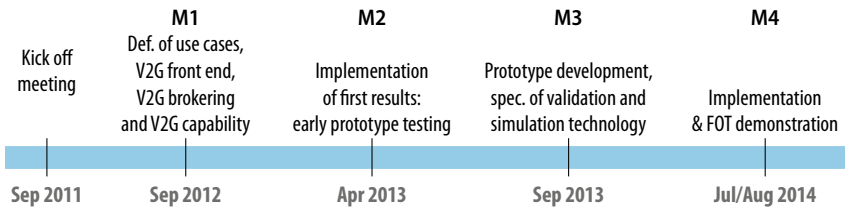
### ■ Motivation and Objectives

The objective of eDash is to develop the necessary Information and Communication (IC) technologies and processes that are needed to achieve a sustainable near real-time integration of Electric Vehicles (EV) in the European electricity grid and to allow the effective load balancing in the grid. In more detail, e-DASH addresses:

- The implementation of vehicle charging and reverse charging capabilities of EVs. In this regard the conventional “over-the-plug” communication is extended with a near real-time “over-the-air” data exchange channel in order to accomplish mobile communication means independent from a physical charge spot connection;
- The development of an Information and Communication Technology (ICT) backbone (E-Mobility Broker) to provide clearing of grid capacities using dynamic tariffs for charging/discharging individual Full Electric Vehicles (FEV) as well as interoperable and roaming capable authentication and accounting services;
- The development of core services for intelligent energy distribution supply networks for enabling near real-time load clearing & balancing of demand and supply
- Validation & demonstration.

### ■ Project Plan, Milestones and Deliverables

The milestone plan below illustrates the sequence of events starting with the definitions and specification phase of all crucial Vehicle to Grid (V2G) elements leading to a first prototype that will be submitted to test in all critical parts before all results will converge in a full “e-DASH” prototype. This full prototype solution will be validated against realistic test conditions before test vehicles will be equipped and tested at the test sites in Malaga/Spain and Mühlheim/Germany.



### ■ Technical Approach

e-DASH develops a viable telecommunication platform, which will allow the price-adapted charging/ reverse charging of electricity, as well as enable the near real-time spatial and temporal balancing of electricity grids for fast charging processes of large numbers of EVs via:

- Extending the conventional “over-the-plug” V2G Interface by a telecommunication interface,
- Development of the V2OEM Back-End Interface (E-Mobility Broker) for services such as clearing of grid capacities using dynamic tariffs for charging/discharging individual FEVs,
- Establishment of “Demand Clearing Houses” for near real-time demand and supply balancing, which prepare the grid and the utilities for high power fast charge spots by applying novel ICT for spatial and temporal distribution of electricity.

Budget	8.5 M€	Funding	5.3 M€
Duration	36 months	Start	September 2011
DG	INFSO / G2	Contract n°	285586
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Partners	CRF, VW, Renault, RWE, ENDESA, CEA, ERPC, Atos, TRIALOG, TUD, k-inside, EURISCO, ATB, Broadbit		
Website	currently under preparation		