

FABRIC



Feasibility analysis and development of on-road charging solutions for future electric vehicles

MOTIVATION AND OBJECTIVES

FABRIC assesses the technological feasibility, economic viability and socio-environmental impact of dynamic charging of electric vehicles (EVs).

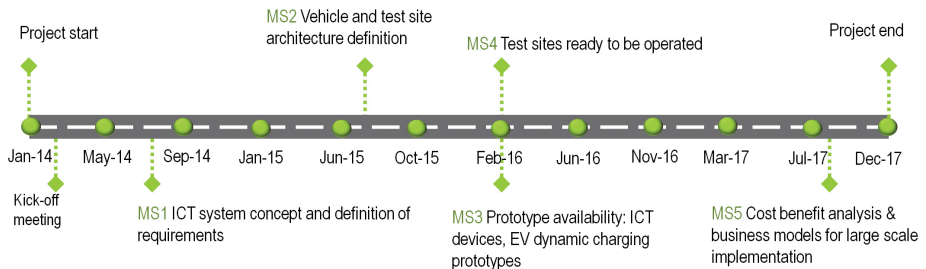
The basic project objectives can be summarised as follows:

- Development and testing of advanced ICT and charging solutions,
- Sustainable integration with road and grid infrastructure specifications,
- Long-term socio-economic impact and feasibility studies for large scale electromobility implementation.



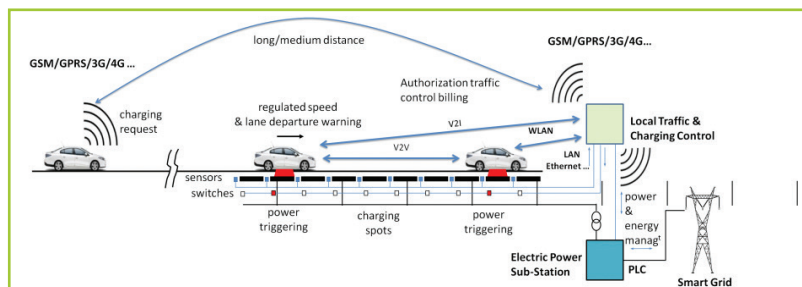
PROJECT PLAN, MILESTONES AND DELIVERABLES

Overview of the FABRIC R&D timeline and major milestones:



TECHNICAL APPROACH

In order to assess the technological feasibility and long term viability of EV wireless dynamic charging solutions and the large scale deployment of electromobility, adapted EVs, ICT and wireless power transfer solutions, road and grid infrastructures will be integrated in three FABRIC test sites in Italy, France and Sweden. Testing and validation of prototypes will be performed to feed a thorough feasibility analysis and impact assessment with respect to the users, the society and environment.



ACHIEVEMENTS

- State-of-the-art and benchmarking of ICT and EV charging solutions; Market readiness study.
- Collection of requirements from road authorities, vehicle manufacturers, and distribution system operators.
- FABRIC use cases.
- Preliminary development of prototype EV wireless stationary and dynamic charging modules.
- Study of the electromagnetic safety aspects.
- Grid and road impact assessment for on-road charging solutions.
- Analysis of renewable energy sources and energy storage systems integration.
- ICT infrastructure design including load balancing for dynamic EV charging.
- Preliminary feasibility study for the large scale implementation of dynamic charging solutions.
- Contribution towards standardising the definition of EV charging modes.

Budget 9 M€
Duration 48 months
DG Research & Innovation
Coordinator Angelos Amditis, ICCS
Partners ICCS, CRF, ERTICO, TRL, KTH, Volvo, Scania, TNO, VeDeCom, CIRCE, QIE, IREN, FKA, TECNOSITAF, ENIDE, POLITO, UNIGE-DITEN, SAET, Sanef, CEA, ATA, AMET, MECT
Website www.fabric-project.eu

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Contact a.amditis@iccs.gr

