

HELECAR

Integrated Energy Management Platform for BEV/PHEV

Description

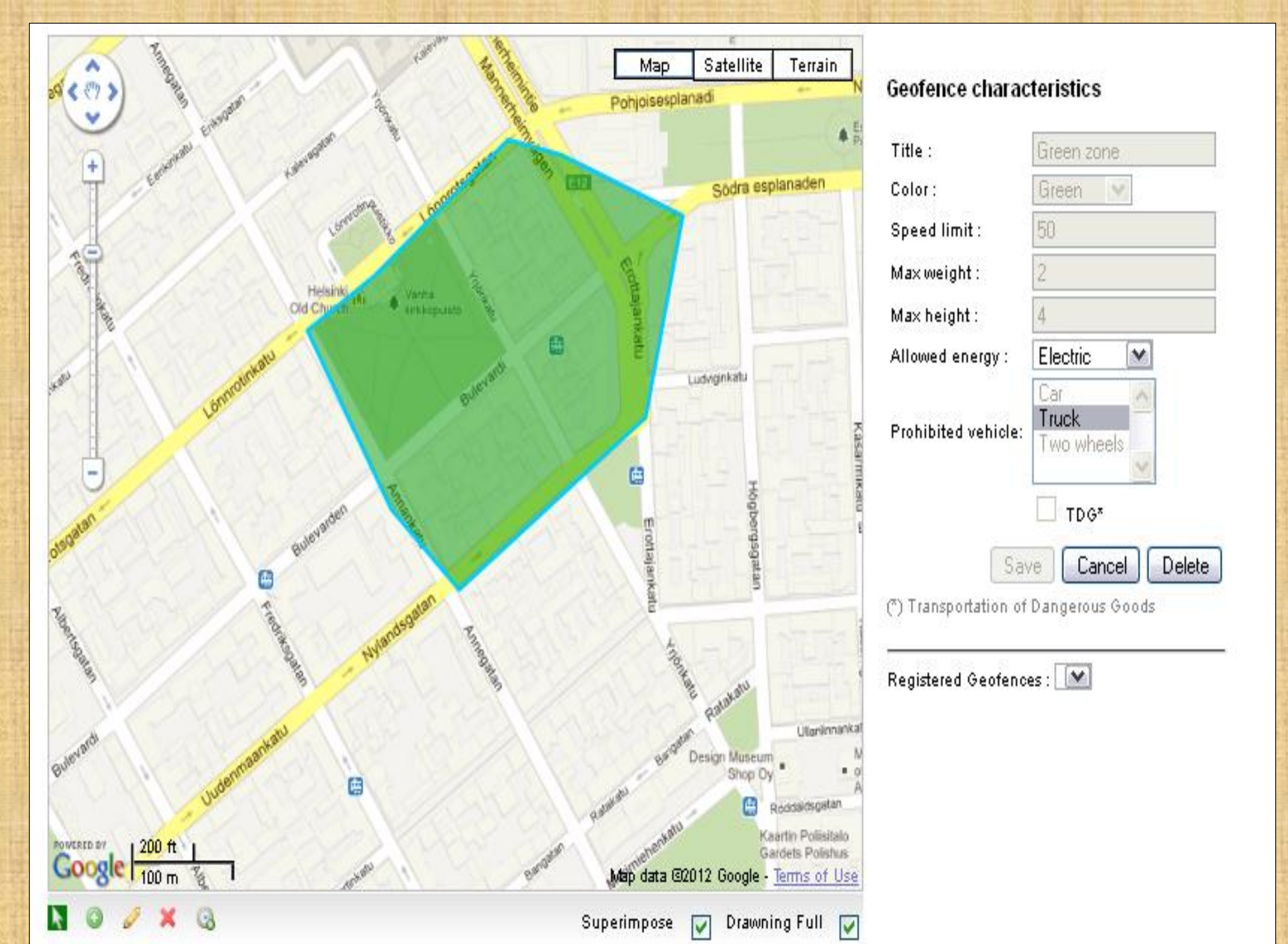
The penetration of plug-in hybrid electric vehicles (PHEV) and battery electric vehicles (BEV) on transportation markets could mitigate environmental impact, energy use, and reduction. However, further research and development together with real pilot testing need to be done in order to optimize and support the way these vehicles are used in different scenarios, such as traffic situation, road nature, and driving behavior. In this project, an intelligent energy management system (IEMS) will be developed to allow selecting the best suitable energy source that is more appropriate to the current situation, such as current state of the battery, intended itinerary, road profile, driving zone, and driving behavior.

Objectives

In this project, a framework for energy management system that interfaces with on-board components and ICT services for efficient energy use will be designed, developed and tested.

Main objectives are:

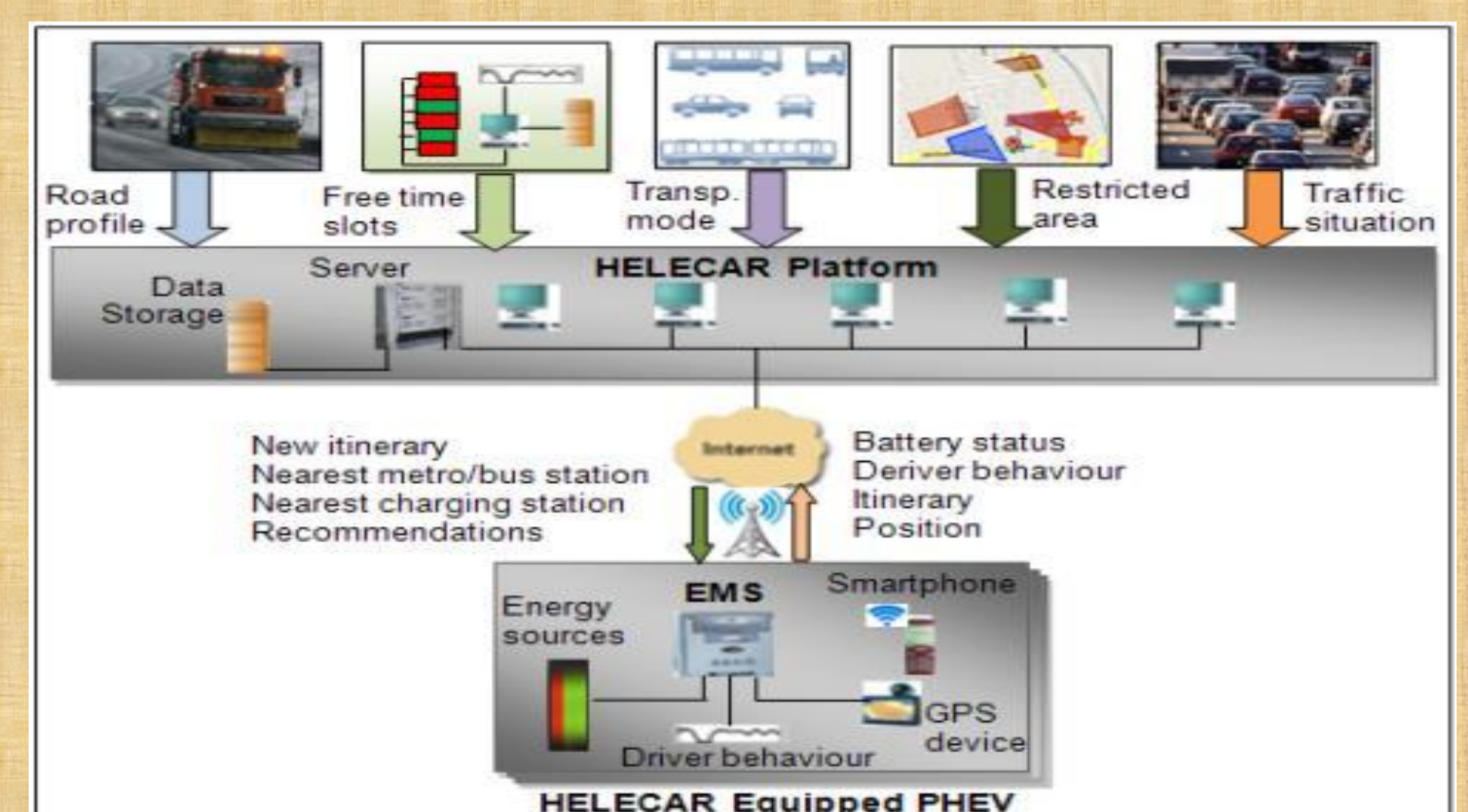
- **Objective 1** : develop optimal and flexible ICT-based services to enhance the driving styles and provide drivers with useful information (e.g., road profile, restricted areas or Traffic Limited Zone-TLZ).
- **Objective 2** : develop an IEMS that interfaces with on-board components and ICT services for efficient energy use.
- **Objective 3** : study the economic benefits in terms of energy efficiency and CO2 emission.



Outcomes

Main outcomes of the HELECAR project are :

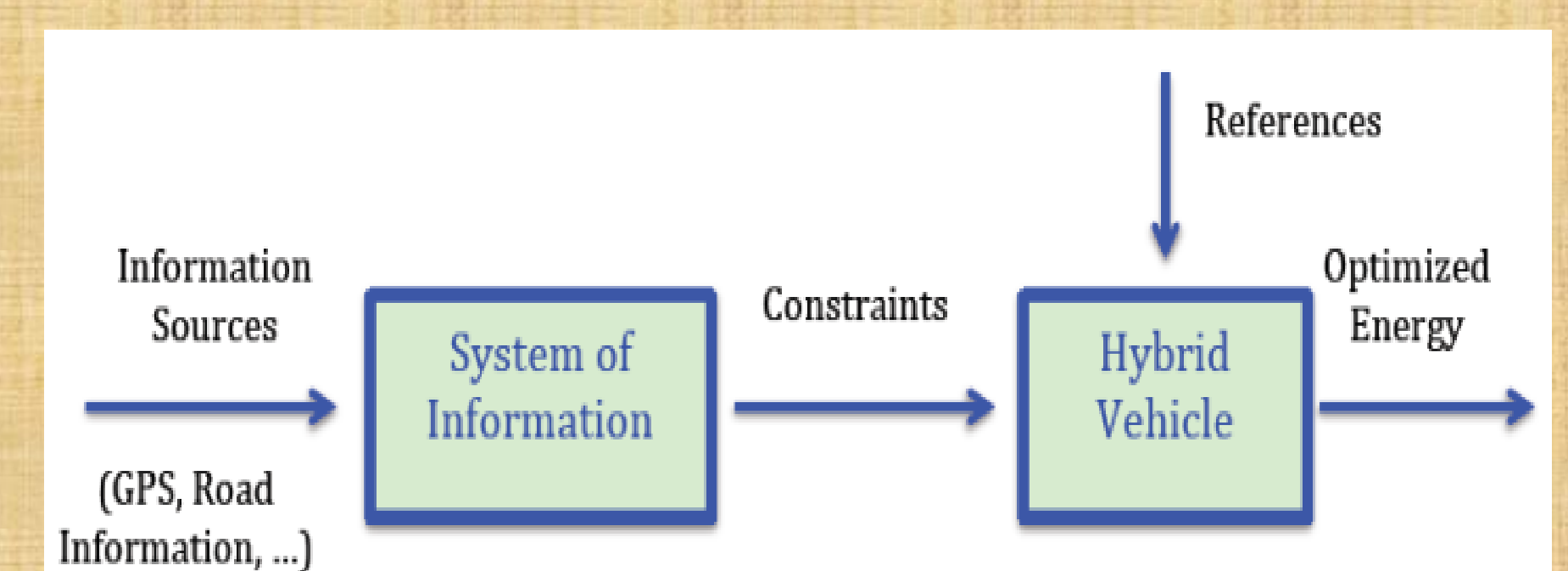
- **Outcome 1** : a software tool that allows defining TLZ.
- **Outcome 2** : a prototype for HELECAR platform that includes TLZ services and predict/manage energy demand & supply.
- **Outcome 3** : an innovative in-vehicle based IEMS.
- **Outcome 4** : small/Medium scale real-testing results.



Overall Strategy

The project is divided into three main tasks:

- **Task 1** : interfaces with other services to gather and process data to be either communicated to the on-board EMS or as recommendations to the driver.
- **Task 2** : develop control strategies that allow the selection of the best suitable energy source.
- **Task 3** : set-up a real-testing of IEMS.



Partners



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Contacts

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