

# Migration of road transport towards hybrid powertrain solutions

**This project focuses on the study of passenger vehicle migration towards innovative electric power-trains under different implementation scenarios.**

The aim is to assess the impact of this migration on several economic, environmental and energetic factors, including from the user point of view. Based on real data of vehicle usage gathered by an international car maker group, an initial analysis of this data has firstly been performed to find general figures that characterise journeys and users.

Then, according to the results, a second-stage filtering has been performed to remove information or variability that shows inconsistencies or does not represent real usage. Once the filtering has been applied, further data treatments

are applied so a deep analysis of the vehicle usage, specially focused on vehicle inactivity times and energy consumption, can be performed.

This deep analysis includes the application of clustering in order to find typical journeys or patterns that can be used to represent common vehicle usage.

With this information, an analysis of the potential charging feasibility is done through the energy demand, the idle times of the vehicles, and current charging system capability.

All the estimations are contextualised in several scenarios, obtaining different realities of the potential real impact of a migration towards alternative power-train vehicles, clarifying the current and future feasibility of this solution to decision-makers •

