



CONNECTED MOBILITY

Sustainable mobility

Connected Mobility

IFPEN Transports Energie Carnot Institute



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OVERVIEW AND CHALLENGES

- The vehicle sector is undergoing a double transformation:
 - one “controlled” and motivated by vehicle manufacturers themselves, although the GAFAs are encouraging them and want to play a role in it: the **driverless vehicle**,
 - the other undergone by and stemming from society, the consequence of dieselgate. Given the disaffection for diesel engines and the announced disappearance of IC engines by 2040, this transformation is accelerating the evolution of the vehicle sector towards widespread electrification and the increasing **influence of software**, onboard or otherwise.
- The tightening up of Euro standards applied to new vehicles >> manufacturers have developed increasingly sophisticated pollution control systems.
- But **real-condition emissions** are higher than the standard, due, in particular, to the fact that rating conditions are too restricted. The new WLTP (Worldwide harmonized Light vehicles Test Procedures) standard, which came into force in the fall of 2017 for all new vehicles sold from that time, will mean ratings are more reflective of reality; but the system only relates to new vehicles, i.e., a small percentage of the total vehicle fleet.
- A vehicle’s energy efficiency and emission levels also depend on its **usage in real conditions** >> connecting vehicles by exploiting the potential offered by information and communication technologies (ICTs) is designed to help drivers improve their behavior at the wheel, the ultimate

aim being **cleaner air**.

Instigating a fundamental change in mobility habits involves:

- *raising drivers' awareness of the impact of their driving on pollutant emissions and the effect of these emissions on air quality, and hence on the health of their fellow citizens,*
- *helping them to drive "better"*

For the same vehicle and the same journey, **NO_x emissions can vary by up to 400%** and **CO₂ emissions by up to 20%**: optimizing driving style is thus a major factor in reducing NO_x emissions (*source IFPEN*).

IFPEN is contributing to the improvement in air quality in towns and cities by developing connected tools, for the regions, the general public and road professionals, capable of measuring their environmental footprint (CO₂, energy and pollutants) and offering advice to help them improve their behavior at the wheel.

[Our solutions](#)

[Our networks](#)

[Our strengths](#)

CONTACT



Gilles Corde

Program manager: "Software and services" and "Air quality"

gilles.corde@ifpen.fr

News



Innovation and Industry

Events

11 - 15 October 2021

IFPEN at ITS WORLD CONGRESS 2021 in Hamburg, Germany

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