UCARE PROJECT & GVI PROJECT

new H2020 projects starting now | Norbert E. Ligterink
enabling citizens with consolidated ERMES knowledge
AMBITION

To reduce the overall pollutant emissions of the existing vehicle fleet by providing vehicle users with simple, insightful, and effective tools to decrease their individual emissions and to support stakeholders with an interest in local air quality in selecting feasible intervention strategies that lead to the desired user behaviour.
WPS & ABS

**Technical Advisory Board**

**WP 1: consolidation of existing data and information**
Preparation of monitoring systems

**WP 2: Emission reduction options for vehicle users**
On-board tool - Stand alone tool

**WP 3: Pilot project with stakeholders**
- consumer organizations, NGOs, cities
1) On-board sensors  2) data logging  3) Consumer choices replacement part  4) Identify tampering  5) Traffic simulation software  6) Retrofit solutions

**WP 4: Contextual evaluation**
Impact for Europe
Technical information for different user groups and stakeholders

**WP 5: Dissemination**
Brochures Papers Conferences Advisory Board

**WP6: consortium management**

Pilot and Dissemination Advisory Board
WP OUTCOMES

WP 1: consolidation of existing data and info
- Standardized data
  - Engine maps
  - cold start
  - non regulated
  - wear emissions
  - Tampering /
  - aging/maintenance
  - retrofit
  - HD/NRMM/PTW

- Simple monitoring
  - CAN/OBD
  - sensor-based
  - mini-PEMS

- Citizens science
  - household products
  - fairground events

- vehicle-tech. groups
  - vehicle identification
  - EU vehicle registrations

WP 2: Emission reduction options for vehicle users
- driving style
  - acceleration advice
  - braking advice
  - gear shifting advice

- trip & usage
  - cold start avoidance
  - payload
  - idling & heating

- maintenance check
  - tyre pressure
  - spotting problems
  - proper repair

- technical solutions
  - retrofitting
  - monitoring
  - adaptations

WP 3: Pilot project with stakeholders
- course material
  - personal footprint
  - do’s and don’ts

- feedback app
  - green-red signal
  - trip evaluation

- fairground setup
  - equipment
  - program

- social media
  - DIY instruction
  - user experience
  - group / competition

- user platforms
  - magazines
  - www infographics

WP 4: Contextual evaluation
- pilot evaluation
  - participation
  - achieved reduction
  - user experience
  - stakeholder review

- fleet coverage
  - pilot potential
  - penetration

- assessment
  - relevance
  - cost effectiveness

WP 5: Dissemination
- data
- pilot re-use
- instruction
- pilot portfolio
- website
UCARE CONSORTIUM PARTNERS

TNO team: project management Paul Tilanus, information management: Catelijne Rauch, scientific lead: Norbert Ligterink, and many others.
UCARE GLOBAL PLANNING

Key deliverable(s)

- WP1: ...user impact on pollutant emission
- WP2: Emission reduction options ...
- WP3: Pilot projects with stakeholders
- WP4: Impact assessment of ...
- WP5: Dissemination
- WP6: Consortium and project mngt

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UCARE PRE-PILOT COMING SATURDAY: WIN A NEW CAR IN A DIRTY CAR COMPETITION
H2020 PROJECT GVI TO SUPPORT: the shift towards emission factors based on-road measurement data
The aim of Green NCAP is to provide comprehensive, simple rating information to consumers, fleet operators and other stakeholders.

Launched in February: https://www.greencap.com/

“Green NCAP is an independent initiative which promotes the development of cars which are clean, energy efficient and not harmful to the environment. It aims to improve the quality of the air that we breathe, to maximise the use of resources used for passenger transportation and to reduce global warming.”
# PARTNERS IN GVI

<table>
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<tr>
<th>Part. no.</th>
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* REC=Research Organisation; PRC=Private Sector; PUB=Public Bodies; Int. Assoc=International Association
GOAL OF GVI

The GVI Project provides independent, transparent, reliable and objective information to the consumer by:

1. identifying the relevant criteria
2. determining the Green Vehicle Index for more than 50 vehicles
3. communication and dissemination through established Green NCAP channels and conducting a large-scale promotion campaign.

GVI will rate the test vehicles selected based on their real-world environmental performance and reward the best scoring vehicles with a high score in a technology neutral way.

This complements approval test results. The method developed in the project will assess the balance of propulsion unit design in terms of its levels of pollution and GHG emissions, its energy efficiency.

Complex test results will be converted into a digestible and understandable rating system and help the consumer in the purchasing decision of a new car and its performance during its useful life.
GVI DEVELOPMENTS

- GVI will develop a holistic scoring methodology of a vehicle’s environmental performance based on all relevant criteria for the consumer such as:
  - tailpipe emissions
  - energy efficiency
  - real-world fuel / energy consumption and driving range.
- If possible, it will extend this methodology to all aspects that consumer need to know about, like noise and operating cost. The aim is to define a single index per representative vehicle.
- The highest standard is attributed to a car with minimised pollutant emissions and greenhouse gases and, at the same time, operates at minimised fuel / energy consumption under real-world conditions during its useful life, without compromising safety.
- Technology-neutral assessment of all propulsion unit types is in the scope of the GVI project.
RATING METHOD

→ Overall Star rating:
  → 0 (poor) to 5 (best) stars

→ Two Boxes:
  → Clean Air Index (0-10pts), rating polluting components HC, NOx, CO, PN
  → Energy Efficiency Index (0-10pts), rating fuel/energy consumption
WORK PACKAGES & PLANNING

- Start in June 2019, end in December 2020
- Testing more than 50 vehicles

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<td>Roadmap, dissemination and exploitation</td>
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THANK YOU FOR YOUR ATTENTION

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