EGVI PPP Multiannual Roadmap
Information Days - Green Vehicles session

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Document of reference for the EGVI PPP:
- Context, rationale and objectives
- Research and innovation strategy
- Expected impacts
- Governance model

Based on the ad-hoc experience of the Green Cars Initiative.


Cross-sector approach: document takes into account the roadmaps produced by the three European Technology Platforms.
Automotive and Smart Systems Industries key sectors for Europe:

- Automotive: 12 million direct jobs and over €500 billion/year in turnover
- Smart Systems: 1 million direct jobs and €10 billion/year in turnover

Vehicle market facing pressing situation:

- lasting crisis situation in Europe shifts markets and profit generation to outside Europe
- jobs under pressure from lower labour costs regions, political pressure and industrial policy outside Europe
General Objectives of the EGVI PPP

- Research, development and demonstration of technologies to enable more energy efficient vehicles using alternative powertrains, strengthening the future competitiveness of the automotive industry, following CARS 2020 Strategy.

- Help to reach the ambitious targets set by the EU transport, energy and climate protection policies:
  - the 20/20/20 targets on renewable energy use,
  - the CO₂ emissions regulation,
  - the Euro emissions standards for road vehicles

- Match the transport needs within the EU with highly efficient and more flexible mobility products/services, by providing EU citizens with best-in-class technology, and matching with the Grand Societal Challenges, e.g. decarbonisation, safety, etc

- Support the policy goals of the EU Transport White Paper thanks to accelerated research, development and demonstration of technologies that allow the efficient use of clean energies in road vehicles
## Research and Innovation Strategy

- Multi-annual Implementation Plan of the EGVI PPP based on relevant research and innovation roadmaps and strategic agendas developed by the ETPs - ERTRAC, EPoSS and SmartGrids.

- Guiding objectives and milestones defined in the following documents:

| ERTRAC-EPoSS-SmartGrids joint roadmap Electrification of Road Transport |
| ERTRAC roadmap European Technology and Production Concept for Electric Vehicles |
| ERTRAC roadmap Hybridisation of Road Transport |
| ERTRAC roadmap Light-duty Powertrains and Fuels |
| ERTRAC roadmap Sustainable Freight System for Europe / Heavy Duty Truck |
| ERTRAC roadmap European Bus System of the Future |
| EPoSS Strategic Research Agenda chapter Automotive |
| SmartGrids Strategic Research Agenda |
- Revised scope to cover all types of road transport vehicles:
  - passenger cars
  - trucks
  - buses
  - L-category vehicles (mopeds, motorcycles, tricycles, quadricycles)
  - new vehicle concepts

- Defined goal and focus: energy efficiency of vehicles and alternative powertrains

- Only topics responding to this goal fall within the scope, other topics to be covered in other parts of EU funding programmes.

- Logistics aspects are no longer included in the Initiative.
Focus of the EGVI PPP

Examples of topics contributing to the goal of the PPP:

- Electrification and hybridisation of powertrains
- Powertrain adaptation to renewable fuels
- Functionality improvement of the vehicle
- Reduction of the vehicle complexity and weight
- Management of the thermal and other energy flows of the vehicle

Any technological development supporting these objectives at the relevant product layers of the value chain - from modules to systems and vehicles - are considered relevant.
Example of technology content

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**2-Wheelers**

- Alternative / lightweight materials
- Alternative fuels and energies
- Advanced materials, Equipment, Nano- / Microtechnologies

**Passenger Cars & LDV**

- Advancement and adaption of resources for green vehicles

**Trucks**

- Processing, integrating advanced (lightweight) materials & technologies
- Electrification & hybridization; Components for sensing & control;
- Energy Storage, functional integration; design for manufacturing
- Power electronics

**Buses**

- Drivetrain for alternative / renewable fuels;
- Reliability and robustness
- Advanced ICE and ICE in context of electrification & hybridization
- PT systems design, optimization, modularization and integration

- PT integration, E/E architecture, thermal management, weight reduction
- Simulation, prototyping, testing, recycling
- Safety & security of data
- Novel vehicle concepts; tailored trucks

**Integration**

- Interfaces and interaction to infrastructure outside vehicles, e.g. smart grid integration, IST for energy efficiency

**Infrastructure**

- Grid and road infrastructures
- Data networks
- Intermodal hubs
Expected Impacts of the EGVI PPP

- Improvement of the energy transport system efficiency by 50% from 2010 to 2030, including: +80% energy efficiency of urban vehicles and +40% energy efficiency of long distance freight transport

- Deployment of alternative powertrains like electric and plug-in hybrid technologies, according to milestones in 2016 and 2020 and matching respective performance parameters, as described in the Electrification roadmap:
  - 5 million Electric & Hybrid Vehicles in the EU by 2020 (0.5 million by 2016)
  - Battery life-time and energy density doubled, at 30% lower cost, in 2020 compared to 2009 Li-Ion technology.
EGVI cPPP Governance Model

- **Partnership Board**, governing body of the cPPP - mechanism for dialogue between public and private sides:
  - Public side: DG RTD, DG MOVE, DG CNECT
  - Private side: Members of the EGVIA Industry Delegation

- Role: preparation of the Work Programmes and Calls for proposals of the European Green Vehicles Initiative, as well as any updates of the PPP Multiannual Roadmap.

- Private side input prepared through a continuous process of stakeholder consultations within EGVIA (workshops and multiannual implementation plans resting upon the long-term roadmaps and strategic research agendas of the ETPs).
EGVI PPP Governance Scheme
Thank you for your attention!

More information? www.egvi.eu

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