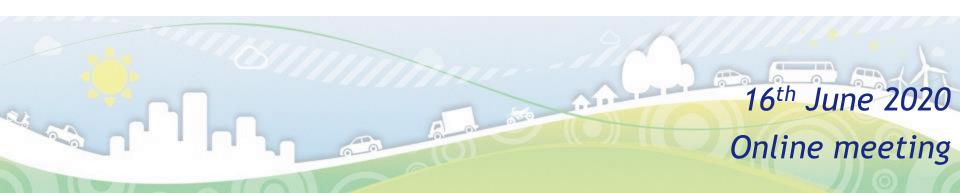


# 2Zero partnership presentation in the ETNA2020 webinar



# From a vehicle focus to a system approach



# **Green Cars** 2008-2013

- Focus on electrification
- Cars, Long distance / Trucks and logistics

# Green Vehicles 2014-2020

- Energy efficiency of vehicles using alternative powertrains, including electric powertrain
- 2 wheelers, cars, vans, buses, coaches and trucks

### 2Zero 2021 - 2027

- System approach for zero emission road mobility for people and goods
- Support carbon-neutral EU by 2050: strategies and roadmaps for 100 % renewable energy in transport
- All type of road vehicles
- Sector interconnection and interoperability (vehicles, energy, logistics, infrastructure ...)

### What do we want to achieve?



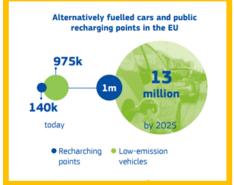
- Pave the way to achieve the vision described in the ERTRAC SRA:
  - ▶ 100 % renewable energy for transport
  - ► Emission-free in urban areas
  - ► Negligible emissions in rural areas
- Hence the partnership will contribute to:
  - Europe having the first carbon-neutral road transport system by 2050;
  - ► Technology leadership supporting economic growth and job creation all over Europe;
  - Ensure European competitiveness thanks to solutions for an integrated carbon neutral road transport ecosystem;
  - Improve the quality of life of EU citizens and ensure mobility for people and goods.

# 2Zero partnership will bring a key contribution to the Green Deal



Vehicle technologies and vehicle propulsion solutions for BEV and FCEV

Integration of the battery electric vehicle into the energy system and related charging infrastructure





- Automated mobility and smart traffic management systems will make transport more efficient and cleaner.
- Smart applications and 'Mobility as a Service' solutions will be developed.



The Green Deal will address emissions, urban congestion, and improve public transport

Innovative concepts and services for the zero emission mobility of people and goods

LCA and circular economy approaches for sustainable and innovative road mobility solutions

# How to achieve this vision? The proposed scope of 2Zero



Layers

**Technology innovations** 

Process and operation innovations

Crosscutting Business models innovation

#### Funded areas

Vehicle technologies and vehicle propulsion solutions for BEV and FCEV

Integration of the battery electric vehicles into the energy system and related charging infrastructure

Innovative concepts and services for zero emission mobility of people and goods

LCA and circular economy approaches for sustainable and innovative road mobility solutions

#### **Key Enabling Technologies**

Batteries, Hydrogen fuel cells, AI, smart systems, sensors development ...



# On propulsion technologies, 2Zero funding will focus on zero tailpipe emission vehicles



### Battery Electric

### Fuel cell electric vehicles











#### BEV

- Vehicle integration of innovative battery technologies
- Vehicle architecture
- Battery management systems and thermal system
- Battery packs and modules
- Power electronic and charging solutions
- Advanced electric motors
- Integration of BEV into the grid

#### FCEV

- Electrification of heavy duty vehicles
- Integration of fuel cell systems into vehicles, focusing on heavy duty vehicles
- Synergy of electronics and vehicles architecture with electric vehicles
- Integration of hydrogen components (tank, sensors,...)

### 2Zero interaction with other coprogrammed and institutional partnerships



#### Clean Hydrogen

- Hydrogen production
- H2 energy storage
- Infrastructure deployment
- Fuel cells systems

## 2Zero

Vehicle integration Mobility solutions System approach

#### CCAM

- Automated driving
- Connected and cooperative mobility
- New mobility and logistics services

#### **Batteries**

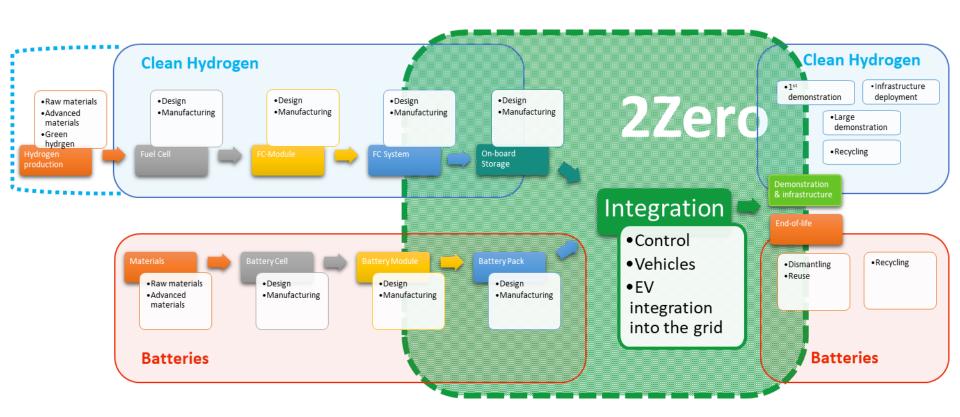
- Materials
- Electrochemistry
- •Cell design
- •Cell manufacturing
- Second use

# Key digital technologies

- Electronic components and systems
- Software

# A special coordination with Batteries and Clean Hydrogen





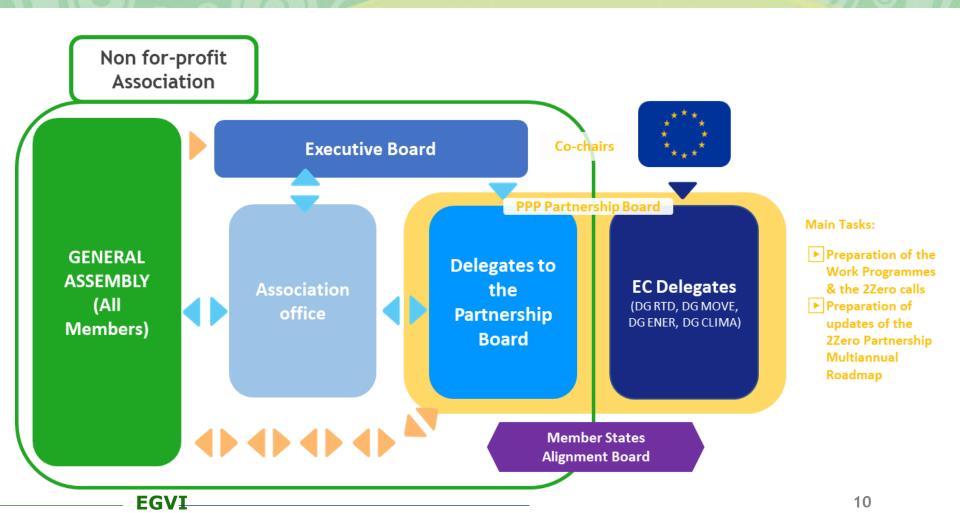
# Synergies with other partnerships



- Connected, cooperative and automated mobility - CCAM
  - Cooperation at vehicle architecture level
  - Interaction in "innovative concepts and services"
  - Possible joint testing activities
- Key Digital Technologies KDT
  - ► Integration of enabling technologies
  - Definition of requirements

# Proposal for the 2Zero Governance structure





# Building upon the existing community



- Keep a lean and flexible structure
- Restructure EGVI partnership according to 2Zero scope, activities and objectives.
- ETPs supporting the partnership:
  - **ERTRAC**
  - ► EPoSS
  - **ETIP-SNET**
  - **ALICE**
  - The newly ETIP on batteries could also become a supporting platform to be discussed with the Governing Board.
- Additional members will be involved to properly cover all areas of the new partnership (TSOs, DSOs, charging point operators, logistics, public authorities ...)

EGV:

### 2Zero membership



#### Who could be member?

- Any stakeholder interested in the R&I areas covered by the partnership
- Industry, research organizations, universities, NGOs, associations ...
- Organisations should be based in the EU or associated countries

### How to become a member in the "2Zero association"?

- ► EGVIA members will have the opportunity to continue their membership in the new association
- Stakeholders can apply at any time of the partnership duration applications should be validated by the General Assembly (all members)
- Yearly membership fees will apply with a different fee according to the categories

### How to apply?

- ▶ Just send an email to EGVIA office: info@egvi.eu
- ▶ The next General Assembly will be organized in Autumn.

# Expectations with the proposed set-up of an Alignment Board



- Reinforce the links to national level
  - Exchange of information on the national priorities to better link national and EU activities
  - ► Ensure successful deployment of activities in coordination with national funded activities
  - ► Reinforce the collaboration among Member States
- Improve the coordination among the different EU funding tools
  - ► Improve the coordination of the use of EU funds and schemes (IPCEI, CEF, Structural funds ... )
- Improve dissemination of knowledge generated through EU funded projects
  - Provide information to the MS on the latest advancements of the State of the Art in the area of the partnership

### **Current status of preparation**



- The partnership proposal has been published by the EC, and is also available on EGVI website.
- The drafting of the 2Zero Strategic Research and Innovation Agenda (SRIA) has started
  - ▶ 2 "Plenary" meetings have been organized
  - ► More than 500 contributors to the 4 Working Groups
  - ▶ WGs are compiling inputs through emails and dedicated phone meetings.
- The consolidated draft version of the document is expected end of June



Thank you for your attention!

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