







26/07/2023 – Presentazione bandi a cascata Spoke 2 – Sustainable Road Vehicle

Andrea Tonoli (andrea.tonoli@polito.it)

CN 00000023 – Centro Nazionale per la Mobilità Sostenibile PNRR M2C4 – Inv. 1.4











Spoke 2: actions and objectives







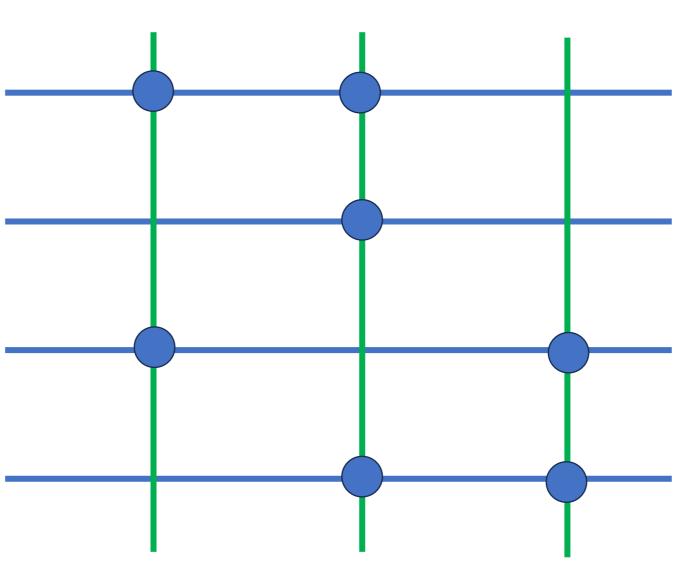




Obiettivi

- O1. Algorithms of energy flow management for vehicle efficiency optimization
- O2. Development of ZEV powertrain for zero emission passenger and commercial vehicles
- O3. Cloud connectivity for monitoring, diagnostics and predictive maintenance functions
- O4. Component optimization for carbon footprint reduction





























Spoke 2: activity breakdown

O1. Algorithms of energy flow management for vehicle efficiency optimization

O2. Development of ZEV powertrain for passenger and commercial vehicles

O3. Cloud connectivity for monitoring, diagnostics and predictive maintenance

O4. Component optimization for carbon footprint redcution

Demo urban e-passenger car



Task

T1.2 - Energy management based on environmental perception

T1.3 - Vehicle integrated in the network for V2G functions

T2.4 - Optimal HW and control strategies for fuel cells systems

Task

T1.6 - Vehicle modularity for user adaptability

T2.2 - Virtual analysis and optimization of H2 electric powertrain

T2.3 - Mechanical, electrical, and thermal testing of H2 powertrain

T3.2 - Hybrid composite material-metal components for **H2** storage

T4.3 -Comfort for assisted driving

Task

T1.4 - Vehicle in the cloud for vehicle safety and reliability

T3.4 - Al-based methods for vehicle data management

T4.2 - Ergonomics analyses

T4.4 - Analysis of passenger diseases and vibrations correlation

Task

T1.5 - Recycling of edrive and LCA

T2.5 - Stylistic design engineering of vehicle chassis and body

T3.3 - Active and semiactive suspensions based on MR fluids

T5.2 - Suspension and transmission systems

T5.3 - Hierarchical multiscale modelling of conventional and renewable rubbers for tires

T5.4 - Innovative layouts and tire-road interaction

T5.5 - Low energy consumption tyre development



Demo light duty H2V



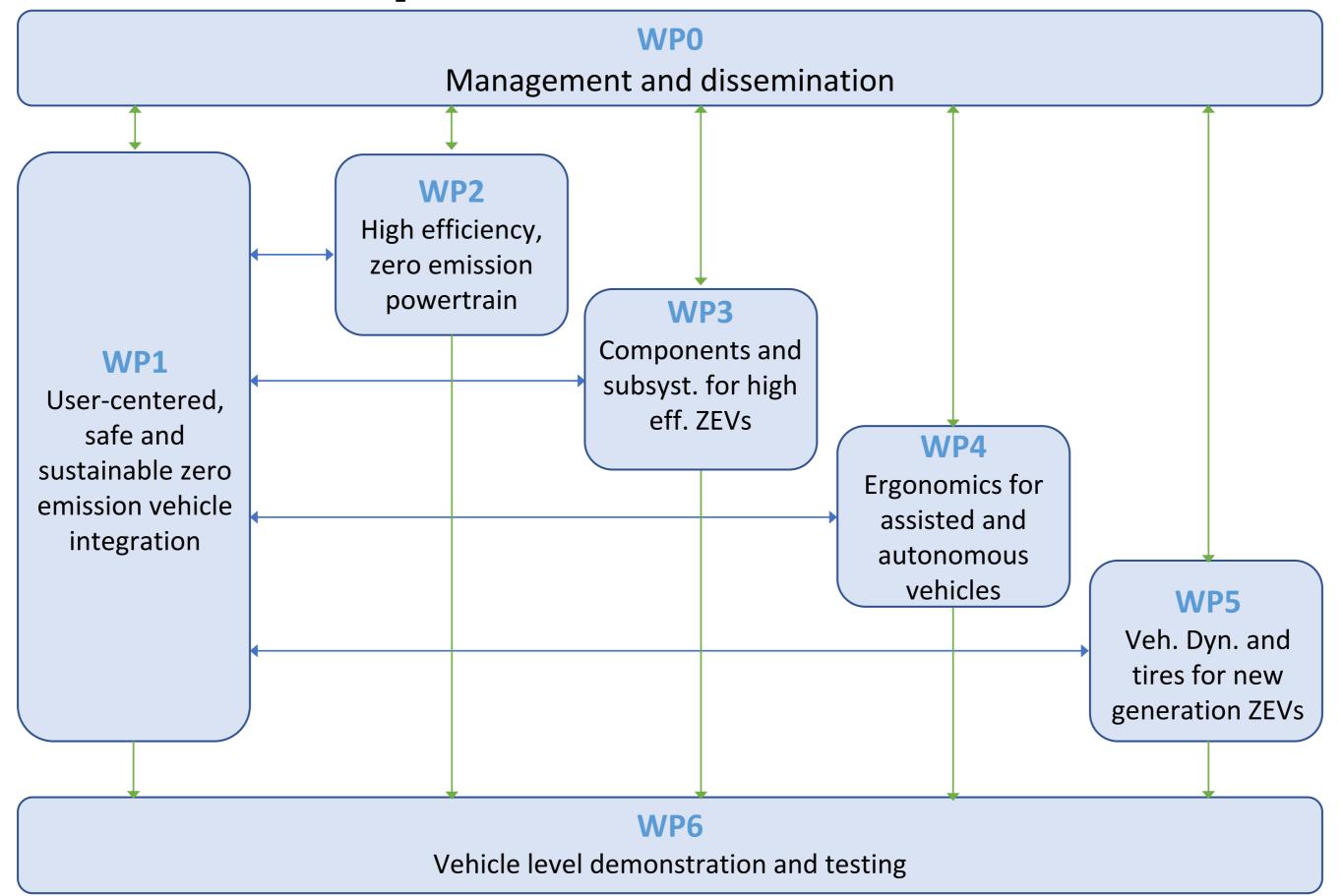








Spoke 2: WP structure











Spoke 2: Open calls

Num.	Topic	Dimensione Massima (k/€)
1	Collaborative design, realization, and testing of a 90 kW DC/DC converter for fuel cell interfacing.	218
2	Prototype Fuel-Cell Powetrain.	218
3	Fuel Cell Powertrain database information.	318
4	Modular battery energy storage system for urban passenger cars equipped with BMS.	318
5	Cloud technologies for vehicle and driver monitoring for functions of predictive maintenance and diagnostics.	318
6	Power electronics for bi-directional interaction between low voltage vehicle battery system and power grid at urban or domestic charging stations.	318









MOST – Centro Nazionale per la mobilità sostenibile

Via Durando 39, 20158 Milano

segreteria@centronazionalemost.it

Tel. 02 91773004

www.centronazionalemost.it





