

JOINT FINAL EVENT 12 & 13TH NOVEMBER 2019, SANTA OLIVA, SPAIN



Welcome from the Project Officer

Marina Kousoulidou - Scientific Project/Programme Officer -
INEA/Horizon 2020 Transport Unit

Background: Horizon 2020, Green Vehicles Call for 2016

- ▶ Growing road traffic in Europe results in detrimental effects on the environment and public health despite increasingly stringent emission standards
- ▶ In particular, CO₂ and noxious emissions may not be sufficiently reduced in real driving from all engine technologies, whilst higher fuel injection pressures may have led to increases in the emissions of nanoparticles that are undetected by current certification procedures

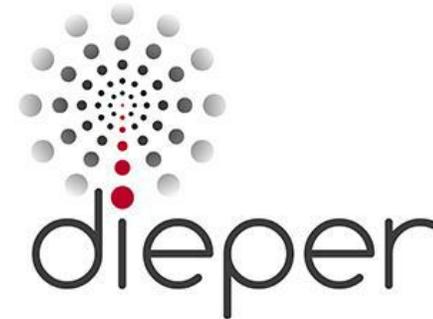
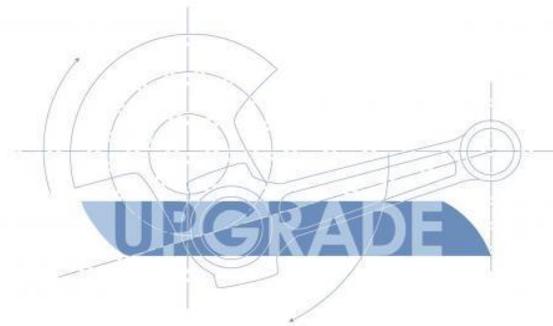
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- ▶ The challenge is to develop a new generation of engine technologies that are truly and significantly **more fuel efficient** than the best 2015 equivalents **under real driving conditions**
- ▶ And to demonstrate pollutant emissions levels from these technologies that can meet with the upcoming **Euro 6 RDE** limits and **particle number emissions measured with a 10nm size threshold**

Horizon 2020, Green Vehicles Projects for GV-02-2016



► Cluster of seven projects:



► PaREGEn: **P**article **R**educed, **E**fficient **G**asoline **E**ngines

- ▶ The PaREGEEn project addresses the **short term** development scope of GV-02-2016 for **direct injection gasoline engines** used in **mid to premium sized passenger cars**
- ▶ Since, with the electrification of the powertrains in smaller vehicles, this class of cars will become the preferred choice for inter-urban and regional passenger transport
- ▶ And improving these vehicles will be effective to address the societal challenges of air quality, decarbonisation and cost-effective mobility

The PEMs4Nano Project



- ▶ The PEMs4Nano project **addresses the development** of measurement procedures **as low as 10 nm**
- ▶ Providing a **contribution to future regulation** on particle emissions, in particular, for real driving conditions
- ▶ This includes a **detailed understanding** of the underlying **particle formation** processes and size selective **chemical composition**
- ▶ Three prototypes have been developed (2 PEMS systems and 1 laboratory system)
- ▶ The prototypes are on display today and tomorrow

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