

WG mobility

General Assembly / Catania - IT, 28 June 2024 and consequent analysis until October 2024:

STATEMENT on SUSTAINABLE MOBILITY

Preferred modes of transport

The working group **Mobility of the RUS**, which brings together 76 Italian universities and deals with **sustainable transport and mobility**, deems and resolves that a **multi-modal** and **flexible mobility** should be pursued as far as possible in a **hierarchical and integrated manner**, i.e. in which:

- A) larger-scale travel - typically among metropolitan and urban areas in Europe - takes place, whenever possible, via the TEN-T rail network as well as via lower-tier rail-related networks, i.e. regional, metropolitan or local;
- B) at the local level, travel needs are met with the most appropriate transport systems in terms of sustainability understood in its entirety: economic, social and environmental; therefore, preference should be given to modes with lower specific *energy consumption* (kWh/pass·km) with less use of fossil fuels, lower *local pollutant emissions*, *active personal mobility*, safeguarding the *safety* of people during journeys as well as the *maintainability of infrastructure and vehicles*, to ensure their quality, safety and efficiency over time. This approach also aims at limiting the use of *land with public access* by vehicles.

Preferred road engines, motors and energy carriers

With regard to **motor vehicles**, the European Parliament's deliberation on the 100 per cent reduction of locally measured CO₂ emissions (2.2023)¹, on newly manufactured vehicles by 2035 clearly and plausibly expresses a concept - oriented towards the transport supply - that needs to be completed.

The additional steps to pursue the objective, both on the side of transport supply and on the side of demand for motorised mobility, are aimed - for consistency with the Physics and Chemistry of the problem - at making the choice more objective, aware of its absolute unattainability in the state of knowledge; they involve:

- 1) an analysis of climate-altering emissions from the energy source used to the wheel (WTW, well-to-wheel analysis), not only from the tank to the wheel (TTW, *tank-to-wheel* analysis), inevitably considering the entire life cycle of the vehicle (LCA, *life cycle analysis* approach). It could indeed be the case that a battery electric vehicle (BEV), although not generating locally CO₂ emissions during the operation, requires more CO₂ emissions for its **production, transport and power generation** than a thermal or hybrid-electric vehicle, depending on the energy mix of the country in which the vehicle is produced and how the electricity for charging is generated and delivered;
- 2) the analysis of **transport demand**, i.e. the satisfaction of motorised mobility needs, in their wide variety and entirety;
- 3) the inclusion of climate change mitigation in the broader concept of **sustainability**, hence also economic and social sustainability.

Therefore, consensus and science - in the environmental context of mobility - still have steps to take: these may possibly bring that an exclusively environmentalist component - which perhaps aims more at de-fossilisation, in parallel with the use of renewables, rather than decarbonisation - closer to the more comprehensive concept of **sustainability** in its economic and social meanings as well, to the benefit of all in the European Union².

The areas to which the **local pollution**, due to numerous sources, can be ascribed typically coincides with **the most densely populated areas**, generally **cities**; within them, vehicular traction can be associated with **zero or near-zero local emissions**, as they are exempt from a local thermal process, thus leaving freedom of movement and giving preference to the best energy efficiency in the overall cycle outside these areas, so as to satisfy those flexibilities that the car pursues, albeit subordinate to a European hierarchical logic in transport as per points A and B above.

¹ [2021/0197\(COD\) - 14/02/2023 - CO2 emission standards for cars and vans \(europa.eu\)](#)

² [CO₂ emission performance standards for cars and vans - European Commission \(europa.eu\)](#)