



Harmonised rules to support the rise of micromobility  
and increased road safety for personal mobility devices

15/12/23

- **This session is being recorded and will be made publicly available**
- Please ensure your microphones are muted
- There will be an opportunity to ask questions at the end of the session
- The views expressed in this session are those of TRL and fka and do not necessarily represent the policy position of the European Commission



# Objectives of the study

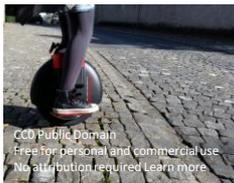
- A classification of existing PMDs with a view to determining groups of devices and common criteria based on design elements.
- A detailed analysis of the market share and rise of the various PMDs to determine those that would most benefit from EU-wide rules.
- An analysis of available data and information on crashes involving PMDs.
- Quantify the impact on market development of the fragmented pieces of legislation in terms of both technical and road traffic rules across the EU.
- Propose regulatory options for common technical safety design requirements on the basis of the obtained classification and interlinks with existing pieces of EU legislation.



- Stand-up and seated e-scooters
- Electrically assisted pedal cycles including electrically power assisted cycles (EPACs), those currently within the scope of Regulation (EU) No 168/2013 and those intended for carrying passengers and/ or cargo
- Self-balancing vehicles including self-balancing personal transporters and hoverboards
- Electric unicycles
- Electric skateboards and ‘One-wheel’ boards.



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# 2021 Study: Key Recommendations

- Create a dedicated approval process for PMDs separate from Regulation (EU) No 168/2013 and the Machinery Regulation (Regulation (EU) 2023/1230)
- Regulate maximum speed at an appropriate level for safety and infrastructure (25 or 30km/h?)
- If it is necessary to regulate maximum motor power do so at a level that does not discourage the development of new vehicle configurations (1,000W?)
- Change the L1e-A sub-category to increase the maximum assistance speed limit to 45km/h while retaining the 1,000W motor power limit without a cap on maximum assistance factor



# The TRL/fka vision for micromobility technical rules

- A simple cutoff from the L-category based on maximum speed and mass (e.g. 30km/h, 250kg?)
- A simple scheme of technical rules that require minimal technical resources to demonstrate compliance
- Primarily performance-based requirements (e.g. stopping distance from maximum speed at maximum load)
- Primarily self-certified by manufacturers, importers or distributors



# Key challenges we foresee

- “Tampering” to increase maximum speed – safety is intrinsically linked to limiting maximum speed. We need to find robust methods to ensure that speed limits are obeyed.
- “The right to repair” – we need to ensure that measures to prevent “tampering” do not lead to products that are unrepairable.
- Enforcement – we need to ensure that compliant products are easily recognisable to the public and enforcing authorities
- Overlaps with machines intended specifically for use by disabled people



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# Requests for assistance

- Market data
- Evidence on the ways in which a lack of harmonised regulations is affecting the micromobility industry
- Collision data – particularly, detailed accounts of collision mechanisms
- Suggestions and feedback on cutoff limits for micromobility (30km/h, 250kg ??) – do we need to include factors other than mass and speed?
- Suggestions and feedback on technical requirements
- Suggestions and feedback on a pragmatic but effective system for self-certification which enables easy enforcement?
- Potential unintended consequences



- How to contact us
  - [Micromobility@trl.co.uk](mailto:Micromobility@trl.co.uk)
- Timeline - This project started in October and will run until July 2024

Tasks	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24
<b>Task 1: Provide a classification and identification of the different personal mobility devices based on their design and market share</b>										
Literature review										
Stakeholder engagement										
Analysis of crash data										
Overview PMDs										
Classification based on safety features										
<b>Task 2: Impact of having fragmented legislation and regulatory options on common technical safety design requirements</b>										
Literature review										
Stakeholder engagement										
Overview national regulation										
Impact analysis of fragmented legislation										
Sample survey of city authorities										
Definition of requirements to ensure road safety										
<b>Task 3: Project management and Quality Assurance</b>										