

# Status Report of Informal Working Group on Validation Methods for Automated Driving (VMAD)

**United Nations Economic Commission for Europe (UNECE)**

**Working Party on Automated/Autonomous and Connected Vehicles (GRVA)**

January 23-27, 2023

Hybrid



**UNECE**

# Purpose



To provide a status update on the work of the Informal Working Group on Validation Methods for Automated Driving (VMAD) :

- Brief review of work and deliverables until June 2024
- VMAD IWG activities since GRVA 14th
- Collaboration between FRAV and VMAD
- Proposal future meetings VMAD

# VMAD Deliverables until the WP.29 June 2024



Activities	Deliverables	Timeline
<ul style="list-style-type: none"> <li>• Start of development of safety verification methods, linking to the status of FRAV's consideration of technical requirements for DDTs, etc.</li> <li>• Description how to create and maintain the catalogue for scenarios (SG1)</li> <li>• Description of the credibility assessment (SG2)</li> <li>• Description of ISM&amp;R (SG3)</li> <li>• Description for RWT (SG4)</li> </ul>	<p>2nd iteration of the Guidelines for NATM including outcome of "outstanding issues"</p>	<p>June 2023 (WP.29),            May 2023 (GRVA, adopt)            January 2023 (GRVA, information: <i>GRVA-15-26</i>)</p>
<p>Progressive increase in FRAV-VMAD collaboration towards 2024 deliverable of consolidated submission.</p>	<p>Consolidated FRAV/VMAD submission (requirements + assessment)</p>	<p>June 2024 (WP.29),            May 2024 (GRVA adopt),            January 2024 (GRVA, information)</p>

# VMAD IWG activities since GRVA #14



- VMAD hold its meetings on October 4+5 and December 14+15 2022, the latter of which was back to back with the FRAV meeting in Tokyo
- Subgroups started up their activities again. Progress per Subgroup:
  - Scenarios: “abstract scenario” has been included in the scenario descriptions as another example of a scenario layer structure
  - Simulation: a Proof of Concept is conducted to translate the “Credibility Assessment” into a practical method
  - Audit/In-Service Monitoring & Reporting: ISMR and SMS audit are being elaborated
  - Track-/Real World testing: development of critical scenario for Track testing. Description of variations in process for Real World Testing

# Next steps in collaboration between FRAV and VMAD



- A joint leadership meeting took place before the FRAV/VMAD meeting in Tokyo. In this meeting we have described the joint vision and a proposal for the execution of the first iteration to link requirements with validation methods and detect which requirements and/or validation methods need further elaboration. This proposal has been presented in both FRAV and VMAD meeting (VMAD-28-10).
- For this first iteration, a Small Drafting Group is expected to start in January, the scheduled delivery of their output is April 2023.
- Meetings among co-chairs from FRAV and VMAD will continue on an irregular basis.
- In addition to the general approach taken so far by FRAV/VMAD, it was proposed to study Lv.4 in depth as a specific case, which will be discussed further at the next VMAD meeting.

# Proposal future VMAD meetings



- January 2023: kickoff meeting for small drafting group
- February 27-28: #29 VMAD IWG (web-conference)
- April: #30 VMAD IWG (hybrid meeting, ITU option for hosting?)
- May 9-10 #31 VMAD IWG (Webex)

**Thank you!**

