

Transmitted by the chairpersons of the informal working group on ADS (Automated Driving Systems) and the chairpersons of the GRVA Workshops on ADS

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*For review at the Bangkok meeting,
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Provisional agenda items 4(a) and 4(b)

Progress report of the informal group on Automated Driving Systems and the GRVA Workshops on Automated Driving Systems

The text reproduced below was submitted by the chairpersons of the informal group on ADS and the chairpersons of the GRVA Workshops on ADS. It provides a progress report on the activities under the informal working group and GRVA workshops. It proposes the structure for the progress reports on the activities and work.

GRVA-22-12/Add.1 contains the progress report to AC.3. that relates specifically to the development of a new UN GTR on ADS (ECE/TRANS/WP.29/AC.3/64).

I. Objective of the proposal to develop regulation on ADS

1. The representatives of China, Canada, European Commission, Japan, United Kingdom of Great Britain and Northern Ireland and the United States of America proposed that GRVA develop of a UN Regulation and a UN GTR on Automated Driving System based on the outcome of the pre-regulatory phase which concluded with the adoption of “Guidelines and recommendations for Automated Driving System safety requirements, assessments and test methods to inform regulatory development” (ECE/TRANS/WP.29/2024/39). The World Forum for Harmonization of Vehicle Regulations and the Executive Committee of the 1998 Agreement (WP.29/AC.3) gave their consent for development of a global regulation on the safety of automated driving systems (ECE/TRANS/WP.29/AC.3/64).

2. The objective of this regulatory activities is to develop a truly global regulation addressing the needs of the Contracting Parties to the 1958 and 1998 vehicle regulations Agreements, aimed to prevent the fragmentation of regulatory approaches and avoid delaying the deployment of new technologies with the potential of improving road safety, promoting cleaner and greener transport, promoting social inclusion, and supporting economic growth.

II. Background

3. Since its inception in 2018, GRVA structured its activities using the Framework Document on Automated Vehicles, which provided a safety vision and key principles that needed to be considered when developing requirements connected and automated vehicles as well as the mandate for the GRVA activities on Functional Requirements for Automated Vehicles and on the Validation Method / New Assessment Test Method. The two activities produced the document title “Guidelines and recommendations for Automated Driving System safety requirements, assessments and test methods to inform regulatory development”. Following the completion of this pre-regulatory phase and the adoption by WP.29, GRVA discussed the modalities of the following activities.

4. As established in the Framework Document¹, GRVA started in 2018 to develop several legislative elements for vehicle automation:

¹ UN Economic Commission for Europe, Revised Framework document on automated/autonomous vehicles (ECE/TRANS/WP.29/2019/34/Rev.2), last amended March 2023 by ECE/TRANS/WP.29/2023/43 and ECE/TRANS/WP.29/2023/151

- 1) Functional Requirements for Automated/Autonomous Vehicles (FRAV)
 - 2) Validation Methods for Automated/Autonomous Driving (VMAD)
 - 3) Requirement for Cyber Security and Software updates (CS/OTA)
 - 4) Requirements for data storage (EDR and DSSAD)
5. Items 3 and 4 (EDR) have been mostly completed and resulted in harmonised guidelines and UN Regulations (UN Regulation 155 on cybersecurity and UN Regulation 156 on software updating). Item 4 (DSSAD) is still in progress.
6. The informal working group on FRAV delivered guidelines for regulatory requirements to be accepted in GRVA and finally in WP29.
7. The informal working group for VMAD had their first deliverable (“Master Document on New Assessment and Test Methods”) endorsed in WP.29 in June 2021 as a reference document. A second iteration was endorsed in WP.29 in June 2022, together with its translation into Guidelines. These Guidelines are an extract of all requirements from the Master Document, leaving out backgrounds and explanations.
8. The integration of the results from FRAV and VMAD led to the overall ADS requirements and validation document mentioned above. The FRAV and VMAD mandates expire in September 2024.
9. During that process, the industry has repeatedly indicated the need for an ADS regulation to be delivered by 2025; the European Commission urged WP.29 and GRVA to update their work programme in that direction. The industry consistently expressed its concern with the lack of progress in addressing such request.
10. In 2022, the European Commission issued rules for the type-approval of specific ADS functionalities in small series, implementing the principles and methodologies developed by the FRAV and VMAD IWGs². At present, also other 1958 Agreement CPs started the regulatory work to allow ADS-equipped vehicles on their roads.
11. In 2022, the UK government set out its vision and plan for connected and automated mobility in a policy paper titled 'Connected and automated mobility 2025: realising the benefits of self-driving vehicles'³. In 2024, the UK Government passed the Automated Vehicles Act (2024) into law which built upon a multi-year review of the law relating to self-driving vehicles⁴. Work has begun to establish a legislative framework for the safe and secure roll-out of automated vehicles, for which a harmonised approval regulation for automated driving systems would play an important role.

III. Subjects for review and tasks to be undertaken

12. The task undertaken by the IWG on ADS are listed in para. X below.
13. The tasks of the GRVA Workshops on ADS include the development of administrative requirements for a GTR ADS, a UNR ADS as well as the development of an interpretation document which is planned as a second phase activity.

For the UN GTR:

² Commission Implementing Regulation (EU) 2022/1426 of 5 August 2022 laying down rules for the application of Regulation (EU) 2019/2144 of the European Parliament and of the Council as regards uniform procedures and technical specifications for the type-approval of the automated driving system (ADS) of fully automated vehicles (OJ L 221, 26.8.2022, p. 1–64)

³ UK government, Connected and automated mobility 2025: realising the benefits of self-driving vehicles, 19th August 2022

⁴ UK Government, Automated Vehicles Act 2024, <https://www.legislation.gov.uk/ukpga/2024/10/contents>, 20th May 2024

Task #	Topic
1	Statement of technical rationale
2	Introduction
3	Procedural background
4	Technical background
5	Principle for developing the regulation
6	Technical rationale and justification
7	Benefits and costs
/	Appendix: Documentation of development of GTR

For the UN Regulation:

Task #	Topic
1	Application for approval
2	Approval
3	Modification of vehicle type and extension of approval
4	Conformity of production
5	Penalties for non-conformity of production
6	Production definitively discontinued
7	Names and addressed of Technical Services responsible for conduction approval tests and of Type Approval Authorities
8	Communication and information document
9	Arrangement of approval marks

IV History of the discussions

A. Details from the IWG on ADS session

14. See GRVA-21-44/Add.1

B. Details from the GRVA Workshops on ADS.

(i) First workshop

15. The first GRVA Workshop on Automated Driving System took place on June 2024 as an online meeting. The experts reviewed in detail the three tasks assigned by the Regulatory approach for Automated Driving System (WP.29-191-31/Rev.1):

(a) Drafting and discussing the specific provisions needed for a UN Global Technical Regulation (e.g. technical rationale),

(b) Drafting and discussing the specific provisions for a UN Regulation (e.g. marking provisions),

(c) Preparing a guiding/interpretation document for the implementation of the regulations.

(d) The Workshop called for volunteers to be “Officers of Principal Interest” (OPI) to develop the necessary paragraphs mentioned in the tasks (a) and (b).

(ii) Second workshop

16. The second GRVA Workshop on Automated Driving System was organized as an online meeting in September 2024. The Workshop reviewed the initial input provided by the

volunteers. They noted that the final wording would develop following the review of the draft paragraph in light of the progress made by the IWG on ADS. The workshop received a presentation from industry providing views and considerations for an Automated Driving System (ADS) regulation.

(iii) Third Workshop

17. The third GRVA Workshop on Automated Driving Systems was hosted by China in Beijing in October 2024 as a hybrid event. The workshop discussed on proposals provided by the designated OPIs towards UN Global Technical Regulation as well as UN Regulation. The experts nominated as OPIs towards UN Global technical regulation submitted a consolidated draft version of the document towards statement of technical rationale and justification. This document was well discussed during the workshop and received inputs from other experts. Similarly, experts nominated as OPIs towards UN regulation submitted a draft towards relevant paragraphs of UN regulation.

18. In addition to above draft documents, expert from industry presented a document for consideration of new approach for the UN regulation on ADS. The participants noted that such considerations should not delay the ongoing work. OICA was asked to prepare a more elaborated version of the proposal together with some other participants. An option could be to prepare this proposal as an interpretation (Task 3)

19. The workshop also discussed on the status as well as synchronising the work with IWG on ADS. It was noted that this activity can be progressed once draft structures would be made available, It is agreed to discuss this topic in upcoming schedules of workshop as well as IWG-ADS.

(iv) Fourth Workshop

20. The fourth GRVA Workshop on Automated Driving Systems (ADS) took place online on December 17 and 19, 2024. Chaired by representatives from Germany, China, and Japan, the workshop brought together 72 experts from various countries and organizations. The primary goal was to review the progress of the Informal Working Group (IWG) on ADS and discuss the development of the UN Global Technical Regulation (GTR) and the UN Regulation on ADS. The session aimed to integrate inputs from different task forces and informal groups to ensure a harmonized approach to ADS regulation.

21. The workshop began with a progress review of the IWG on ADS, presented by the expert from Japan. This presentation highlighted upcoming meetings, projected deliverables, and the coordination between the IWG on ADS, GRVA ADS workshop, and ambassadors. The group agreed on the proposed timeline to finalize draft inputs by April 2025 and present an integrated document by July 2025. Discussions also covered the agreed structure of the regulation and the progress on various chapters, including the overlap between the new UN Regulation on ADS and UN Regulation No. 157 (ALKS).

22. The review of inputs for the UN GTR on ADS included presentations on the Detailed Task Decomposition Framework Structure and OPIs Table for GTR. The group discussed the need for additional volunteers for open sections in the GTR and reviewed the integrated document prepared by the expert from China. Key sections such as the introduction, procedural background, technical background, principles for developing the GTR, and technical rationale and justification were discussed. The group noted the need to revisit the terminology used for Operational Design Domain (ODD) and agreed to further review the benefits and cost section in the upcoming workshop.

23. For the UN Regulation on ADS, the secretariat presented the updated Detailed Task Decomposition Framework Structure and OPIs Table. The expert from the Netherlands presented documents relevant to the scope of the draft UN Regulation on ADS and justifications to exclude ALKS from its scope. The group discussed the need to harmonize the text and agreed to further discussions on the safety management system, approval, and approval marking. The expert from the United Kingdom, on behalf of the OPI for the approvals topic, presented possible solutions for mutual recognition based on the 1958 Agreement, and the group agreed that further discussion was needed. The workshop concluded with a briefing on future sessions and the integration of documents with the IWG on ADS, with the next session scheduled for February 13-14, 2025, in an online format. The

group also agreed to prepare a report for consideration by GRVA in January 2025 and requested the secretariat to compile the information for WP.29 and AC.3.

(v) Fifth Workshop

24. The fifth GRVA Workshop on Automated Driving Systems (ADS) was held online on February 13–14, 2025, bringing together 72 experts from various Contracting Parties and organizations. The workshop focused on reviewing the progress of the Informal Working Group (IWG) on ADS and advancing the development of both the UN Global Technical Regulation (GTR) and the UN Regulation on ADS. A key objective was to integrate contributions from different task forces and informal groups to ensure a harmonized regulatory approach.

25. The workshop opened with a review of the draft inputs for the UN GTR on ADS. China's expert presented a consolidated document covering the introduction, procedural and technical background, development principles, and technical rationale. The group discussed revisiting the terminology for Operational Design Domain (ODD) and agreed to further examine the benefits and costs section in the next session. The Netherlands highlighted the need to clarify the scope of the UNR-ADS and differentiate it from UN R157 (ALKS).

26. Regarding the UN Regulation on ADS, the Netherlands proposed three options for defining its scope: maintaining separate regulations with a general scope, linking the new UNR-ADS to UN R157, or incorporating specific UN R157 requirements into an annex of the new regulation. The group emphasized the importance of harmonizing the text and agreed to continue discussions on safety management systems, approval processes, and marking. The UK expert presented potential solutions for mutual recognition under the 1958 Agreement, which the group agreed required further exploration.

27. The workshop concluded with a briefing on upcoming sessions and coordination with the IWG on ADS. The next meeting is scheduled for March 25–26, 2025, to be held online. Participants agreed to prepare a report for GRVA's January 2025 session and requested the secretariat to compile the necessary documentation for WP.29 and AC.3. No additional business was raised.

(vi) Sixth Workshop

28. The 6th GRVA Workshop on Automated Driving Systems (ADS) was held online on March 25 and 26, 2025, chaired by the GRVA Chair. The session brought together participants from Contracting Parties, industry, and international organizations to review progress on the development of the UN Global Technical Regulation (GTR) and UN Regulation on ADS. The group reviewed the integrated documents prepared by OPIs, noting structural changes and the consolidation of existing directives and standards into annexes. Updates were provided on the introduction, procedural background, and technical background sections, including agreement on terminology such as the use of "ODD" and updates to the term "vehicle manufacturer."

29. The workshop also addressed the rationale and justification for safety case requirements, with the expert from SAE International emphasizing the need for a clear explanation of the safety assessment framework. Discussions on cost-benefit analysis highlighted differing perspectives, with SAE proposing a model based on regulatory impact and crash prevention benefits, while OICA raised concerns about focusing too heavily on regulatory development costs. The GRVA Secretary clarified that the 1998 Agreement allows flexibility in defining cost-benefit approaches and recommended focusing on the costs imposed by regulatory provisions rather than the broader development costs of ADS technologies.

30. In reviewing the draft UN Regulation on ADS, the group discussed key topics including the scope of application, validity of the Safety Management System (SMS), multi-stage approval, and mutual recognition. The Netherlands led discussions on scope options, while the UK and OICA provided input on SMS reassessment timelines. SAE and OICA emphasized the importance of clarifying responsibilities in multi-stage approvals. The UK

presented a proposal for mutual recognition under the 1958 Agreement, encouraging broader consultation among type approval authorities. The GRVA Secretariat supported further exploration of harmonized solutions and advised against country-specific requirements.

31. The Co-Chair of the IWG on ADS presented a summary of the 7th IWG session, highlighting areas of alignment and mutual interest with the GRVA Workshop. The Ambassador from the Netherlands introduced a proposal for developing interpretation documents to support implementation of the UN GTR and UN Regulation. The group acknowledged the importance of these documents in ensuring consistent application across Contracting Parties. The session concluded with a briefing on upcoming meetings, including the next GRVA Workshop and the preparation of formal reports for WP.29 and AC.3. No additional business was discussed.

(vii) Seventh Workshop

32. The 7th GRVA Workshop on Automated Driving Systems (ADS) was held online on April 28 and 30, 2025, under the chairmanship of the GRVA Chair. The session brought together 69 participants from Contracting Parties, industry, and international organizations. The group adopted the agenda (GRVA-WS07-01/Rev.2) and approved the minutes of the previous workshop (GRVA-WS07-02). Japan's Co-Chair of the IWG on ADS presented a progress report from the Tokyo session, outlining chapter-by-chapter updates to the draft ADS regulation, including both resolved and outstanding issues. He also noted the acceptance of proposals from the DSSAD IWG and the FADS Task Force, and informed participants of upcoming online meetings in preparation for the July session in Finland.

33. The workshop reviewed the consolidated draft of the UN Global Technical Regulation (GTR) on ADS. Several sections were updated: the procedural background now includes references to WP.29 and GRVA reports; the technical background reflects consensus on using "ODD" as the standard abbreviation; and the technical rationale and justification section was revised based on prior feedback. A new draft of the benefits and cost section was introduced, highlighting the broader societal and technological impacts of ADS. Participants were encouraged to submit further input to OPIs to refine these sections.

34. The group also examined the draft UN Regulation on ADS. The Netherlands proposed a new introductory section referencing UN Regulation No. 157, which will be revisited in future discussions. The scope section was revised to remove references to fully automated vehicles, and the terminology debate—specifically "manufacturer" versus "vehicle manufacturer"—was flagged for further review. The UK and Netherlands provided updates on the approval and mutual recognition sections, with the Netherlands volunteering to coordinate expert contributions for the next draft. The workshop underscored the importance of continued collaboration among Contracting Parties and industry stakeholders.

35. The Ambassador from Netherlands introduced initial considerations for developing interpretation documents to support the implementation of both the UN GTR and the UN Regulation on ADS. These documents aim to clarify regulatory intent and promote consistent application across jurisdictions. The GRVA Chair concluded the session by outlining the schedule for upcoming meetings, including the next online session on June 10–11, 2025. He also reminded participants of the formal reporting process to WP.29 and AC.3, supported by the GRVA Workshop Secretariat, the IWG on ADS, and the Ambassadors. No additional business was raised.

V. Work schedule

36. Schedule of meetings: (Subject to changes)

	2024						2025											
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WP.29 sessions					12-15 UN				4-7 UN			24-27 UN					18-21 UN	
GRVA sessions			23-27 UN				20-24 UN				19-22 TH	2-6 TH			22-26 UN			
Deliverables									ADS IWG Draft Doc				ADS + WS Inform al Doc			ADS + WS Formal Doc		
ADS IWG sessions	9-12 EC			8-11 UK		9-13 RoK		18-19 Web	17-21 NL	14-18 JP	19, 23, 27 Web		7-11 FIN		[Early Sept Web]	[6-10] CND		[8-12 Asia]
Deliverables									WS Draft Doc									
GRVA ADS Workshops			10-11 Web	15-16 CN		17+19 Web		13-14 Web	25-26 Web	28 & 30 Web		10-11 Web			18-19 UN		4-5 Web	

Legend –
 UN – UN office, Geneva
 EC – European Commission, Brussels
 CN – China
 CDN – Canada
 UK – United Kingdom
 JP – Japan
 RoK – Republic of Korea
 TH – Thailand
 Web – Online Meeting

In-Person event only

Hybrid Session

Web-only sessions

VI. Specific reporting to AC.3

See GRVA-22-12/Add.1