Annex II

Recommended information for the review of ITC Working Parties

This document is prepared in implementation of decision 8 of the Inland Transport Committee at its 85^{th} session (<u>ECE/TRANS/328</u>, para 18). It covers the 5-year period 2018-2023¹.

Antonio Erario, Chair WP.29 Takashi Naono. Vice-Chair WP.29

- I. Subsidiary body mandates and governance framework
 - A. General Assembly/ECOSOC
 - B. UNECE
 - C. ITC

The work of UNECE Inland Transport Committee (ITC) on the harmonization of commercial vehicles goes back to 1952, when after the government of Belgium and the Government of Netherlands identified a problem with the maximum permissible weight of each type of vehicle being different in each country resulted in issues for both countries. The ITC decided to set up a Working Group of Experts specializing in technical conditions for vehicles to study the problems [related to different vehicle weights for each country], taking into account their economic implications, and to meet, as appropriate, to consider at the same time any other problems of a similar nature which may be submitted to it in the future. The establishment of the World Forum for the Harmonization of Vehicle Regulations is reflected in E/ECE/TRANS/338 Resolution 45 (1952). The Inland Transport Committee also endorsed the decisions of WP.29 to change its name into "World Forum for Harmonization of Vehicle Regulations (WP.29)" and to install its new Terms of Reference and Rules

of Procedure (TRANS/WP.29/690), as from its one-hundred-and-twentieth session (March 2000) The World Forum for the Harmonization of Vehicle

D. Memo item: Alignment with ITC revised Terms of Reference and Rules of Procedure

Regulations is commonly known as WP.29.

¹ If a Working Party considers it relevant, it may submit information for the period **2013-2023**, i.e. since the previous full review of working parties.

WP.29 TOR and ROPs² are in principle in line with the latest of ITC. WP.29 will consider the inclusion of requirements related to the chairing of meetings by Vice-Chair in cases of absence of the Chair, which is an already applied practice.

II. Working Party objective

- (a) Initiate and pursue actions aiming at the harmonization or development of technical regulations or amendments to such regulations, adapted to the technical progress, which may be accepted world-wide, and which are directed at improving vehicle safety, protecting the environment, promoting energy efficiency and anti-theft performance, providing uniform conditions for periodical technical inspections and strengthening economic relations world-wide, according to the objectives laid down in the respective Agreements;
- (b) Develop and realize measures on adaptation of legal instruments to the technical progress, achieve coordination between legal tools, develop the guideline principles for establishment of technical requirements and uniform procedures for compliance assessment;
- (c) Foster the reciprocal recognition of approvals, certificates and periodical technical inspections among Contracting Parties to the Agreements that expressly provide for such action; development of the Database for Exchange of Self Certification and Type Approval Documentation;
- (d) Serve as the specialised technical body for the relevant Agreements established under the auspices of the United Nations Economic Commission for Europe, Inland Transport Committee. Its function is to develop recommendations regarding the establishment or amendment of technical regulations which may be accepted world-wide and regarding uniform conditions for periodical technical inspections, consistent with the provisions of those Agreements;
- (e) Foster world-wide participation in its activities by encouraging cooperation and collaboration with countries and Regional Economic Integration Organizations (REIOs) not yet participating in WP.29 activities, with regard to technical matters that come before WP.29;
- (f) Encourage all its participants to apply or adopt into their law world-wide harmonized technical regulations and conditions for periodical inspections;
- (g) Develop a work programme attending the respective Agreements in a coordinated and coherent manner;
- (h) Create a working environment that facilitates the fulfilment by Contracting Parties of their obligations set forth in the respective Agreements;
 - (i) Ensure openness and transparency during the sessions

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² ECE/TRANS/WP.29/690/Rev.1

The World Forum services three UN Agreements, in 1958 (UN Regulations, annexed to the 1958 Agreement), 1997 (UN Rules, annexed to the 1997 Agreement) and 1998 (United Nations Global Technical Regulations (UN GTRs), associated with the 1998 Agreement), which provide the legal framework allowing Contracting Parties (member countries) attending the WP.29 sessions to establish regulatory instruments concerning motor vehicles and motor vehicle equipment.

1958 Agreement (XI.B.16)

Concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations, done at Geneva on 14 September 2017 (Revision 3)

Concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions, done at Geneva on 5 October 1995 (Revision 2)

Concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958 (Original)

1997 Agreement (XI.B.31)

Concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and The Reciprocal Recognition of Such Inspections, done At Vienna on 13 November 1997³

1998 Agreement (XI.B.32)

Concerning the Establishing of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts Which Can Be Fitted and/or Be Used on Wheeled Vehicles, done at Geneva on 25 June 1998

(Reference document ECE/TRANS/WP.29/690/Rev.2, Terms of reference of WP.29)

III. Work areas covered by the Working Party

A. Transport facilitation (including border-crossing facilitation)

- Only work area
- Main work area
- Minor work area

International Road Transport operators may be requested to provide evidence of Periodic Technical Inspection (PTI) at border crossing procedures.

Vehicles used in international transport may be subject to technical roadside inspections.

■ N/A

³ As last amended in 2019 (C.N.501.2019.TREATIES XI.B.31, dated 15 October 2019)

B. Safety (including Road safety)

- Only work area
- Main work area
- The UN Regulations and UN GTRs seek to improve the behaviour, handling and equipment of vehicles so as to decrease the possibility of a road crash (active safety), to minimize the risk and severity of injury to the occupants of a vehicle or to other road users in the event of a crash (passive safety) and to address vehicle and component features which are not directly linked to the above mentioned subject areas, such as windshield wipers and washers, controls and displays, devices for indirect vision and glazing (general safety consideration). UN Regulations and UN GTRs seek to minimize health impacts stemming from road crashes, pollutant emissions and noise. UN Rules for PTI aim at keeping vehicles in acceptable safety and environmentally friendly conditions during their use.
 - Minor work area
 - N/A

C. Environmental/climate performance

- Only work area
- Main work area
- Specific UN Regulations and UN GTRs have been established to address the environmental performance (e.g. emissions of gaseous pollutants, particulates and CO2, noise level) of vehicles with conventional propulsion engines, hydrogen and fuel-cell vehicles, hybrid-electric vehicles and electric vehicles. UN Rules for PTI aim at keeping vehicles in acceptable environmentally friendly conditions during their use.
 - Minor work area
 - N/A

D. Other (Security)

- Only work area
- Main work area
- Minor work area
- Technical provisions and are being drafted to address the specificities of vehicle connectivity and automation. This work is needed to integrate innovative technologies into the existing transport system and to ensure that the benefits of these new technologies can be captured: to better road safety, the environmental performance of road vehicles, to reduce congestions and to account for cyber security.
 - N/A

IV. Work areas covered by the Working Party – efficiency and value added

A. <u>Internal</u> overlaps/duplication (other UNECE bodies performing similar/identical tasks)

- Area of work 1: Enhanced and harmonized legal requirements for the safety of vehicles;
 - Full overlap (explain)
 - Partial overlap (explain)
 - No overlap
- Area of work 2: Enhanced and harmonized legal requirements for reduced pollutant emissions and energy consumption;
 - Full overlap (explain)
 - Partial overlap (explain)
 - No overlap
- Area of work 3: Enhanced and harmonized legal requirements for the safety and security of automated/autonomous and connected vehicles;
 - Full overlap (explain)
 - o Partial overlap (explain)
 - WP.1 is addressing the use of highly automated vehicles in road traffic which needs the understanding of the safety requirements as well as use-cases covered.
 - No overlap
- Area of work 4: Enhanced and harmonized requirements legal for periodic technical inspections;
 - → Full overlap (explain)
 - o Partial overlap (explain)
 - WP.1 maintains in its resolution R.E.1 requirements related to periodic technical inspections stemming from times before the establishment of the 1997 Agreement.
 - No overlap

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B. <u>External</u> overlaps/duplication (other non-UNECE bodies performing similar/identical tasks)

- Area of work 1: Enhanced and harmonized legal requirements for the safety of vehicles;
 - Full overlap (explain)
 - Partial overlap (explain)
 - No overlap
 - Note: The European Union has replaced its technical directives with references to UN Regulations.
 - National legislation of non-contracting parties partially contains related or similar provisions.
 - Private Standardization Organisations partially address related technical elements.
- Area of work 2: Enhanced and harmonized legal requirements for reduced pollutant emissions and energy consumption;

- → Full overlap (explain)
- Partial overlap (explain)
- No overlap

Note: The European Union has replaced its technical directives with references to UN Regulations.

National legislation of non-contracting parties partially contains related or similar provisions.

Private Standardization Organisations partially address related technical elements.

- Area of work 3: Enhanced and harmonized legal requirements for the safety and security of automated/autonomous and connected vehicles;
 - Full overlap (explain)
 - o Partial overlap (explain)
 - No overlap

Note: The European Union has replaced its technical directives with references to UN Regulations.

National legislation of non-contracting parties partially contains related or similar provisions.

Private Standardization Organisations partially address related technical elements.

- Area of work 4: Enhanced and harmonized legal requirements for periodic technical inspections;
 - Full overlap (explain)
 - o Partial overlap (explain)

The European Union has an identical regional directive.

National legislation of non-contracting parties partially contains related or similar provisions.

Private Standardization Organisations partially address related technical elements.

No overlap

C. <u>Internal</u> synergies (with other UNECE bodies performing complementary tasks)

- Area of work 3: Enhanced and harmonized legal requirements for the safety and security of automated/autonomous and connected vehicles;
 - WP.1 is addressing the use of highly automated vehicles in road traffic which needs the understanding of the safety requirements as well as usecases covered.
- Area of work 4: Enhanced and harmonized legal requirements for periodic technical inspections;
 - WP.1 maintains in its resolution R.E.1 requirements related to periodic technical inspections stemming from times before the establishment of the 1997 Agreement.

D. <u>External</u> synergies (with other non-UNECE bodies performing complementary tasks)

Area of work 3: Enhanced and harmonized legal requirements for the safety and security of automated/autonomous and connected vehicles;

- o ITU is discussing elements of vehicle communication and cyber security.
- Area of work 4: Enhanced and harmonized legal requirements for periodic technical inspections;
 - CITA, The International Vehicle Inspection Committee, is discussing technical elements related to vehicle inspection as well as related quality control.

V. Work methods

The World Forum and its subsidiary Working Parties normally meet in total sixteen times a year with around 1,200 participants who represent contracting parties, their competent authorities, other countries, intergovernmental organizations and non-governmental organizations. The work is supported by some 43 Informal Working Groups which provides access to a network of some 4,000 experts globally. Proposals submitted by Contracting Parties are also presented for discussions at the GRs and WP.29 throughout the process.

Official documents per year:

Around 550

Optimization of the work:

- WP.29 is supported by six subsidiary working parties:
 - o Working Party on Pollution and Energy (GRPE)
 - Working Party on General Safety Provisions (GRSG)
 - Working Party on Automated/Autonomous and Connected Vehicles (GRVA)⁴
 - Working Party on Lighting and Light-Signalling (GRE)
 - Working Party on Passive Safety (GRSP)
 - o Working Party on Noise and Tyres (GRBP)⁵
- Co-ordination of work for WP.29 and its subsidiary bodies is performed by an Administrative Committee for the Coordination of Work (WP.29/AC.2 as stipulated in Chapter IX of RoP)
- The WP.29 programme of work specifies priorities of tasks for each of the subsidiary working parties with fixed timelines;

⁴ GRVA was established as successor of GRRF (Working Party on Brakes and Running Gear) in 2018 (Decisions of ITC ECE/TRANS/274, para. 52 and WP.29 ECE/TRANS/WP.29/1139, para. 33)

⁵ GRBP was established as successor of GRB (Working Party on Noise) in 2019 as follow up of the establishment of GRVA by reallocating GRRF activities on Tyres to GRB.

- Preparation of technical proposals is done in a projectbased manner by informal working groups directly supervised by the responsible working party;
- Preliminary discussions and preparation of draft amendments are performed in the working parties;
- Final technical considerations are subject to discussions in the working parties subsidiary to WP.29;
- Contracting parties may propose amendments to existing or new regulations/rules as well activities at any stage of the process.
- Policy decisions and considerations of new and amendments to existing UN Regulations, UN GTRs and UN Rules are taken at the World Forum;
- New and amendments to existing UN Regulations, UN GTRs and UN Rules are established by the Treaty Body of the respective UN Agreement.

Informal working groups under the supervision of WP.29 (2018-2023):

WP.29	• Intelligent Transport Systems (ITS)
	• Electronic Database for the Exchange of Type Approval
	documentation (DETA)
	• International Whole Vehicle Type Approval (IWVTA)
	Enforcement Working Group
	• Periodic Technical Inspections (PTI)
	Safer and Cleaner New and Used Vehicles (SCUNV)
	Quiet Road Transport Vehicles (QRTV UN GTR)
	 Additional Sound Emission Provisions (ASEP)
	• UN GTR No. 16 (Tyres), Phase II
	• Wet grip performance for tyres in worn state (WGWT)
	Measurement Uncertainties (MU)
	• Simplification of the Lighting and Light Signalling
	Regulations (SLR)
	Visibility, Glare and Levelling
	Electromagnetic Compatibility (EMC)
	• Environmental and Propulsion Performance Requirements
	of L-category vehicles (EPPR)
	Electric Vehicle and Environment (EVE)
	Particle Measurement Programme (PMP)
	Vehicle Interior Air Quality (VIAQ)
	• Worldwide harmonized Light vehicles Test Procedures
	(WLTP Phase 2)
	Global Real Driving Emissions (RDE)
	Automotive-Life Cycle Assessment (A-LCA)

- Task Force on Cyber Security and OTA
- Functional Requirements for Automated and Autonomous Vehicles (FRAV)
- Validation Method for Automated Driving (VMAD)
- Cyber Security and Over-The-Air software updates (CS/OTA)
- Event Data Recorder / Data Storage System for Automated Driving (EDR/DSSAD)
- Automatically Commended Steering Functions (ACSF)
- Advanced Emergency Braking Systems (AEBS) for M₁ and N₁
- AEBS for heavy vehicles
- Modular Vehicle Combinations (MVC)
- Agricultural Coupling Devices and Components (ACDC)
- Harmonization of Side Impact Dummies
- UN GTR No. 7 on Head Restraints Development of Phase 2
- UN GTR No. 9 on Pedestrian Safety Deployable Pedestrian Protection Systems (DPPS)
- Electric Vehicle Safety (EVS) Phase 2
- Specification of the 3D-H machine
- Hydrogen and Fuel Cell Vehicles (HFCV) Phase 2
- Protective Helmets
- Safer Transport of Children in Buses and Coaches
- Field of Vision Assistants (IWG-FVA)
- Panoramic Sunroof Glazing (PSG)
- Awareness of Vulnerable Road Users proximity (VRU-Proxi)
- Behaviour of M2 and M3 category vehicles' general construction in case of fire events (BMFE)

VI. Main partners

A. Government sector:

Representatives of the following countries have taken part in the sessions of WP.29: Albania, Algeria, Armenia, Australia, Austria, Belgium, Brazil, Bosnia and Herzegovina, Burundi, Bulgaria, Canada, China, Croatia, Czech Republic, Democratic Republic of the Congo, Egypt, El Salvador, Finland, France, Georgia, Germany, Hungary, India, the Islamic Republic of Iran, Iraq, Ireland, Israel, Italy, Japan, Jordan, Kazakhstan, Latvia, Luxembourg, Malaysia, Morocco, Nigeria, Netherlands, Norway, Pakistan, Poland, Portugal, Republic of Korea, Republic of Moldova, Romania, Russian Federation, San Marino, Senegal, Serbia, Singapore, Slovakia, Slovenia, Sri Lanka, South Africa, Spain, Sweden, Switzerland, Thailand, Tunisia, Türkiye, United Kingdom of Great Britain and Northern Ireland, United States of

America, Uruguay, Uzbekistan, Viet Nam and Zimbabwe, Representatives of the European Union.

B. International/intergovernmental organizations:

International Telecommunication Union (ITU)

C. Non-governmental sector:

- Association for Emissions Control by Catalyst (AECC),
- Consumers International (CI)
- European Association of Automotive Suppliers (CLEPA/MEMA/JAPIA)2
- International Motor Vehicle Inspection Committee (CITA)
- European Garage Equipment Association (EGEA)
- European Tyre and Rim Technical Association (ETRTO)
- European Association of Internal Combustion Engine Manufacturers (EUROMOT)
- Fahrzeugsystemdaten GmbH (FSD)
- Fédération International de l'Automobile (FIA)
- Fédération internationale des véhicules anciens (FIVA)
- Federation of European Motorcyclists' Associations (FEMA)
- Forum 21 Institute
- Fédération Internationale des Grossistes, Importateurs et Exportateurs en Fournitures Automobiles (FIGIEFA)
- Global Auto Regs
- Global New Car Assessment Programme (Global NCAP)
- International Automotive Lighting and Light Signalling Expert Group (GTB)
- International Motorcycle Manufacturers Association (IMMA)
- International Road Transport Union (IRU)
- International Standards Organization (ISO)
- Recreation Vehicle Industry Association, Inc. (RVIA)
- Motor and Equipment Manufacturers Association (MEMA)
- International Organization of Motor Vehicle Manufacturers (OICA)
- International Society of Automotive Engineers (SAE International)
- Towards Zero Foundation (TZF)
- World Blind Union (WBU)

D. Academia:

- The American University in Cairo
- Tongmyong University

E. Other (please specify):

- American Automotive Policy Council (AAPC),
- World Bicycle Industry Association (WBIA).
- Kenya Auto Bazaar Association
- EuroMed Transport Support Project and European Committee for Standardization (CEN)

- Development, testing & simulation of powertrain systems (AVL)
- Ford Motor Company (South Africa)
- Secure America's Future Energy (SAFE)
- U.S. Tire Manufacturers Association
- Uber Technologies, Inc

VII. Results achieved Regulatory/Normative work and contracting parties

Amendments to legal instruments

WP.29 adopts amendments to UN Regulations 3 times a year at the regular sessions, these amendments aim to keep the regulations up to date with changing global requirements. On average 133 amendments are adopted annually for a total of approximately 665 adopted amendments since 2017. ⁶

Adoption of new UN Regulations, and UN GTRs since 2017

1958 Agreement (XI.B.16)

- UN Regulation No. 144 Accident Emergency Call Systems (AECS) XI.B.16.143
- UN Regulation No. 145 ISOFIX anchorage systems, ISOFIX top tether anchorages and i-Size seating positions XI.B.16.144
- UN Regulation No. 146 Hydrogen and Fuel Cell Vehicles of category L XI.B.16.145
- UN Regulation No. 147 Mechanical coupling components of combinations of agricultural vehicles XI.B.16.146
- UN Regulation No. 148 Light Signalling Devices (LSD) XI.B.16.147
- UN Regulation No. 149 Road Illumination Devices (RID) XI.B.16.148
- UN Regulation No. 150 Retro-Reflective Devices (RRD) XI.B.16.149
- UN Regulation No. 151 Blind Spot Information System for the Detection of Bicycles XI.B.16.150
- UN Regulation No. 152 Advanced Emergency Braking Systems (AEBS) for M1 and N1 vehicles XI.B.16.151
- UN Regulation No. 153 Fuel system integrity and electric power train safety at rear-end collision XI.B.16.152
- UN Regulation No. 154 Worldwide harmonized Light vehicles Test Procedure (WLTP Regulation) XI.B.16.153
- UN Regulation No. 155 Cyber security and cyber security management system XI.B.16.154
- UN Regulation No. 156 Software update and software update management system XI.B.16.155

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⁶ See TRANS/2023/25/343 Part II

- UN Regulation No. 157 Automated Lane Keeping System (ALKS) XI.B.16.156
- UN Regulation No. 158 Devices for means of rear visibility or detection XI.B.16.157
- UN Regulation No. 159 Moving Off Information System (MOIS) XI.B.16.158
- UN Regulation No. 160 Event Data Recorder XI.B.16.159
- UN Regulation No. 161 Devices against Unauthorized Use XI.B.16.160
- UN Regulation No. 162 Immobilizers XI.B.16.161
- UN Regulation No. 163 Vehicle Alarm systems XI.B.16.162
- UN Regulation No. 164 Studded Tyres XI.B.16.163
- UN Regulation No. 165 Reverse Warning XI.B.16.164
- UN Regulation No. 166 Vulnerable Road Users in Front and Side Close Proximity XI.B.16.165
- UN Regulation No. 167 Approval of Motor Vehicles with Regard to Their Direct Vision XI.B.16.166
- [UN Regulation No. 168 Approval of Light duty passenger and commercial vehicles with regards to real driving emissions (RDE) XI.B.16.167]

1998 Agreement (XI.B.32)

- UN GTR No. 20 Electric Vehicle Safety (EVS) (XI.B.32.20)
- UN GTR No. 21 Determination of Electrified Vehicle Power (DEVP) (XI.B.32.21)
- UN GTR No. 22 In-vehicle Battery Durability for Electrified Vehicles (XI.B.32.22)
- UN GTR No. 23 Durability of pollution-control devices for two- and three-wheelers (XI.B.32.23)
- UN GTR No.24 Laboratory Measurement of Brake Emissions for Light-Duty Vehicles (XI.B.32.24)

1997 Agreement (XI.B.31)

- Rule No. 3 Periodical Technical Inspections of motor vehicles using Compressed Natural Gas (CNG), Liquefied Petroleum Gas (LPG) and/or Liquefied Natural Gas (LNG) in their propulsion system (XI.B.31.3)
- Rule No. 4 Uniform provisions for periodical technical inspections of motor vehicles equipped with electric or hybrid propulsion system(s) with regard to their roadworthiness (XI.B.31.4)

Number of contracting parties

With the accession of Armenia (30/04/2018), Nigeria (18/10/2018), Uganda (23/8/2022), Philippines (3/11/2022), Andorra (11/4/2023) and Viet Nam (26/7/2023) The 1958 Agreement now counts 61 contracting parties.

With the accession of Nigeria (18/10/2018), Tunisia (31/12/2019), and Uganda (23/8/2022) The 1997 Agreement now counts 33 contracting parties.

With the accession of Uzbekistan (04/05/2018), Nigeria (18/10/2018), and Uganda (23/8/2022) The 1998 Agreement now counts 39 contracting parties.

- Policy recommendations on enhancing vehicle safety and environmental performance were provided for, *inter alia*, : .
 - o Georgia
 - o Kazakhstan
 - o Mongolia
 - o Malaysia
 - Philippines
 - o Viet Nam
 - o Nigeria
 - o Zimbabwe
 - o Rwanda ...

Using elements such as

- o Road safety performance reviews
- o Capacity development and technical assistance
- Seminars
- Webinars
- Major outputs
- Roadmaps to Accession to the three Vehicle Agreements (1958, 1997 & 1998)
- Activity in UN Road Safety Fund projects (SCUV Phases I, II and III, Motorcycle ABS, Motorcycle Helmets)
- o Webinars on UN R155 and UN R156
- o eLearning Modules on Vehicle Approval and Intelligent Transport Systems
- Analytical work
 - o UN Vehicle Regulations for Road Safety Cost-Benefit Methodology
 - o Safer and Cleaner Used Vehicles for Africa
 - World Forum for Harmonization of Vehicle Regulations (WP.29) How It Works, How to Join It (Revised Fourth Edition)
 - Intelligent Transport Systems (ITS) for Sustainable Mobility, Second Edition

VII. Results and changes expected in near future

• Vehicle Automation

WP.29/GRVA is working according to the guidance provided by the Framework Document on Automated Vehicles recently amended by its parent body WP.29. It is finalizing its activities on the functional requirements for automated vehicles as well as the new assessment/test method for automated driving. It is developing recommendations regarding data storage system for automated driving and continuing its activities regarding cyber security and software updates. GRVA is expected to complete, mid of 2024, the drafting of integrated guidelines on ADS safety assurance sufficient to enable WP.29 decisions on initiatives under the Agreements. Regulations Agreements both 1958 and 1998 approval/certification of Automated Driving Systems are expected by end of 2026.

• Climate Change mitigation

WP.29/GRPE has initiated activities to develop a harmonized way to determine the carbon footprint of vehicle throughout its lifetime, from cradle to grave, considering all phases of the vehicles' life from production, to use, dismantling and recycling; this would provide a strong basis for international comparison of vehicle carbon emissions, also providing a better way to define zero emission vehicles. Draft harmonized methodology for light duty passenger cars is expected in 2025.