

Workshop on the UN Agreements for Vehicle Regulations and Transport of Dangerous Goods (Ulan Bator, 28-30 June 2017)

UN vehicle regulations agreements

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TRANSPORT



Content

- I. WP.29
 - a) WP.29 Activities
 - b) WP.29 scope and organization

- II. The tools of WP.29
 - a) Vehicle approval: the 1958 Agreement
 - b) Vehicle certification: the 1998 Agreement

- III. Better vehicles by implementation of the UN Vehicle Agreements



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I. WP.29

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Why a worldwide regulatory framework for vehicles is needed?

- Regulatory framework: Nationally or internationally?
- The automotive industry became a global industry
- Main contributor to economical growth
- Mitigate negative effects (accidents, pollutants, climate change, trade barriers)

Mandate: Development of worldwide harmonized regulations resulting:

- in safer and cleaner vehicles and
- in the reduction of technical barriers to trade and of costs for consumers



The World Forum for Harmonization of Vehicle Regulations (WP.29)

- UNECE Sustainable Transport Division: secretariat to WP.29 for more than 60 years
- WP.29 is:
 - the unique worldwide regulatory forum for the automotive sector
 - administrating three Multilateral UN Agreements



Construction regulations

1958 Agreement – Type Approval Regulations with mutual recognition of the type approvals

1998 Agreement – Global Technical Regulations



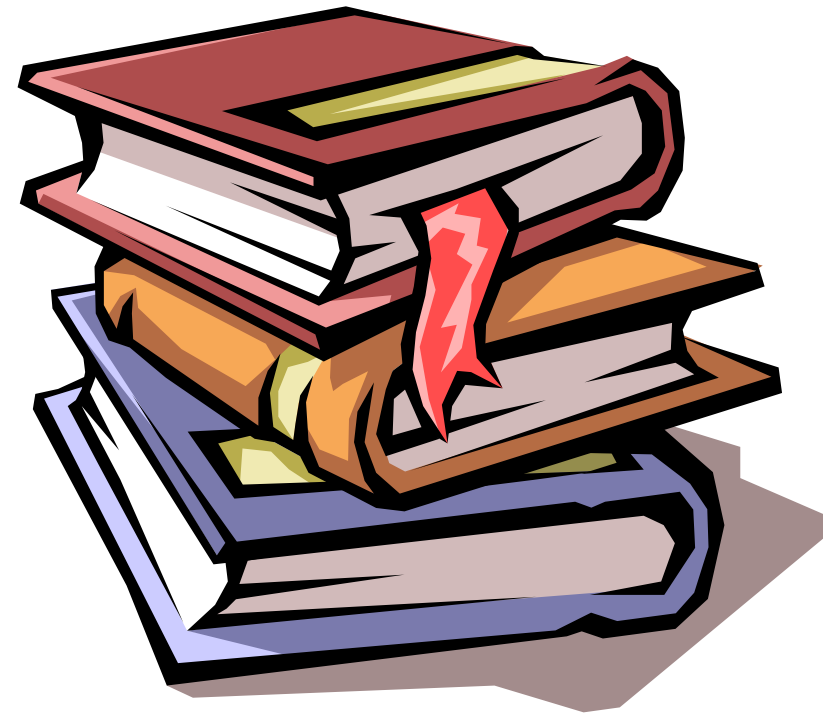
In Use PTI regulations

1997 Agreement – Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of Such Inspection

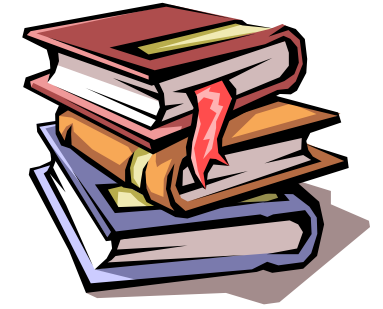


Historical background of WP.29

- 1949: Convention on Road Traffic
-> Resolution No. 45
- 1952: Establishment of WP.29
- 1958: '58 Agreement
- 1997: '97 Agreement
- 1998: '98 Agreement
- 2000: World Forum



WP.29 administers 3 Agreements



'58 Agreement

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

(54 Contracting Parties, [144] UN Regulations)

'98 Agreement

Establishing of Global Technical Regulations (gtrs) for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicle

(36 Contracting Parties, 18 UN gtrs)

'97 Agreement

Uniform conditions for periodical technical inspections of wheeled vehicles and the reciprocal recognition of such inspections

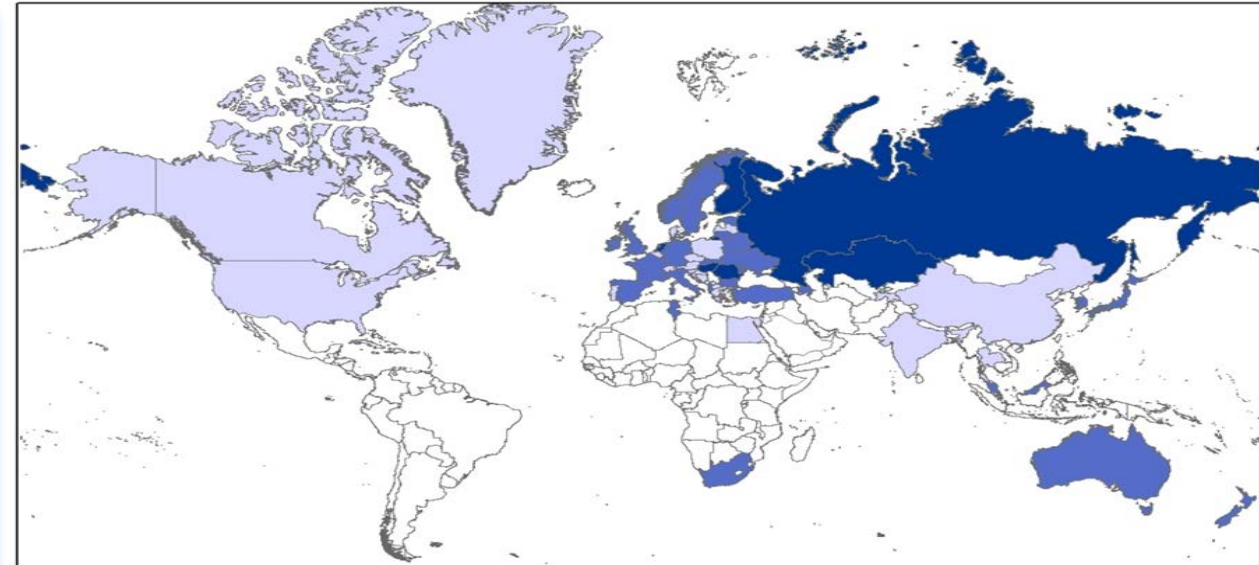
(13 Contracting Parties, 17 signatories pending ratification, 2 UN Rules)



WP.29 is worldwide, unique and transparent

- Agreements open to all Nations of the UN
- Participation open to States, Governmental Organizations (GOs) and NGOs, but

**Decisions are taken by
Governments (of CPs)**



Countries contracting parties to Vehicle Regulations Agreements

Number of Agreements



No other worldwide organization covers this area

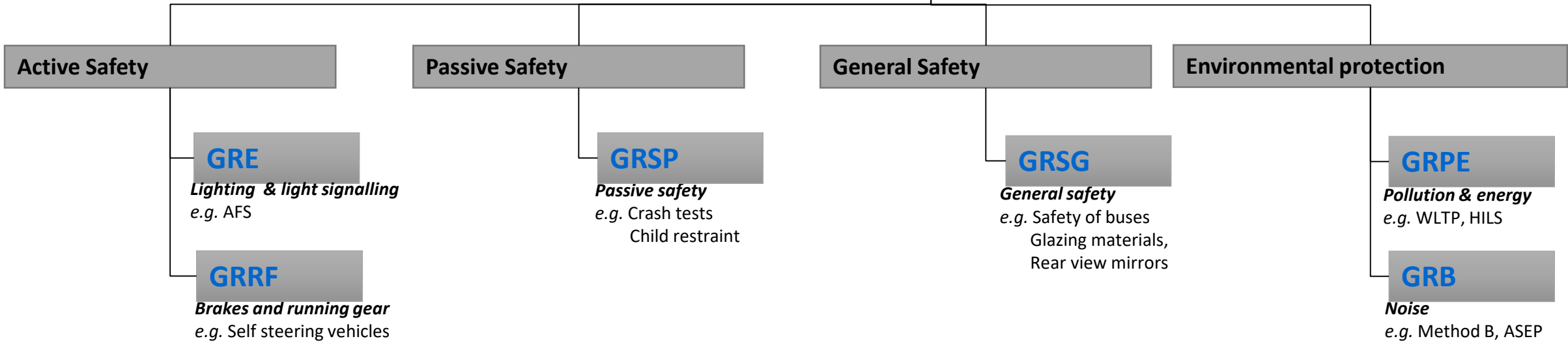


The WP.29 structure

Committee for the 1958 Agreement (AC.1)
Committee for the 1998 Agreement (AC.3)
Committee for the 1997 Agreement (AC.4)

Committee for
Coordination of Work
(AC.2)

World Forum for Harmonization of Vehicle Regulations (WP.29)



and ~40 non-permanent technical groups



What is WP.29 doing?



Emissions of pollutants and CO₂



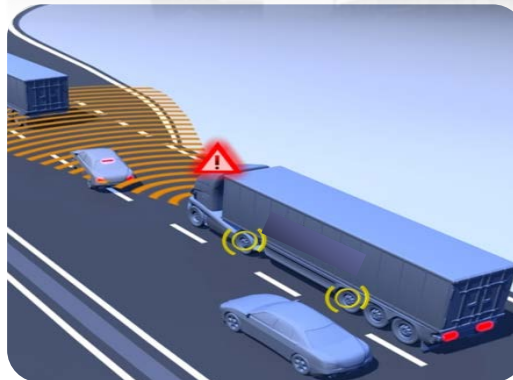
General safety



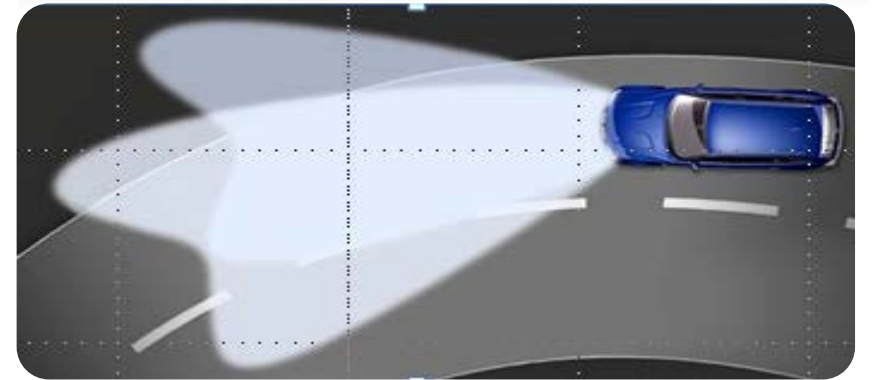
Passive safety



Noise



Active safety



Lighting and light signalling

Environmental Protection

GRPE Activities on pollution and energy:

Battery Electrical Vehicles (EV): 1996

Measurement procedure for CO₂ emissions (Fuel consumption): 1997

Hybrid/Electric Vehicles (HEV): 2004

Bio-Fuels and Plug-in Hybrid/Electric Vehicles (PHEV): 2008

Market Fuel Quality (FQ): 2010

Hydrogen & Fuel Cell vehicles (HFCV): 2010/2013

Environmentally Friendly Vehicles (EFV) – Feasibility: 2011

Retrofit Emission Control Devices (REC): 2014

Worldwide Harmonized Light Vehicle Test Procedures (WLTP): 2014/(2018/20)

GRB Activities on noise:

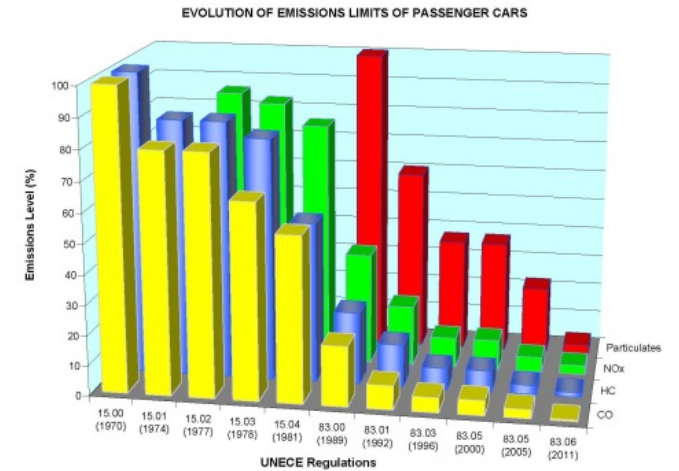
Noise level of for motor cycles and motor vehicles : 1980 &1982

Tyre rolling noise and wet grip adhesion: 2007

New noise measurement method: 2007 – new limit values: 2014

Tyres Rolling Resistance: 2010

Quiet Road Transport Vehicles (audible warning devices): 2016



Active Safety

GRE Activities on lighting and light-signalling:

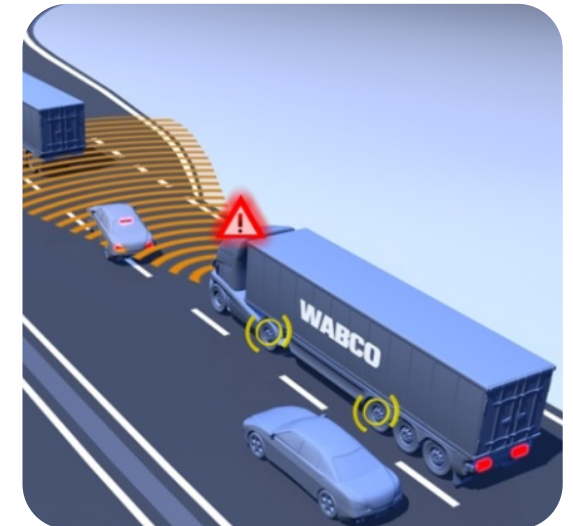
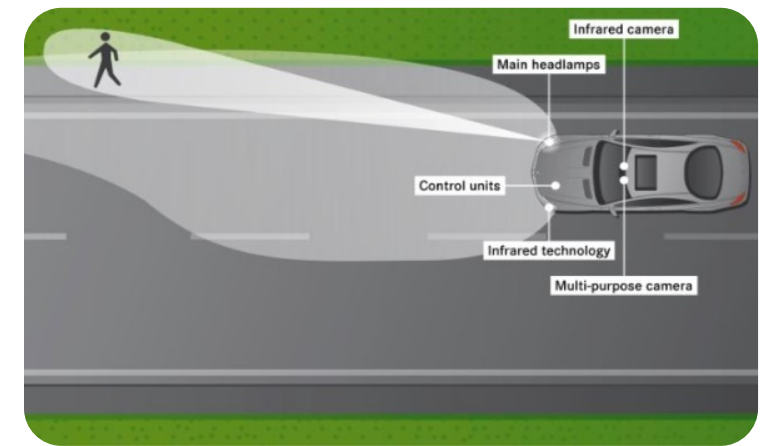
- Conspicuity/Contour markings: 2006
- Daytime Running Lamps (DRL): 2007
- Adaptive Front-lighting Systems (AFS): 2007
- LED headlamps: 2008

GRRF Activities on brakes and running gear:

- Anti-lock braking systems (ABS): 1990
- Regenerative braking systems: 2008
- Electronic Stability Control (ESC) / Brake Assist system (BAS): 2008/2017
- Tyre Pressure Monitoring Systems (TPMS): 2010
- Advanced Emergency Braking Systems (AEBS): 2012
- Lane Departure Warning Systems (LDWs): 2012
- Tyre installation: 2016

WP.29 informal group on:

- Intelligent Transport Systems – Automated Driving (ITS-AD)



Passive Safety (GRSP)

- Safety belts: 1970
- Protective helmets: 1972
- Child Restraint Systems: 1981/2013
- Frontal and lateral crash tests: 1995
- Pedestrian safety GTR: 2008
- ISOFIX anchorages: 2002
- Safety-belt reminders: 2009
- Electric vehicle safety: 2010/2013
- Enhanced Child Restraint Systems (ECRS): 2013
- Pole side impact: 2015
- Hydrogen and Fuel Cell Vehicles (HFCV): 2015



General Safety (GRSG)

- Indirect vision systems (mirrors & camera monitor): 1981/2005/2015
- Safety glazing materials and their installation: 1981/2008/2014
- Rear Underrun Protection: 1982/2015
- Superstructure of buses and coaches: 1986/2010
- Liquefied Petroleum Gas (LPG): 1987
- Vehicle alarm systems/immobilizer: 1997
- Compressed/Liquefied Natural Gas (CNG/LNG): 2000/2013
- Burning behaviour: 2005
- Fire detection and suppression systems: 2016
- Accident Emergency Call Systems: (2017)
- Panoramic Sunroof Glazing (PSG): (2018)



The Agenda 2030 and Road Safety

The Sustainable Development Goals (SDGs)

Two targets are directly relevant for road safety



3.6. By 2020, halve the number of global deaths and injuries from road traffic accidents.



11.2. By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.



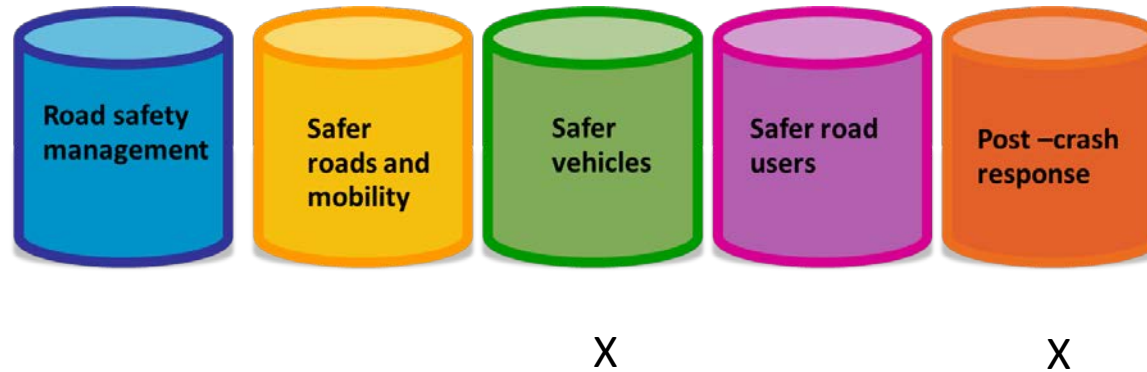
UN decade of action for road safety 2011-2020



The plan



The 5 pillars



WP.29 is unique and transparent

All regulations and rules, calendar of meetings, agenda, working documents and reports are freely available at the WP.29 website: www.unece.org/trans/main/welcwp29.htm

(including the Terms of Reference & Rules of Procedures as well as the status documents of the 3 Agreements)

Questions to the structure and organization of WP.29 ?



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Principal Elements of the 1958 Agreement

Eligible Contracting Parties to the 1958 Agreement:

Members of UN



The 1958 Agreement provides:

Legal framework for the adoption of uniform UN Regulations on the vehicle construction

Reciprocal recognition of Type Approval
Approved once and accepted everywhere (CPs)

Elimination of barriers to trade



Principal Elements of the 1958 Agreement

- All vehicle parts and systems approved according to UN Regulations under the 1958 Agreement bear the unique **E**-marking



E stands for Excellence Effective Economic Efficient...

- The Type-Approval with an approval number and the approval date + test reports

The '58 Agreement (1)

Key Provisions:

- all Regulations are annexed to the Agreement and therefore part of it; they are considered as international law
- CPs are free to be bound by all, some or no Regulation
- a Regulation apply to a type of vehicles, equipment or parts as specified in the scope of the Regulation
- a new Regulation is adopted by a 2/3 majority of the Administrative Committee (AC.1 = representatives of CPs)
- UN SG notifies a new Regulation to all CPs
- a Regulations applies to each CP that does not notify to the SG its objection or intention to cease the application
- same procedure applies to amendments of Regulations (i.e. to adapt to the technical progress an existing Regulation)



The '58 Agreement (2)

UNECE Regulations include:

- technical prescriptions regarding the testing method
- conditions (performance requirements) for granting a type approval (e.g. limit values)
- conditions for the mutual recognition of the type approvals
- requirements for the E-marking
- prescriptions for conformity of production



The '58 Agreement (3)

Type Approval Procedure:

- manufacturer shall address the application to a Designated Administrative Department (type approval authority)
- tests are conducted by an accredited Technical Service
- the Designated Administrative Department grant the type-approval, if test results comply with the requirements
- the type approval is mutually recognized by all other CPs applying that Regulation
- the manufacturer may bring his E-marked product to the market without any further tests
- the manufacturer and the Designated Administrative Department have to ensure the conformity of production according to the provisions of the Regulation



Revision 3 to the 1958 Agreement: Objectives

- A CP applying a UN Regulation may issue type-approvals pursuant to **earlier versions of the UN Regulation** (i.e. pursuant to preceding series of amendments or the original version of the UN Regulation). However, other CPs applying the UN Regulation are be obliged to accept such type-approvals (ease accession by countries from emerging economies to join).
- All CPs applying a UN Regulation shall **mutually recognize type-approvals granted according to the latest version** of the UN Regulation (keep principle of mutual recognition).
- Insertion of the new scheme for the **International Whole Vehicle Type Approval** (IWVTA) into draft UN Regulation No. 0.
- Developing of a **Database for the Exchange of Type Approval documentation** (DETA) between all CPs (hosted with UNECE).
- Modified **voting procedure and conditions** (4/5 majority instead of 2/3 majority).



International Whole Vehicle Type Approval (IWVTA)

- Definition: “International whole vehicle type approval” means that all type approvals granted pursuant to applicable UN Regulations for the systems, components and parts of a vehicle are integrated into a single approval of the whole vehicle according to the administrative provisions of UN Regulation No. 0
- Scope: First step is the IWVTA of category M1 vehicles (passenger cars)
- Structure:
 - ❑ New UN Regulation No. 0 on IWVTA (listing all UN Regulations to which the type of vehicle has to comply with)
 - ❑ New “Schedules” under the 1958 Agreement (Annex with a list of administrative and technical procedures).



Revision 3 to the 1958 Agreement: Next steps

WP.29 agreed on **ECE/TRANS/WP.29/2016/2** in June 2016:

- Draft Revision 3 to the 1958 Agreement

See document: www.unece.org/fileadmin/DAM/trans/doc/2016/wp29/ECE-TRANS-WP29-2016-002e.pdf

EU notification to the UN Secretary-General in November 2016

S-G notification to all CP in Dec. 2016 (6-month period of possible objections)

Date of Entry into Force expected mid of September 2017

- Draft UN Regulation No. 0 expected to adopted in November 2017

See document: www.unece.org/fileadmin/DAM/trans/doc/2017/wp29/ECE-TRANS-WP29-2017-104e.pdf

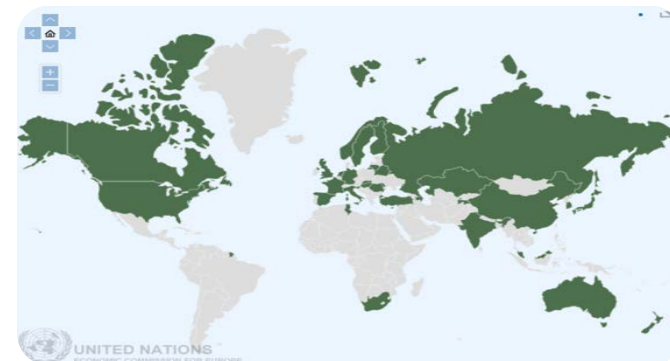
Entry into force expected in mid/end of 2018



Principal Elements of the 1998 Agreement

Eligible Contracting Parties to the 1998 Agreement:

Members of UN



The 1998 Agreement provides:

Legal framework for the adoption of uniform Global Technical Regulations
- UN GTRs -

No administrative provisions
(for self-certification and homologation)



Principal Elements of the 1998 Agreement

Contracting Parties to the 1998 Agreement

Commit themselves to implement a GTR into national legislation, when voting in favour

Need a system/agency for market surveillance and enforcement of production compliance

The 1998 Agreement requests

Regular reporting by Contracting Parties on the implementation of GTRs in their national law



The '98 Agreement (1)

Key provisions:

- Compendium of Candidate gtrs: national regulations
- Develop gtr at the highest level of stringency
- gtrs may specify alternative non-global levels of stringency as well as alternative test procedures when needed to facilitate the regulatory activities of developing countries
- Adoption of gtrs by consensus vote of the Executive Committee (AC.3) of the Agreement, present and voting
- Registry of global technical regulations: established gtr
- Initiate adoption into national/regional legislation
- Periodical reports to the SG on adoption



The '98 Agreement (2)

gtrs include:

- technical prescriptions regarding the testing method (eventually alternative methods)
- performance requirements (e.g. limit values)

No certification procedure

No conformity of production

No reciprocal recognition



The '98 Agreement (3)

Compendium of Candidate gtrs:

- Catalogue of regulations that are candidates for the development of gtr (UNECE Regulations are candidates)
- Any CP may suggest listing any technical regulation in the Compendium
- Voting in AC.3: At least 1/3 of the CPs presenting and voting, with a positive vote by USA, EC or Japan



The '98 Agreement (4)

Global Registry:

- The Global Registry contains all established gtrs
- Adoption by consensus vote of CPs present and voting
- New gtrs considered to be established in the Registry on the date of the consensus vote by AC.3 in favour of the gtr
- CPs objecting shall provide explanations within 60 days, otherwise they are considered as voting in favour
- The Secretariat creates and maintains the Global Registry
- 11 gtrs established in the Global Registry
- the gtrs can be transposed into national law with amendments



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Implementation of 1958 Agreement

- Amendments to national legislation
 - Requirements for vehicle approval (e.g. reference to UN Regulations)
 - Requirements for reciprocal recognition of UN Type Approvals
 - Requirements for vehicle registration (e.g. vehicle approval as prerequisite)
 - Responsibilities and sanctions
- Type Approval Authority
 - Administrative procedures for granting, extending, suspension of approvals
 - Assessment, designation and notification of technical services
 - Conformity of production procedures
 - Acting as liaison point to other TAAs and the WP.29 secretariat
- Technical Services
 - May also be private or located outside the country/in any other Contracting Party



Type Approval

Testing

- Submission of the information document (documentation of the product)
- Performance of the tests prescribed
- (According to the provisions of the Regulation)

Approval

- Test report and documentation checked
- Type approval issued by the Authority

COP

- Conformity of Production (COP) process and checks (QM / QA)
- COP audit by the Authorities

In Use

- Some regulations require «in use» testing of products (e.g. in the field of emissions)

End or life

- One regulation is dedicated to the recyclability of vehicles



Implementation of 1998 Agreement

- Amendments to national legislation
 - Full transposition of the UN GTR into national legislation
 - Introduce provisions for self-certification or homologation
 - Requirements for vehicle registration (e.g. vehicle certification as prerequisite)
 - Responsibilities and sanctions
- National Authority for market surveillance and enforcement of production compliance
 - Procedures for market surveillance and enforcement of production compliance
 - Technical capacity for performing compliance tests once vehicle models are put on the market
 - Enforcement of recall activities and sanctions against manufacturers
 - Acting as liaison point to the WP.29 secretariat
 - Mandatory status report to AC.3



Why does it matter?

Why vehicle regulations?

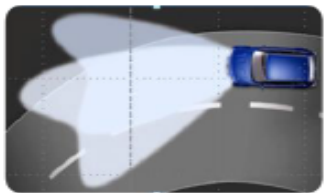
Several versions of a given model, because:

- Left Hand Drive
- Right Hand Drive
- The US/Canada version
- The Rest of the World (e.g. for countries with low fuel quality)...

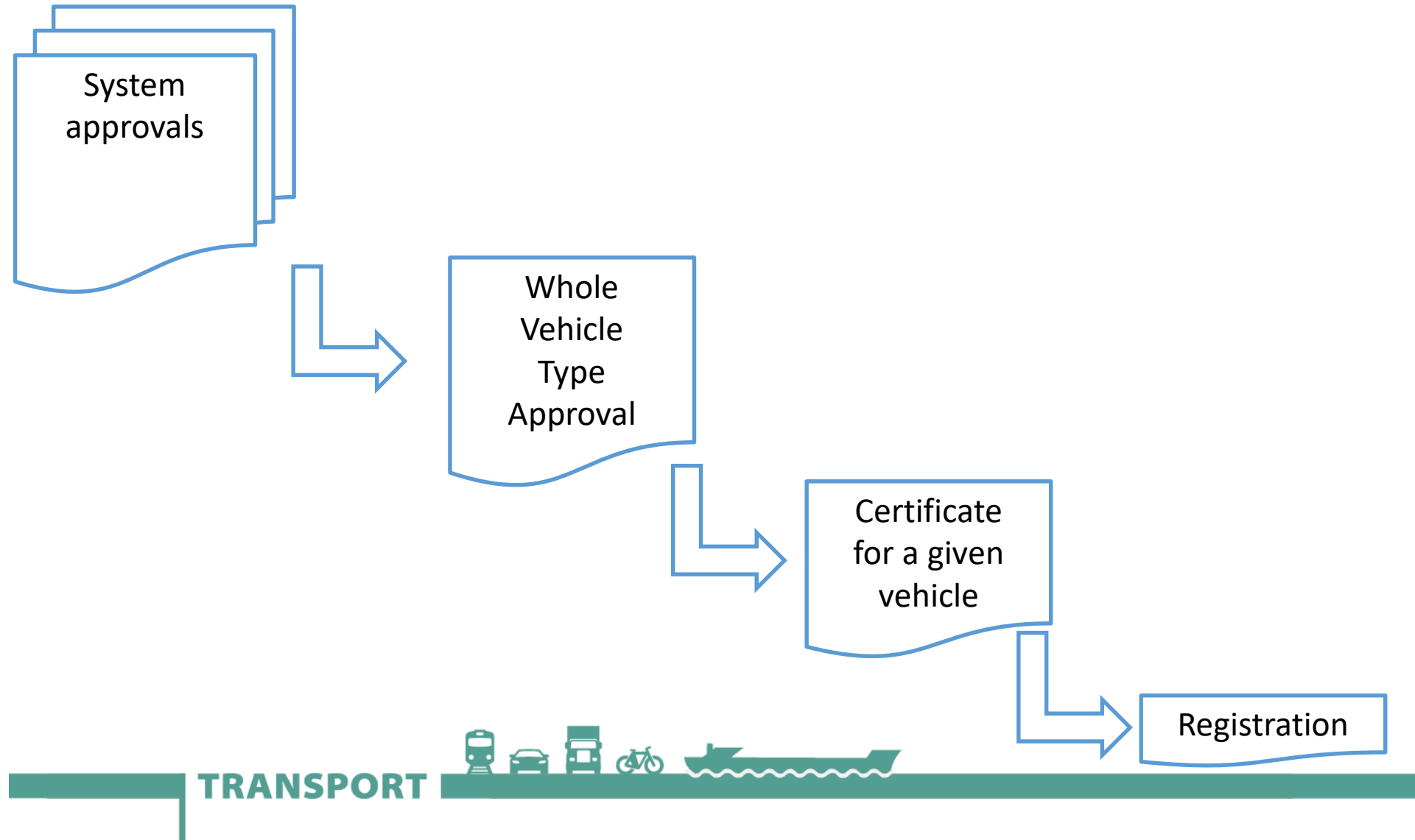


The most important UN Vehicle Regulations to make a change to road safety

Topic	Passenger cars UN Regulation	PTWs UN Regulation	Commercial vehicles UN Regulation
Active safety			
Brakes	R13 H (incl. ESC) GTR 8	R 78 (incl. ABS) GTR 3	R 13 (incl. EVSC)
Steering	R 79		R 79
Tyres	R 30/ GTR 16	R75	R 54
Mechanical couplings			R 55
Passive safety			
Helmets		R22	
Safety belts anchorages	R 14		R 14
Safety belts	R 16		R 16
Seats/ head restraints	R 17, R 25/ GTR 7		
Frontal collision	R 94		
Lateral collision/ pole side impact	R 95, R 135/ GTR 14		
Pedestrian safety	R 127/ GTR 9		
Child restraints	R 44		
Electric PTW safety		R 136	
Cabs strength			R 29
General safety			
Buses and coaches			R 107
Safety glazing	R 43/ GTR 6		R 43
Devices for indirect vision			R 46
Rear underrun protection			R 58
Lighting and light installation			
Installation of lighting	R 48	R 53, R 74	R 48



How are used UN type approvals / certificates



The advantage of a international regulation

For the business sector:

- The "safe harbor"
- Harmonized requirements
- Simpler export (less/no technical barrier)
- Less uncertainty about market acceptance

For Countries and their citizens:

- Safety
- Better trade
- Interoperability
- Facilitated border crossing



The 3 Agreements administered by WP.29:

- Established by consensus
- The Depositary is the S-G
- Follow well-established UN legal procedures
- Open to all UN Member States and REIO
- No accession fee
- Amended as the needs arise (innovative technologies)
- Many non-ECE States are already Parties
- To become a Party, deposit an instrument with the S-G



Why to become a Contracting Party?

- Participation in the regulatory harmonization process
- Approvals granted are recognized by the other CPs applying the Regulation
- Accession to database for the Exchange of Type Approval documentation (DETA)
- Information of non-compliant automotive products
- Exchange of know-how at expert and governmental level
- Possible participation in R&D projects



How to become a CP to an Agreement

Requirements for a valid instrument of accession:

- Identify the Agreement
- Declaration of undertaking. Expression of intent of the Government to be bound by the Agreement and to undertake faithfully to observe and implement its provisions
- Issued and signed by:
Head of State or Government or the Minister of Foreign Affairs (MFA) or by a person exercising the power of one of these authorities *ad interim*.
- Dated
- Addressed to the UN Secretary General in New York



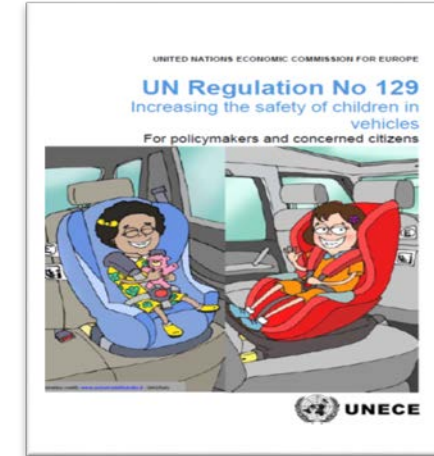
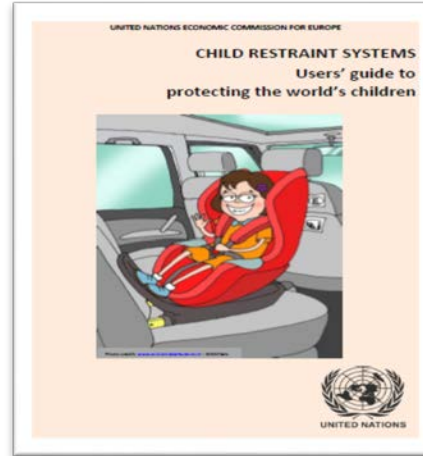
Model of an instrument of accession

- WHEREAS the [title of agreement] was concluded [adopted, etc.] at [place] on [date],
- NOW THEREFORE I, [name and title of the head of State or Government or MFA], declare that the Government of [name of State], having considered the above mentioned [agreement], accedes to the same and undertakes faithfully to perform and carry out the stipulations therein contained.
- IN WITNESS WHEREOF I have signed this instrument of accession at [place] on [date].

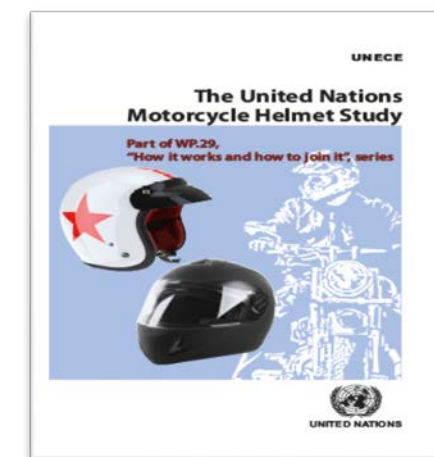
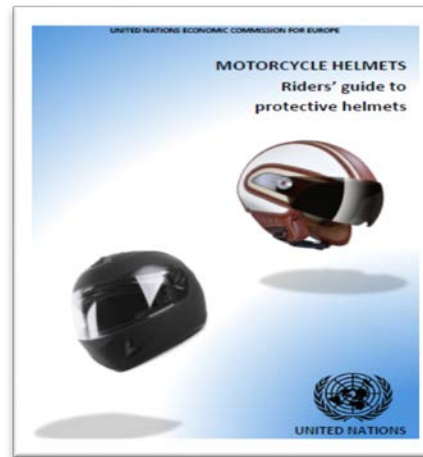


Leaflets and Publications

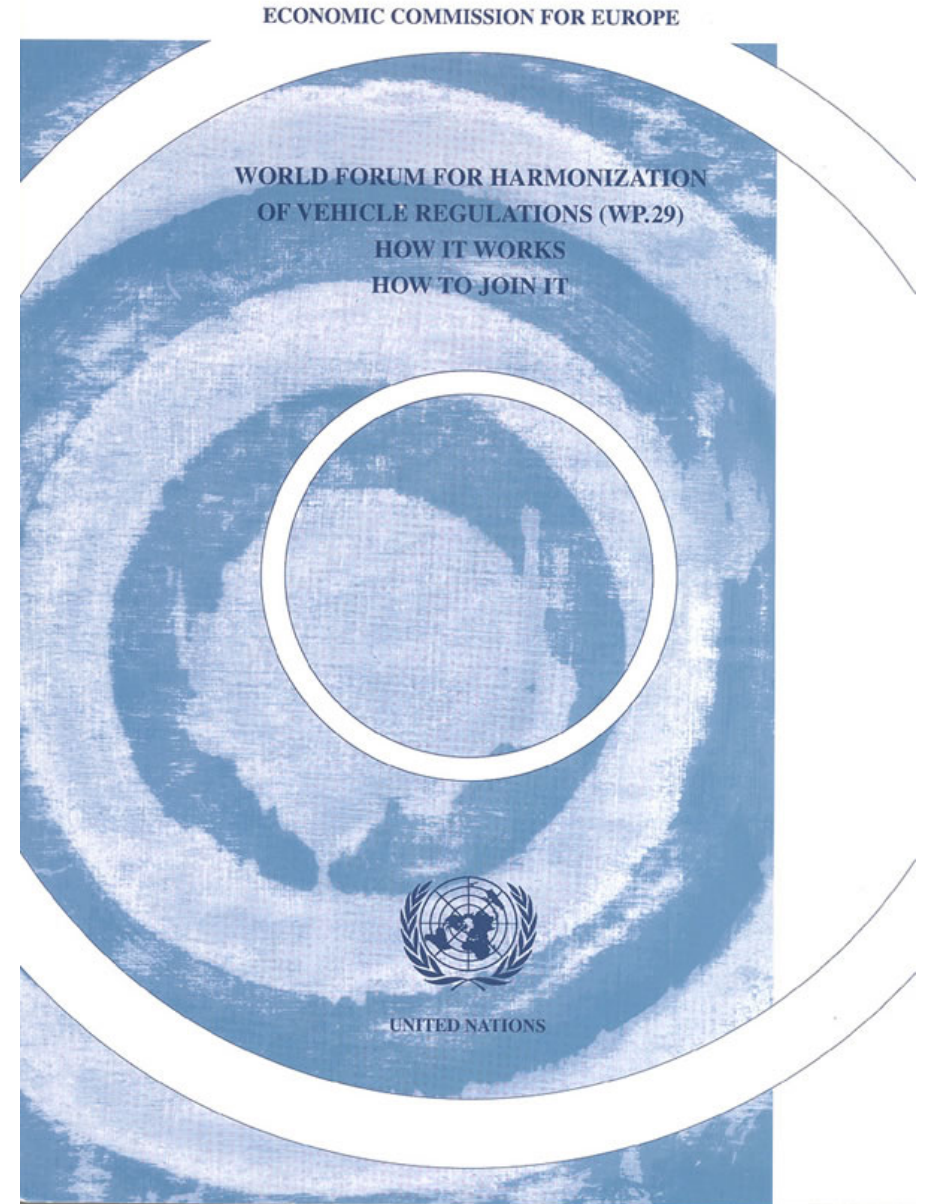
- Child restraint systems



- Motorcycle helmets



WP.29: How it works - How to join it?



Practical exercise: using vehicles with the right driver seating position (e.g. produced for Japan) in right-hand traffic

- Do you agree that such vehicles pose some challenges for road safety, compared to “regular” cars with the left-side steering wheel?
- Which shortcoming of such vehicles for road safety can you identify?
- Do you think that using vehicles with the right driver seating position in Mongolia:
 - Should be allowed without any restriction?
 - Should be prohibited?
 - Could be tolerated for a certain period, but phased out in the future?
- Which step-by-step measures can you envisage to discourage people and companies from buying and importing such cars?



**THANK YOU
FOR YOUR ATTENTION**

UNECE Sustainable Transport Division

<http://www.unece.org/trans>

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