Current developments regarding automotive

And

Implementation of the regulatory framework

François E. Guichard
Secretary to GRVA
UNECE
Content

Part A

• Some figures
  - Electric vehicles
  - (Active) safety ➔ automated vehicles

• Implementation of the deliverables of the World Forum WP.29

Part B

• 9 Steps towards safer and cleaner used and new vehicles
According to IEA:

- Almost 14 million new electric cars were registered globally in 2023, bringing their total number on the roads to 40 million
- EV and PHEV market penetration increases
- Throughout Africa, Eurasia and the Middle East, electric cars are still rare, accounting for less than 1% of total car sales
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Electrification

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- EV and PHEV market penetration increases.
- Throughout Africa, Eurasia and the Middle East, electric cars are still rare, accounting for less than 1% of total car sales.
Advanced safety features

In countries with technical regulations for vehicles:

- Near to all new vehicles are equipped with ABS, ESC since 2008
- Near to all new vehicles are equipped with AEBs since 2016

- Around 50% of the new vehicles are shipped with Level 1 or 2 systems (Advanced Driver Assistance System) in regulated countries.

- LMICs where most imported vehicles are used vehicles receive these technologies with some years of delay
Context: our current agenda

• Artificial intelligence (definitions and guiding principles)
• Automated and autonomous systems (Level 3 and higher)
• Amendments of regulations for vehicle automatization
• Advance Driver Assistance Systems - DCAS (Level 2)
• Cybersecurity and software-updates (over the air - OTA)
  - Access to vehicle data and privacy
  - (Exploration: Vehicle–to–vehicle communication – At the VCTF)
• Braking/steering, e.g. ETBS, steer-by-wire and electromechanical braking, first Motorcycle ADAS
Example of structure in place at the World Forum WP.29

**IWG on ADS**
- Leadership team
  - 6 Co-Chairs:
  - “Ambassadors”
- Secretariat

**GRVA Workshops on ADS**
- Leadership team
  - 1 Chair and 2 Vice-Chairs
- Secretariat
Implementation of WP.29 deliverables – selected examples

UN GTR 22
UN GTR 24

“Global activities”
Recommendations and guidelines
(GRIUA – Framework Document)

Level 2
Level 3
Level 4

Regulatory activities
-UN Regulations
-Regulations (EU)

UN Regulation No. 79
(Lane keeping)
New Reg. on DCAS®

UN Regulation No. 157
(Traffic jam pilot)
(Motorway pilot®)

EU Regulation (Small series regime
For Urban Shuttles and Valet Parking)

UNECE Guidelines and recommendations®

Framework directive: Regulation (EU) 2018/858

Regulatory activities
-UN Regulations
-Regulations (EU)

UN Regulation No. 79
(Lane keeping)
(Lane change on motorway®)

UN Regulation No. 157
(Traffic jam pilot)
(Motorway pilot®)

EU Regulation (Small series regime
For Urban Shuttles and Valet Parking)

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Connectivity

UN Regulation No. 15 (Cyber + CSMS)
UN Regulation No. 15 (SU + SUMS)

⇒ OTA Updates
⇒ Services
⇒ Information
⇒ Etc.
Overview – whole life compliance (Simplified)

Vehicle life time

Pre development audit
- Initial assessment
- 1958 Agreement

Premarket phase
- Vehicle approvals
  - Examples
    - UN R13-H / GTR 8
    - UN R79
    - UN R83/ GTR 15
    - UN R101/ GTR15
    - UN R48
    - Etc.

Use phase
- «In use» requirements
- Periodic technical inspection
  - Examples
    - UN R83
    - UN R155
    - UN Rules 1 and 2
    - (UN Rules 3 and 4)

End of Life
- Recyclability
  - UN R 133
Our the stakeholders

The UN Member States
(Contracting Parties)

Manufacturers:
- AAPC
- OICA

Suppliers:
- CLEPA
- MEMA
- JAPIA

Testing centers:
- CITA

Consumers/motorists representatives:
- FiA
- CONSUMERS INTERNATIONAL

Road and Public Transport Federations:
- UITP
- IRJ

Observers & others:
- Standard Developing Organizations:
  - IEC
  - ISO
  - ITU
  - SAE
Vehicle regulations at UNECE – three pillars

**Rule making**
- Entry into Force
- Adoption notification to the CPs
- Adoption
- Drafting proposals
- Participants - CPs - NGOs

**Committees**
- Nominate TA/TS
- Contracting Parties
- Adopt (Agreement) (Regulations)
- Implement

**International cooperation**
- Bring input to the committees

**One ecosystem**
- In service Conformity
- Audits and Testing
- Initial Assessment
- Approval
- Conformity of production

**Implementation**
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Roadmap towards Safer and Cleaner Used Vehicles

Walter Nissler
Chief of Section
# 9 Steps towards Safer and Cleaner Vehicles

<table>
<thead>
<tr>
<th>Items</th>
<th>Reference Material</th>
<th>Legislation</th>
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<th>Inputs from Workshop</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Current Situation</td>
<td>Road safety performance review</td>
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<tr>
<td>2. Target/Goals</td>
<td>Global plan of action 2021-2030</td>
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<tr>
<td>3. Vehicle inspection (at import and periodic)</td>
<td>1997 Agreement Rules 1 – 4 SCUNV Guidelines</td>
<td>Primary Law for vehicle inspection</td>
<td>CB on 1997 Agreement</td>
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<td></td>
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<td>By-law for import inspection</td>
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<td>By-law for periodic inspection</td>
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<td>By-law for technical roadside inspections</td>
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<tr>
<td>4. Minimum vehicle requirements</td>
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<tr>
<td>a. International/UN Regulations</td>
<td>SCUNV Guidelines</td>
<td>Primary Law for vehicle safety and emissions</td>
<td>CB on 1958/1998 Agreements</td>
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<td></td>
<td>1958/1998 Agreements</td>
<td>By-law for detailed (technical) requirements for vehicle safety and emissions; application of UN Regulations and/or Transposition of UN GTRs</td>
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<tr>
<td></td>
<td>List of minimum requirements</td>
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<td>b) Reciprocal recognition</td>
<td>1958 Agreement</td>
<td>Primary legislation on vehicle approval/homologation</td>
<td>CB on 1958 Agreement</td>
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| c) Homologation / Approval | Approval of individual vehicle  
 Approval of vehicle types (National)  
 Approval of Parts/Components (National)  
 Approval of vehicle types (International)  
 Approval of Parts/Components (International) | Primary legislation on vehicle approval/homologation  
 By-law on approval process and nomination of Technical Services | CB on 1958/1998 Agreements                                                      |                      |          |
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| d) Vehicle tests | Tests for approval of individual vehicle  
 Tests for approval of vehicle types (National)  
 Tests for approval of Parts/Components (National)  
 Tests for approval of vehicle types (International)  
 Tests for approval of Parts/Components (International) | By-law on nomination of Technical Services  
 By-law on tests for approval of individual vehicles  
 By-law on tests for approval of vehicle types (National)  
 By-law on tests for approval of parts/components (National) | CB on 1958 Agreement  
 Schedule 2                                                                 |                                                                                                                                                    |----------|
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| 5. Institutional setting   | Type Approval Authority (TAA)  
Test Institute/ Technical Services (National or Designated) 
Vehicle Inspection Authority 
Inspection Centres 
Supervising Authority(ies) 
Enforcement Body(ies)       | Law on establishment of TAA  
By-law on test institutes  
By-law on designation of technical services  
Law on establishment of inspection authority  
By-law on inspection centres  
By-law on inspectors  
Law on supervising authorities  
By-law on supervision activities and supervisors  
Law on enforcement bodies and enforcers |                                  |                      |                         |         |
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<td>Identify UN Regulations applied as of accession</td>
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<td>Identify UN Regulations for gradual application</td>
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<tr>
<td>7. Information exchange / gathering</td>
<td>Identify responsible agencies/offices</td>
<td>Law on information exchange/gathering for individual vehicles</td>
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<td>Identify SPOCs at each of the responsible agencies/offices</td>
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<tr>
<td></td>
<td>SCUNV Guidelines on information exchange</td>
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<td>DETA (Linked to 1958 Approvals)</td>
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<td>8. Enforcement</td>
<td>Technical Roadside Inspections</td>
<td>Law on supervising authorities</td>
<td>CB on Technical Roadside Inspections</td>
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<td>Supervision of Test Centres</td>
<td>By-law on supervision activities and supervisors</td>
<td>CB on Supervision of Test Centres</td>
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<td>Market surveillance of vehicles, parts and components</td>
<td>Law on enforcement bodies and enforcers</td>
<td>CB on Market surveillance</td>
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<td>9. System Review</td>
<td>Impact assessments on vehicle inspection system, vehicle/type/parts/components approval system</td>
<td>Road safety performance review</td>
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Thank you!

walter.nissler@un.org
https://unece.org/transport/vehicle-regulations