

La normativa sulla guida autonoma: a che punto siamo



Future Mobility Week 2018
Autonomous cars/vehicles

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- **Verso la mobilità automatizzata**
 - **Una strategia dell'UE per la mobilità del futuro**
 - **Revisione della GSR e autonomous driving**
 - **Il ruolo di Ginevra e dei Regolamenti ECE**
 - **La nuova struttura del WP.29**

- **Risultati già ottenuti a Ginevra**
 - **Regolamento ECE R79/02 ed R79/03**
 - **Cybersecurity e SW Update**

- **La vision dell'industria automotive**

COM(2018) 283 final, 17/05/2018

La visione comune dell'UE per la mobilità del futuro si sviluppa lungo tre assi principali:

1. **Rendere l'UE più forte nel campo delle tecnologie e delle infrastrutture per la mobilità automatizzata**
2. **Prevedere gli effetti della mobilità automatizzata sulla società e sull'economia**
3. **Il mercato interno a garanzia della sicurezza della mobilità automatizzata**
 - **Permettere l'innovazione**
 - **Rendere sicura la mobilità automatizzata**
 - Affrontare le questioni in materia di responsabilità
 - Potenziare la connettività del veicolo per l'automazione
 - Assicurare la cybersecurity, la protezione dei dati e l'accesso ai dati

Permettere l'innovazione: linee guida sull'applicazione dell'articolo 20 della direttiva quadro (2007/46/EC)

- ***Documentation to be provided by manufacturer and documentation to be shared with other type-approval authorities***
based on building blocks (ODD, perception system, driver monitoring, fall back, driver complacency/misuse, etc.)
- ***Article 20 for whole vehicles only***
- ***Limited in time / in number ?***
- ***Harmonized method to assess and validate the vehicle safety guidelines on risk analysis, tailored tests, best practice on HMI, cybersecurity.***
- ***Transparency***
- **➔ *Next steps: presentation of first draft proposal in TCMV on 27/09/2018, consultation MVWG, Finalisation by 2018***

Rendere sicura la mobilità automatizzata: un nuovo schema di certificazione

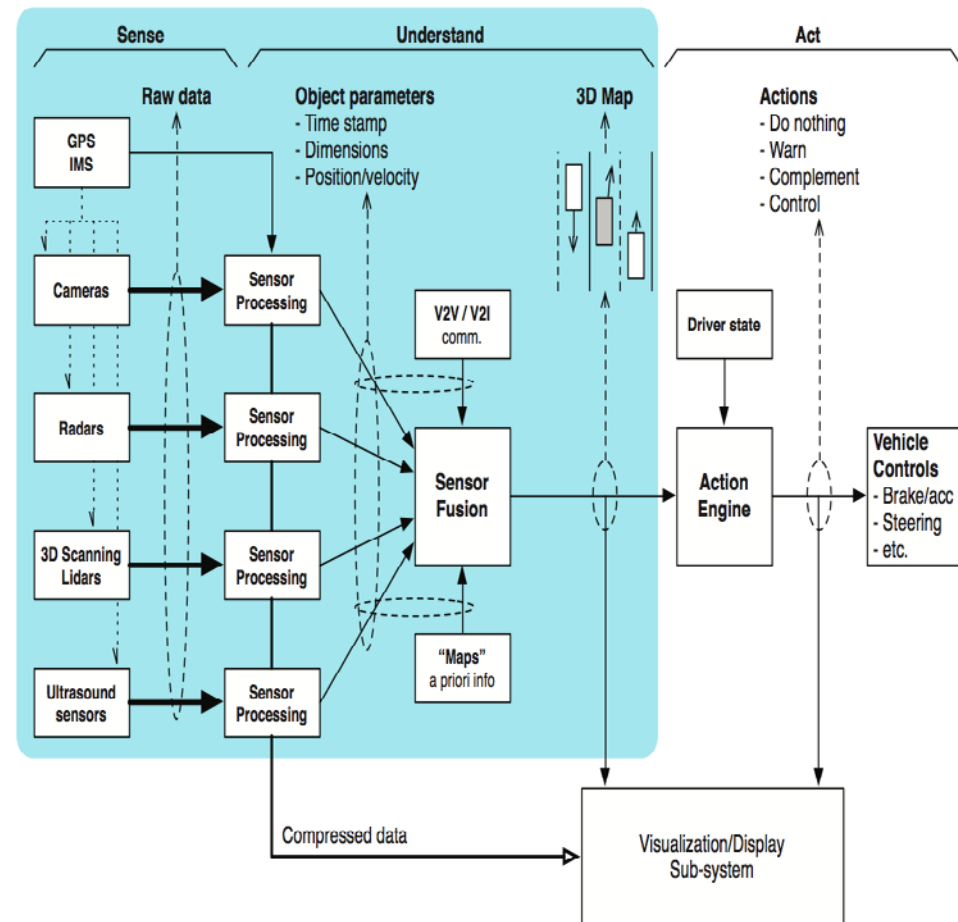
Challenges

- Perception, coordination and reaction from driver to vehicle
- HMI/misuse/abuse
- Difficult to run repeatable tests

New approach

- Cover not only functional safety but also operational/operating safety
- Use UNECE as priority, but also
- Use the full opportunity of type approval and market surveillance (Regulation 858/2018)
- Build on experience on Art 20

Autonomous vehicle platform: a functional diagram



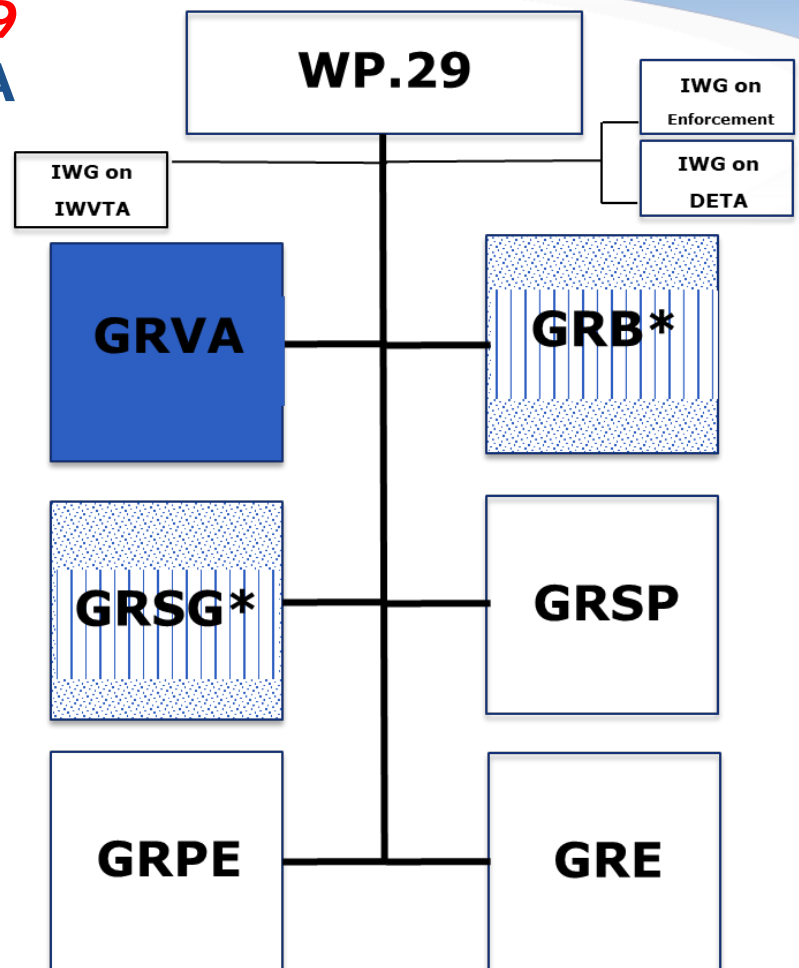
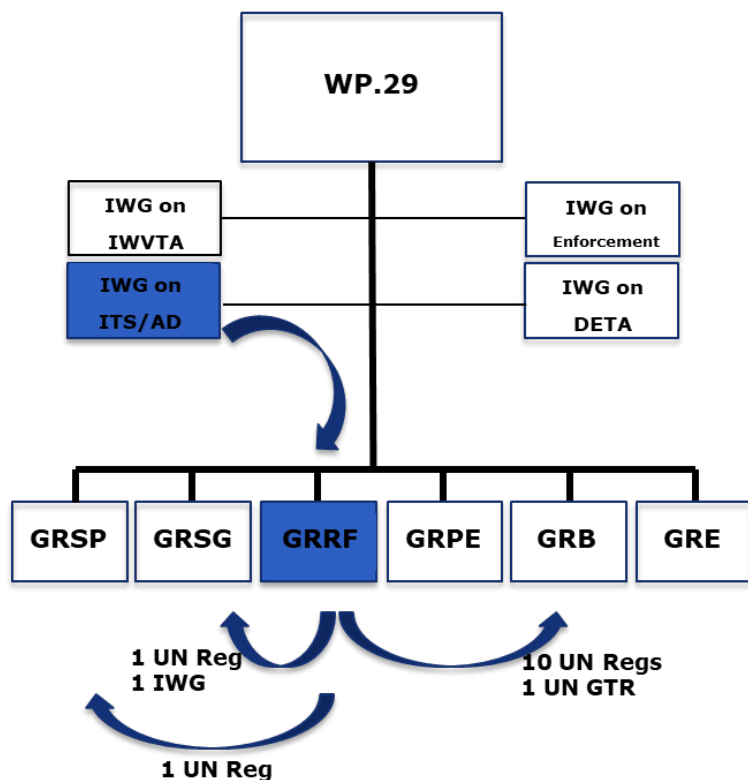
Revisione del Reg. (CE) 661/2009 sulla sicurezza: un'occasione per regolamentare la guida automatizzata

COM(2018) 286 final

- Allegato II con l'elenco di tutti i requisiti e relative date di applicazione
- Entrata in vigore prevista nella primavera del 2019
- Sono previsti requisiti applicabili ai veicoli a guida automatizzata
- Nuovi tipi: aprile 2022
- Nuovi veicoli: aprile 2024
- È probabile l'adozione dei regolamenti ECE sulla certificazione del veicolo automatizzato/autonomo

Subject	M ₁	M ₂	M ₃	N ₁	N ₂	N ₃
Driver availability monitoring	B ⁵	B ⁵	B ⁵	B ⁵	B ⁵	B ⁵
Event (accident) data recorder	B	B ⁵	B ⁵	B	B ⁵	B ⁵
Systems to replace driver's control	B ⁵	B ⁵	B ⁵	B ⁵	B ⁵	B ⁵
Systems to provide the vehicle with information on state of vehicle and surrounding area	B ⁵	B ⁵	B ⁵	B ⁵	B ⁵	B ⁵
Platooning	B ⁵	B ⁵	B ⁵	B ⁵	B ⁵	B ⁵

Una nuova struttura del WP.29 aperta al futuro: nasce il GRVA



* With additional tasks

GRVA – "Groupe Rapporteur pour Véhicules Autonomes", in the meaning of encompassing activities both for automated and autonomous vehicles

ACSF Automatically Commanded Steering Functions

- R79 Series 02 adopted at WP29-171 (March 2017), covering CSF + ACSF A / B1, entered into force on 10.10.2017
- R79 Series 03 adopted at WP29-174 (March 2018), covering ACSF C1, ESF, CEL (step1), will enter into force on [16.10.2018]
- Next steps:
 - ❖ IWG to develop proposal for ACSF B2 that align at least with Lv3, Lv4
 - ❖ ACSF C2 “excluded” from scope of the IWG; presented by industry directly at 1st GRVA
 - ❖ ACSF B2/Lv2 “excluded” from scope of the IWG; will be presented by industry as Hands-Off Driving Functionalities (Level 2)

Document structure: Cyber Security paper

How to understand the paper

TFCS/OTA Recommendation on Cyber Security
Executive Summary of the Work undertaken and Recommendation to ITS/AD

UN Regulation requiring:

- The vehicle manufacturer to obtain a **certificate of compliance** for their **Cyber Security Management System**
=> prerequisite to obtain vehicle type approval
- **Vehicle type approval** with regard to cyber security

UN Resolution

- May be used by Contracting Parties, vehicle manufacturers and other stakeholders as guidance on how to meet the requirements of the regulation and how to amend national regulations on vehicle registration and/or PTI.

Chapter 7: Conclusion and Recommendation for further proceedings

Annex D: List of reference documents

Annex A: Draft proposal to introduce regulation on cyber security

Annex 1: Requirements for cyber security

Annex 2: Information document

Annex 3: Communication

Annex 4: Arrangements of approval marks

Annex 5: Model of certificate of compliance

Chapter 1: Introduction

Chapter 2: Definitions (and abbreviations)

Chapter 3: Cyber security principles

Chapter 4: Threats to vehicle systems and ecosystem

Chapter 5: Mitigations

Chapter 6: Requirements for cyber security processes and how to evidence their application

Annex B: List of threats and corresponding mitigations

Annex C: List of Security Controls related to mitigations incl. examples

Document structure: Software update paper

How to understand the paper

TFCS/OTA Recommendation on S/W Update Processes
Executive Summary of the Work undertaken and Recommendation to ITS/AD

Chapter 7: Conclusion and Recommendation for further Proceedings

UN Regulation requiring:

- The vehicle manufacturer to obtain a **Certificate of Compliance** for their **S/W Update Process Management System**
=> prerequisite to obtain vehicle type approval
- **Vehicle type approval** with regard to software update processes.

Annex A:

Draft Proposal to introduce a regulation on software updates.

- Annex 1: Information Document
- Annex 2: Communication Form
- Annex 3: Arrangement of approval marks
- Annex 4: Model of Certificate of Compliance

Amendments to existing UN **Regulations**:

- Introduction of RxSWIN in system regulations

Annex B: Draft proposal to amend existing regulations to introduce Regulation x Software Identification Numbers (RxSWIN).

UN Resolution

- May be used by Contracting Parties, vehicle manufacturers and other stakeholders as guidance on how to meet the requirements of the regulation and how to amend national regulations on vehicle registration and/or PTI.

Chapter 1: Introduction

Chapter 2: Definitions

Chapter 3: Document Structure

Chapter 4: Process of Software Updates

Chapter 5: Safety and Security requirements for software updates

Chapter 6: Identification of the installed software

La visione dell'industria automotive

