



Harmonized regulatory framework on Accident Emergency Call System developed by UNECE World Forum for Harmonization of Vehicle Regulations (WP.29)

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The Economic Commission
for Europe (UNECE)

Inland Transport
Committee (ITC)

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

Other Working
Parties

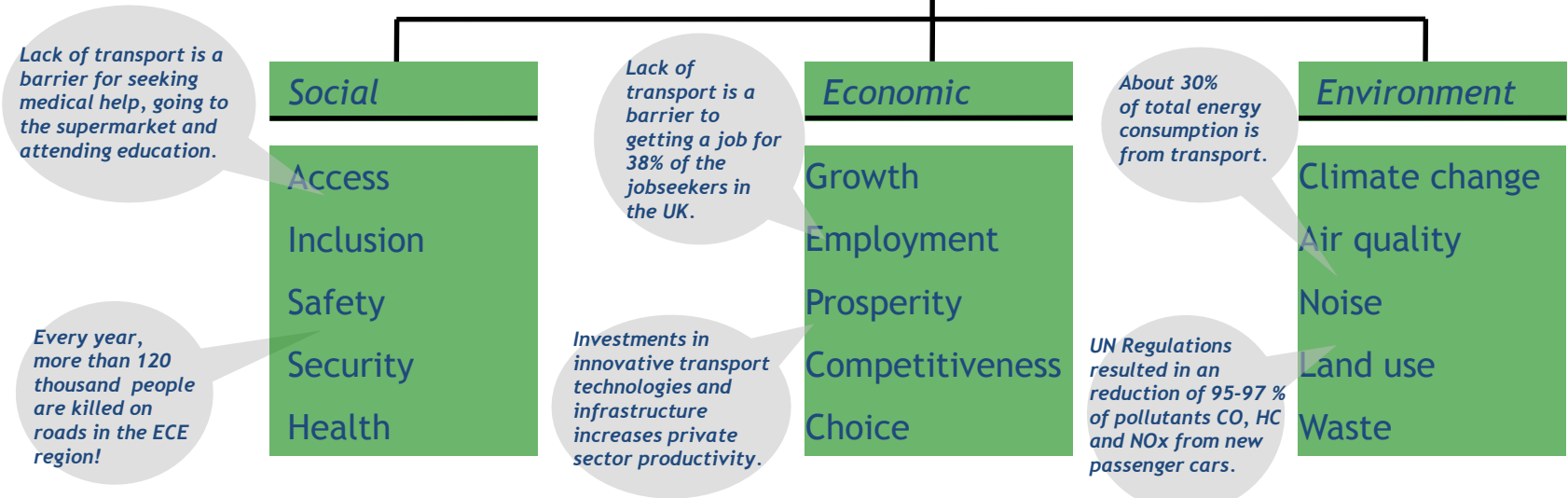
- Pollution and Energy
- General Safety Provisions
- Brakes and Running Gear
- Lighting and Light-Signalling
- Noise
- Passive Safety

- UNECE works to facilitate economic integration and cooperation among its member States. Key actions include:
 - negotiation of international legal instruments
 - development of regulations and recommendations
- ITC negotiates and adopts international legal instruments on inland transport that support develop efficient, harmonized and integrated, safe and sustainable pan-European transport systems.
- WP.29 is a unique framework that allows for the development of globally harmonized regulations on vehicles.



UNECE transport division and sustainable development

Transport for sustainable development



UNECE - Transport Division



Sustainable Transport in the proposed SDG Framework and the role of ITC and its subsidiary bodies

ITC expressed its continued support in March 2015 on proposed SDGs:

GOAL 3 Ensure healthy lives and promote well-being for all at all ages

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

GOAL 11 Make cities and human settlements inclusive, safe, resilient and sustainable

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.



Why a worldwide regulatory framework for vehicles?

→ WP.29 established in 1952 (World Forum since 2000)

The automotive industry became a global industry

Main contributor to economical growth

Mitigate negative effects (accidents, pollutants, climate change)

Note: The development of worldwide harmonized regulations results:

- in safer and cleaner vehicles and
- in the reduction of technical barriers to trade and of costs for consumers
- given the focus of proposed SDGs 3.6 and 11.2, WP.29 and the others
UNECE/ITC subsidiary bodies will have an increasing role on sustainable transport goals





UNECE/WP.29 administers 3 UN Agreements

The World Forum administers 3 Agreements:

'58 Agreement 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 (52 Contracting Parties, **134 UNECE Regulations**)

'98 Agreement concerning the establishing of global technical regulations (gtrs) for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicle (35 Contracting Parties, 16 **gtrs**, adopted in 2014)

'97 Agreement concerning the adoption of uniform conditions for periodical technical inspections of wheeled vehicles and the reciprocal recognition of such inspections (12 Contracting Parties, 17 pending signatories, 1 Rule, 1 draft Rule)

The 58 & 98 Agreements have similar technical provisions (parallel)





WP.29 and emerging economies

Most of BRICS countries are Contracting Parties to the Agreements of the World Forum WP.29





UNECE/WP.29 structure

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

Active Safety

Lighting and light-signalling (GRE)

Adaptive Front-lighting Systems

Installation of lighting and light-signalling devices

Brakes and running gear (GRRF)

Electronic Stability Control (ESC);

Lane Keeping Assist System (LKAS) and Parking Assist Systems (PAS)

Passive Safety

Passive safety (GRSP)

Pedestrian protection

Frontal/lateral impact protection

Child restraint

General Safety

General Safety (GRSG)

Safety of buses & coaches

Glazing materials

Rear view mirrors

Environmental protection

Pollution and Energy (GRPE)

On-Board Diagnostic systems

Electric Vehicles and Environment (EVE)

Noise (GRB)

Quiet road transport vehicles

> 40 non-permanent technical groups

Future
UNECE - Transport Division





The '58 Agreement (1)

Key Provisions:

- CPs are free to be bound by all, some or no UN Regulation.
- UN Regulations apply to a type of vehicle, equipment or parts as specified in the scope of the Regulation.
- a new UN Regulation is adopted by a 2/3 majority of the CPs, but in practice by unanimity.
- UN SG notifies a new Regulation to all CPs.

UN Regulations include:

- Technical prescriptions, regarding the testing method.
- Conditions (**performance requirements**) for granting a type approval (including limit values).
- **Conditions for the mutual recognition of the type approvals**
- Requirements for E-marking.
- Prescriptions for conformity of production.





The '58 Agreement (2)

- **52 Contracting Parties** (incl. European Union-EU).
- **Regulations accepted by other countries** (i.e. Canada, ASEAN, APEC etc.)
- **Regulations applied by other countries on a national level law** (i.e. South America, Philippines ...)

'58 Agreement is being updated soon to include:

- International Whole Vehicle Type Approval (IWVTA).
- A whole vehicle approved accepted by all.
- Different levels of stringency to facilitate the regulatory activities of developing countries.
- Possibility to grant approvals to earlier versions of the UN Regulations.





The '98 Agreement (1)

UN Global Technical Regulations can be amended when transposed to national law (almost **total** harmonization)

Contracting Parties: 35 countries including China, India and USA

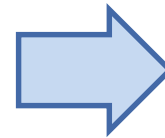
UN GTRs include:

- technical prescriptions, the testing method (eventually alternative provisions and
- performance requirements, including limit values
- No administrative provisions
 - No certification procedure
 - No conformity of production
 - No reciprocal recognition



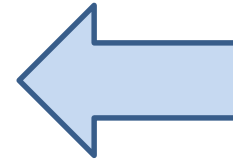


Role of government experts in the decision making process



The WG adopt the proposal & send to WP.29/AC.1
Only CPs have right to vote

WP.29 adopt the proposal with 2/3 majority



CPs applying that UN Regulation binded to apply

The UN Reg./Amend is adopted after 6 months if no disagreement from >1/3 CPs





Type Approval Procedure



Manufacturer shall address the application to a Designated Administrative Department (Type Approval Authority (TAA))

Tests conducted by accredited Technical Service

TAA grant the type-approval, if test results comply with the requirements



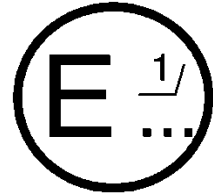
The type approval is mutually recognized by all other CPs applying that Regulation



The manufacturer and the TAA have to ensure the conformity of production



The manufacturer may bring its E-marked product to the market without any further tests





UNITED NATIONS

Why a UN Regulation on Accident Emergency Call Systems (AECS)

Save up to 2500 lives a year, speed up emergency response times by 40% in urban areas and 50% in the countryside (EU)

Need of fully interoperability of positioning systems (e.g. ERA-GLONASS, GPS, Galileo) and of mobile telecommunication networks

Need for harmonization of technical requirements on the basis of performance-based tests provisions

Voluntary approach would not lead to a fast widespread eCall deployment, rather to services limited to some (high end) vehicles initially



WP.29 agreed in June 2013 to develop a UN Regulation by Oct. 2015 applicable worldwide

- **At its June 2013** session WP.29 established a new informal working group (IWG) on AECS chaired by the Russian Federation.
- **Task of the IWG :**
 - ❖ **Develop** a UN Regulation (in the framework of the 1958 Agreement),
 - ❖ **Technologically** neutral provisions for AECS applicable worldwide.
- **The UN Regulation would be implemented in** national legislation on e-call after its adoption by WP.29 and entry into force.
- **The UN Regulation would support** any Global Navigation satellite system

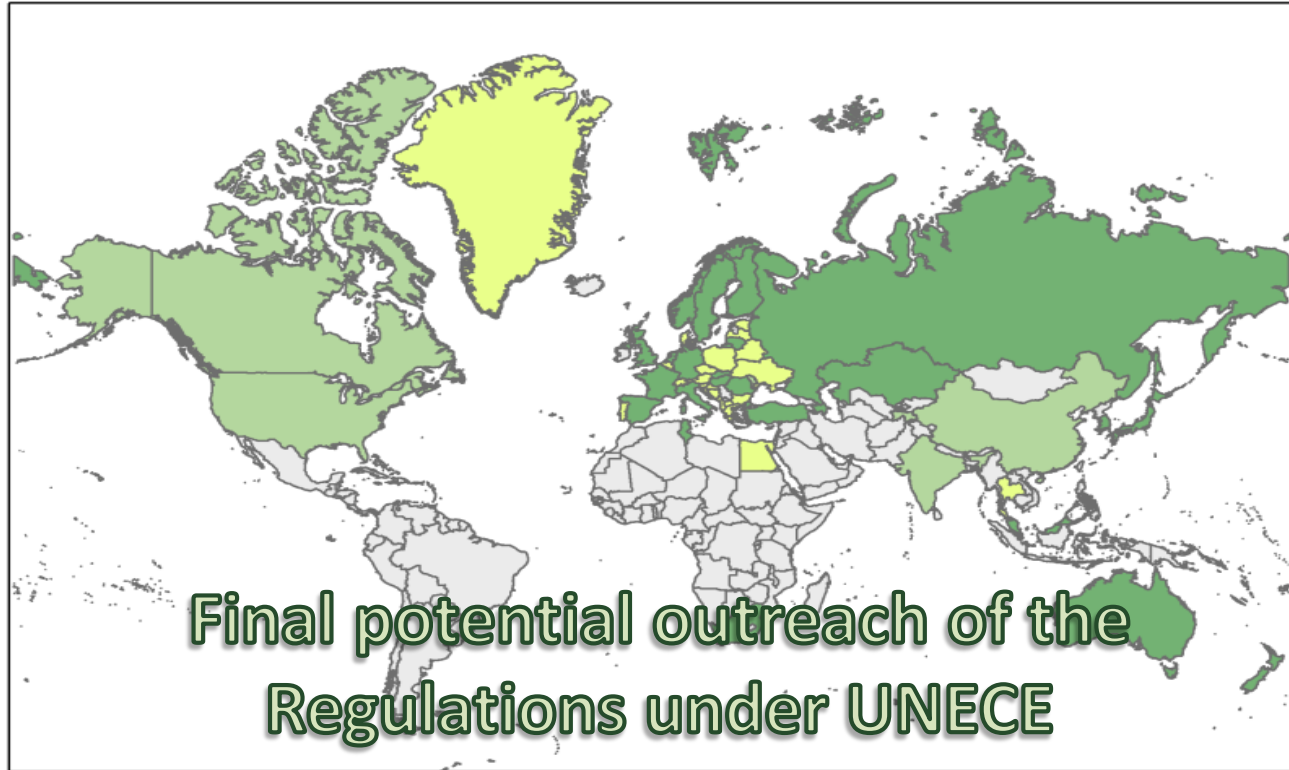
- **The draft UN Regulation** consists of three parts:
 - Part I: e-Call devices;
 - Part II: installation
on vehicles of approved AECS devices
 - Part III: AECS system (fully integrated AECS)
- Scope: passenger (M1) & small commercial (N1) category of vehicles

Harmonization of Acronyms

- “e-Call device (AECD)” refers to a device capable of:
 - determination of co-ordinates and direction of motion of a vehicle;
 - Transmission of above information in case of severe accident;
 - bilateral voice communication with emergency services through mobile telephone networks.
- “e-Call system (AECS)” refers to a fully integrated e-Call device.



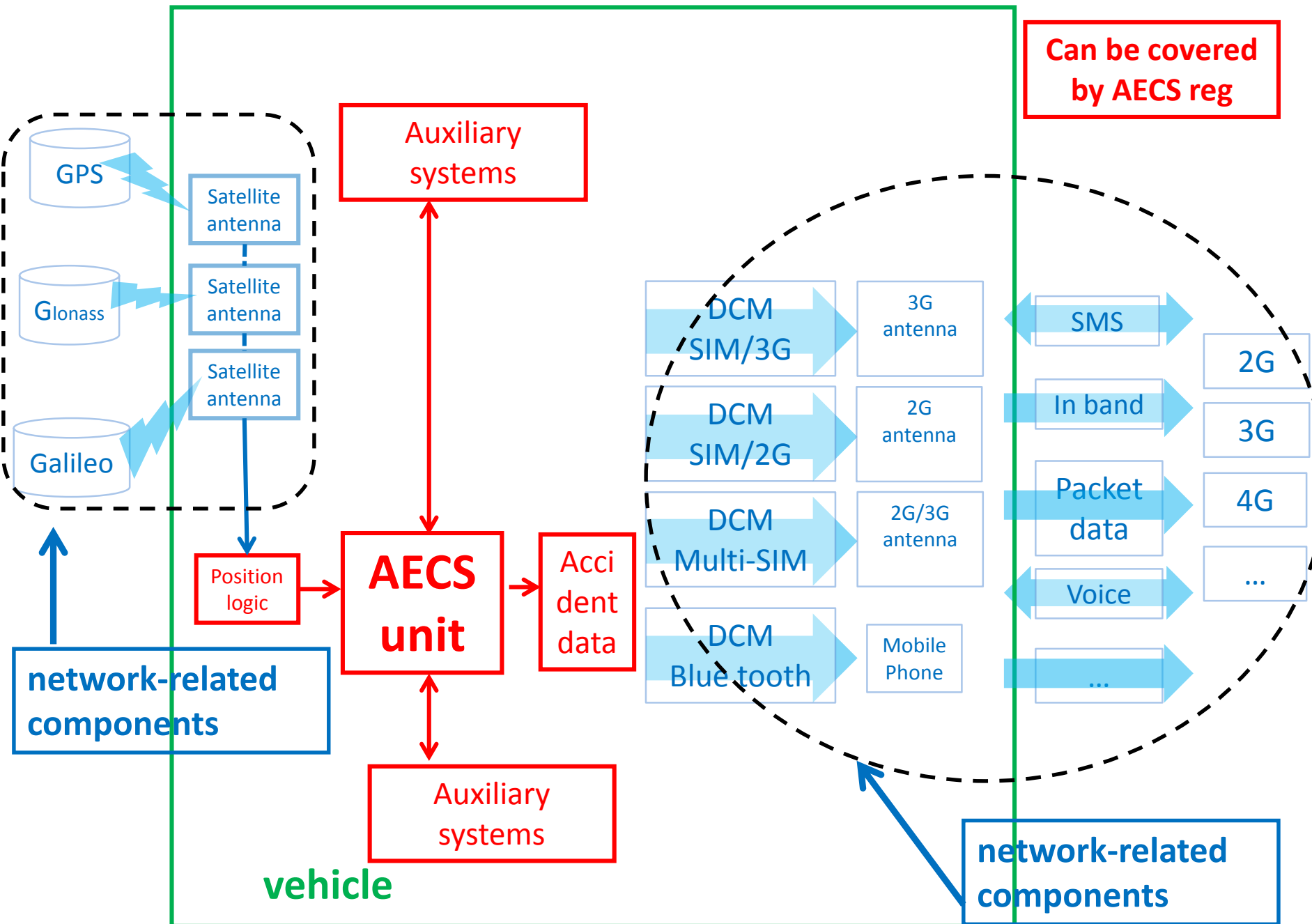
Outreach of UN Regulations



- Contracting Parties to both Agreements
- Contracting Parties to the 1958 Agreement
- Contracting Parties to the 1998 Agreement
- Not Contracting Parties







Scheme of operations of the AECS system



Status of the draft UN Regulation

Pending issues on the lack of harmonised telecommunication standards due to existing regional requirements :

Russia (ERA Glonass Regulation and standards established):

Positioning via **Glonass** satellite constellation

Mobile network: 2G & 3G required

In band modem **and SMS** for data transmission

Detailed device requirements with regard to environmental, mechanical and voice communication performance

Manual-only operation for 'device' and automatic trigger for 'system'

EU (voluntary third party service system and eCall Regulation in progress)

Positioning via **Galileo** satellite constellation

Mobile network: 2G required & 3G optional

In band modem data transmission

No manual-only operation

Japan (Helpnet, voluntary third party service system)

Positioning via **GPS** satellite constellation

Mobile network: 3G (UMTS 1700/2100 MHz)

Packet data transmission (not compatible with 2G voice transmission)



Decisions

State of play of discussions at experts level:

1. Scope restricted to items not related to communication:
 - Human/Machine interface
 - Resistance to impact
 - Triggering signal generation
 - Minimum Set of Data (MSD)
 - Etc.
2. On-going discussions on
 - “if-fitted” requirements with regard to GNSS connectivity
 - Vehicle approval procedures
 - Test method for resistance to impact of eCall device
 - Human/Machine Interface





Benefits of a UN Regulation

1. **Satisfying environmental and safety regulations** on a market-by-market basis is extremely expensive.
2. **A UN Regulation will simplify** an exceedingly complex global “regulatory arena.”
3. **A type approved vehicle**, can be marketed everywhere (Principle of mutual recognition of T.A. of 1958 Agreement).
4. **Set harmonized** technology-neutral provisions fostering leverage of costs.
5. **An affordable eCall system for all vehicle categories** will help saving multiple lives and reducing road fatalities.



Thank you for your attention

