

EV Special Session

27th January, 2021



JAPAN AUTOMOBILE STANDARDS INTERNATIONALIZATION CENTER

The purpose of this session is to share information among Asian countries on regulations of automotive electrification.

<Background>

Interests on Electrification has been increased globally.

i.e. Japan is aiming to cut greenhouse gases to zero by 2050 and become a carbon-neutral society. One of the solution in achieving this target is the electrification of vehicles. e.g. EV,PHEV,FCEV,HV

Index

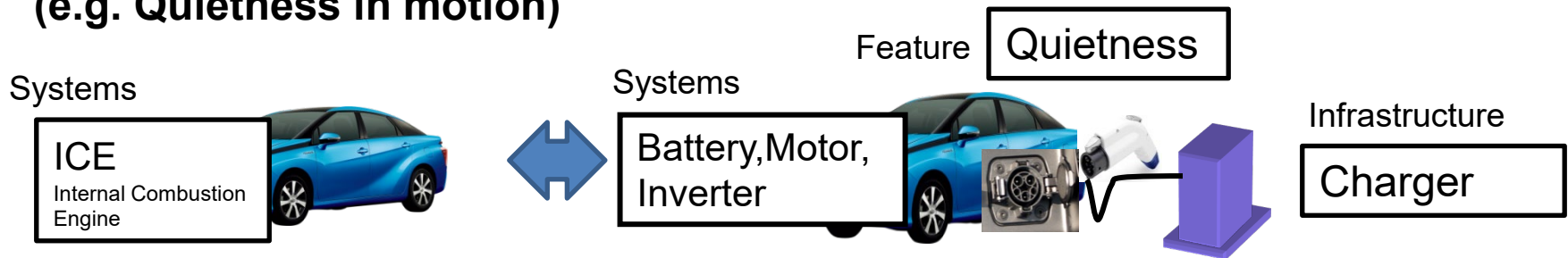
- 1. Significance of Electrified Vehicles**
- 2. Roll of Regulations and Standards**
- 3. Harmonization for promoting Electrification**
- 4. Corporation among Asian countries**

-Sharing information from Asian countries, if any (Open floor)

-Introduction of expert meeting (video)

1. Significance of electrified vehicles~What will be needed for EV?~

- ✓ Regulations and Standards are essential and beneficial to support electrification of vehicles.
- ✓ The significance of electrified vehicles is mainly related to electrified propulsion systems. i.e. Battery, Motor, Inverter.
- ✓ Some electrified vehicles, such as pure EV and PHV need infrastructure of electric charging.
- ✓ Performance in terms of electric propulsion is also different. (e.g. Quietness in motion)



-Different safety aspects from conventional vehicles are required, such as high voltage protection, battery safety design preventing fire risks. (Li-ion)

-It is beneficial if the different chargers and vehicles are compatible with each other by adopting the same standard.

-QRTV(Quiet Road Transport Vehicles)is the countermeasure for pedestrian awareness to electrified vehicles.

2. Roll of Regulations and Standards

Those are the overall picture of Regulations and standards.

Safety
-R100
-R136



Connecting
ISO17409
IEC61851
IEC62752
IEC62893
IEC62196(DC)

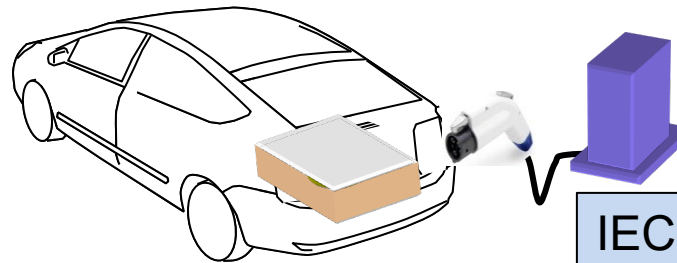
Safety
ISO6469

Communication IEC61851

**QRTV(Quiet Road
Transport Vehicles)
R138**

UN R13/13H
Regeneration of
electricity
(only applicable
this system)

Performance
ISO8714,8715

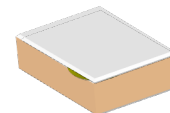


Electrical Installation for
building, Wiring regulations in
each country

IEC61851 (EMC in charging)

UN R10 (EMC in charging)

Transportation of
Battery(SOLAS,ICAO)



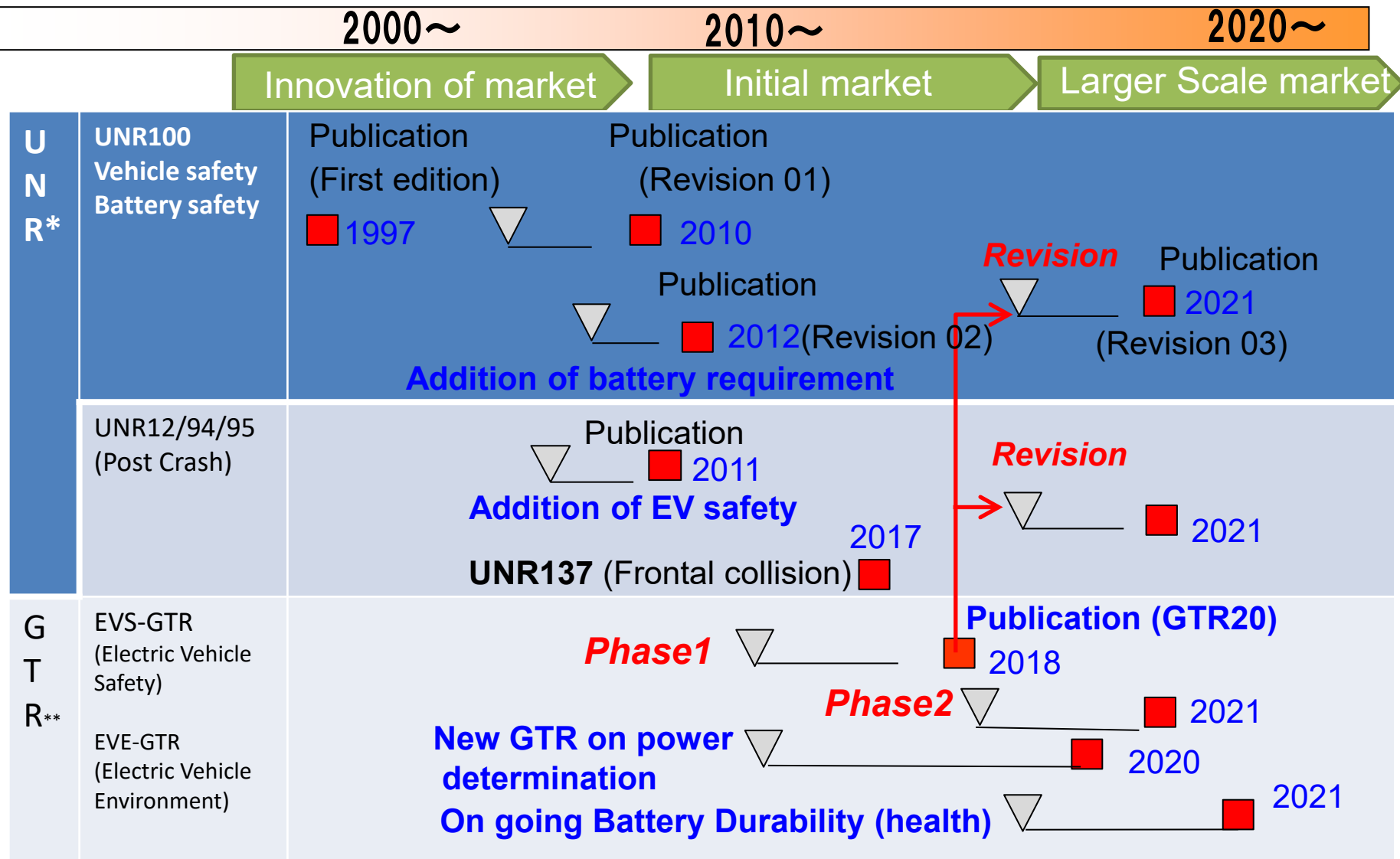
Battery
IEC62660,IEC12405



Motor
ISO21782

3. Harmonization for promoting Electrification

Regulations have been developed at WP29 in accordance with market deployment.



*UN R under 1958 agreement

** GTR Global Technical Regulation under 1998 agreement

4. Corporation among Asian countries

- ✓ Asian countries are rapidly growing. They are promising auto markets as well as important international partners.
- ✓ JASIC supports Asian countries in every respect, e.g. Public and Private meeting, Expert meeting

Asia as Growing Auto Markets

Asia as International Partners

1958 Agreement



Thailand

Japan
Korea
Malaysia

India
China

1998 Agreement

Harmonization of
technical
requirements

Harmonization of regulations+
Mutual recognition of certification

Support from JASIC

- **Public and Private Joint Forum in Asian Region**
⇒ Overall communication for harmonization such as WP29 movements
- **Expert Meeting for each country and/or group of countries**
⇒ Focus on specific subject to meet each country's request



Public and Private Joint
Forum at KL in 2019



Indonesia in 2016

Open floor

Any piece of information of each country with respect to Electrified Vehicles and its regulation movements is appreciated.

- ✓ **We are unable to hold expert meeting on a face-to-face basis.**
Thus, we've created the video program for UN R 100 and 136 in keeping the equivalent quality and effects.
- ✓ **We intend to provide with those for everyone who are interested in so that they can learn anywhere at anytime .**
- **The instructors are the experts of the area recognized world-wide.**



UN R100

Mr. Naoki Kinoshita
JASIC GRSP, RESS
Technical Working Group



UN R136

Mr. Tatsuo Hayashi
JASIC GRSP, RESS
Technical Working Group

How to access the video program.

⇒ JASIC will provide you with the access point to view the video.