



OICA

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Informal Document **GRBP-82-21**
82nd GRBP, 3-5 September 2025,
agenda item 12

Work on Exterior Acoustic Signaling Status Report

5 September 2025

EXTERIOR ACOUSTIC SIGNALING

WORK IN PROGRESS
ACEA TF-ACSI

Working Party on Noise and Tyres (GRBP)
82nd session, Palais des Nations, Geneva

Yannick Denoual (Renault)
Pilot of ACEA TF-ACSI

5 September 2025

The ACEA logo is displayed in a large, dark blue, lowercase sans-serif font. The letters 'a', 'c', 'e', and 'a' are arranged in a staggered, overlapping manner. Small, light blue circular dots are positioned above the top two letters and below the bottom two letters, creating a sense of depth and texture.

MEETINGS AND PARTICIPANTS

ACEA TASK ACOUSTIC SIGNALING (TF-ACSI)



4

Number of Meetings

Hybrid-meetings

7th TF ACSI: 2025, May 21

8th TF ACSI: 2025, June 23

9th TF ACSI: 2025, July 18

10th TF ACSI: 2025, August 27



4

Participants

- ACEA:
Vehicle and Commercial vehicle manufacturers from EU and Japan, Korea (via importers)
- Acoustic Experts:
ACEA, AFAI

SITUATION AND MOTIVATION

- Following documents WP.29-191-05r1 and [GRBP-78-02](#), OICA asked ACEA to work on Exterior Acoustic Signalling.
- ACEA established the Task Force Acoustic Signalling (TF-ACSI).
- TF-ACSI aims to work on acoustic signalling:
 - To harmonize requirements
 - To orient requirements to function related specifications
 - To propose a framework for exterior acoustic signals specifications
- TF-ACSI **will not define the need for acoustic signals**, but a common way to define their specifications.

FRAMEWORK

Task 1 – Regulation scanning

- Scan regulations and standards to identify specifications of exterior acoustic signals
- Examine regulations and standards on how the acoustic signal is specified
- Create an overview of cross functions on devices.

Task 2 – Propose guidelines

- Create general template for the definition of sounds specification (pattern, frequency, level, ...)
- Cluster in exterior acoustic signalling functions (safe life, safe car, information/communication,...)
- Propose how to manage priorities defined in GRs in exterior acoustic signals

Task 3 – Propose amendments

- Ensure test procedures are well described and consistent
- Amend device-oriented requirements to function-oriented, to broaden the scope of technologies
- Propose guidelines for the specification of sound signals in future regulations

TF ACOUSTIC SIGNALLING DELIVERABLES

Milestones

- 79th GRBP (February 2024):
 - Status Report on working program
- 80th GRBP (September 2024):
 - Reporting postponed
- 81st GRBP (February 2025):
 - Outcome from Task 1 (in progress)
 - Proposed framework for acoustic signal specification
- 82nd GRBP (September 2025):
 - Outcome from Task 1 (finalized)
 - Progress on Task 2 (framework)
 - Progress on Task 3

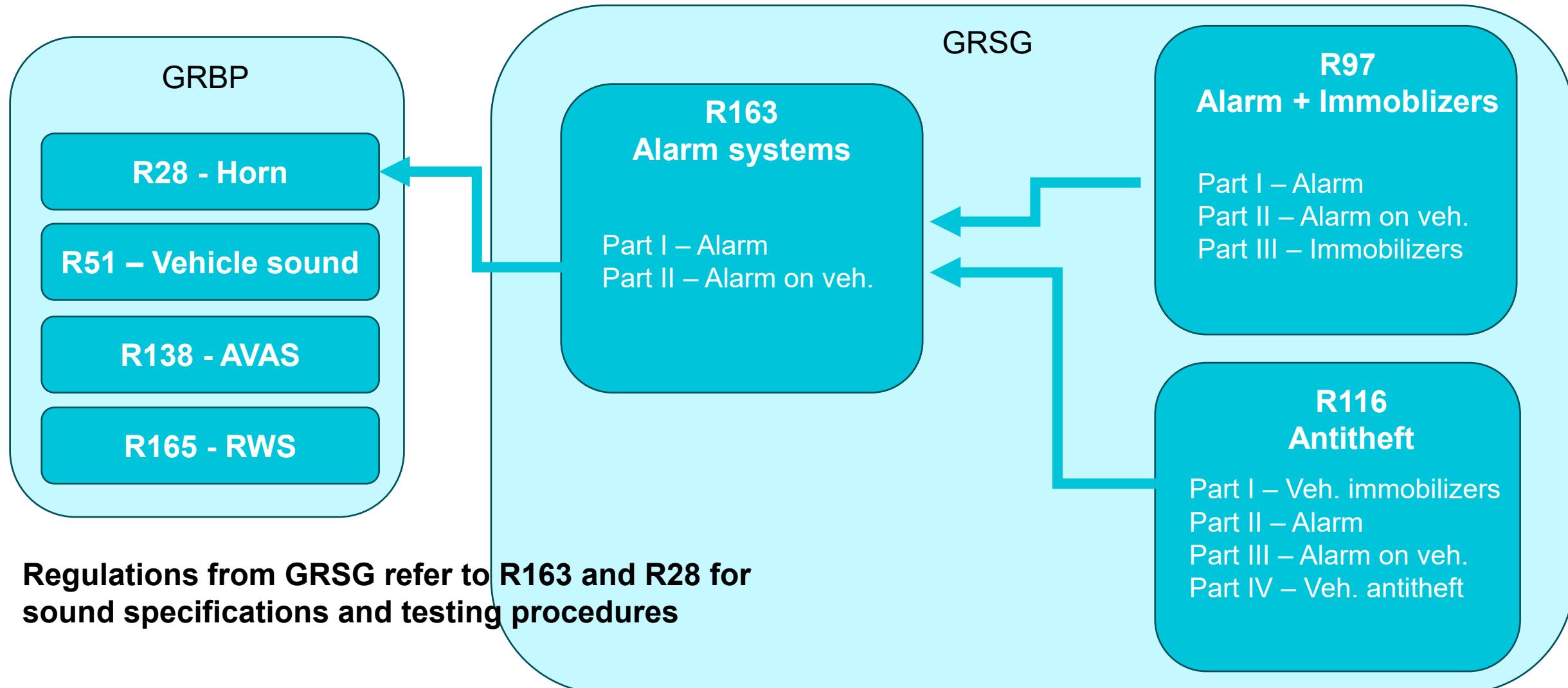


RESULTS OF TASK 1

REVIEW OF REGULATION / STANDARDS

TASK 1: REVIEW OF REGULATION / STANDARDS

Regulations / standards related to exterior acoustic signalling.

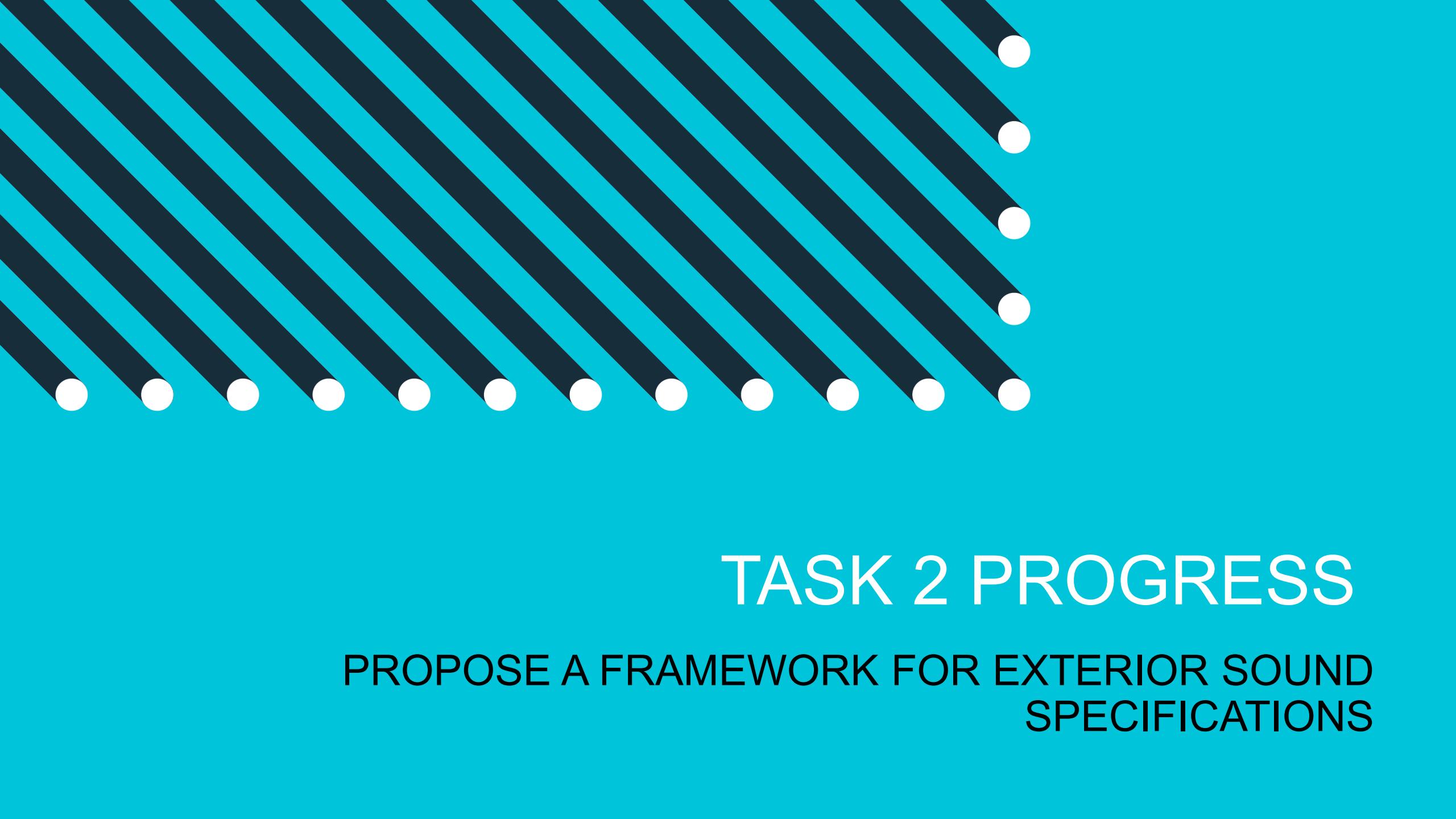


TASK 1: REVIEW OF REGULATION / STANDARDS

Requirements on acoustic signalling in GRBP, GRSG, EU

		R28 Horn	R138 AVAS	R165 RWS	R163 Alarm	R116 Antitheft	EU 540/2014* 2019/839
Sound presence	Mandatory ? Exemptions ?	√	√		√	√	√
Sound level	Minimum ? Maximum ?	√	√	√	√	√	
	Self adjusted to background ?			√			
Sound descriptors	Subjective description	√					√
	Frequency range, frequency emergence	√	√	√	√	√	
	Sound pattern			√	√	√	
Component	Technology	√		√			
	Specification on component	√		√	√	√	
	Component installation	√		√	√		
Users features	Pause function		√	√	√	√	√
	Selectable sound		√	√			
Test procedure	Microphone distance, height, test facility	√	√	√	√	√	

Review national regulations specifying exterior sound signals



TASK 2 PROGRESS

PROPOSE A FRAMEWORK FOR EXTERIOR SOUND SPECIFICATIONS

REPORT ON TASK 2 PROGRESS

Drafting a template for exterior signal specification

- Identify necessary and/or recommended criteria, regarding the function of the sound

		Safe Life	Safe car	Communication
Sound presence	Mandatory ? Exemptions ?	√	√	
Sound level	Minimum ? Maximum ?	√	√	√
	Self adjusted to background ?			
Sound descriptors	Subjective description			
	Frequency range, frequency emergence			
	Sound pattern			
Component	Technology			
	Specification on component			
	Component installation			
Users features	Pause function			
	Selectable sound			
Test procedure	Microphone distance, height, test facility			

REPORT ON TASK 2 PROGRESS

Proposal of a template to draft regulations on exterior signalling

- Provide guidelines for the drafting of exterior sound signals specifications,
- taking into account their level of priority (safe life, safe car, communication)
- Format: a Document For Reference Only ?
- Communication to other GRs ?



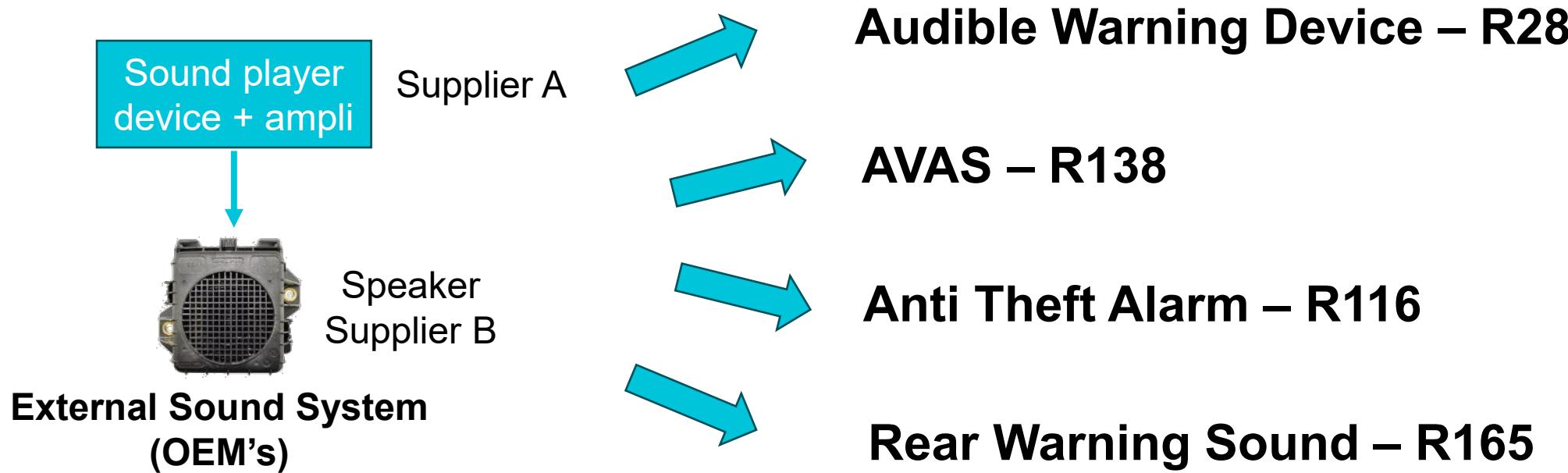
TASK 3 PROGRESS

AMEND TEXTS

PLANS FOR TASK 3

Are there amendments needed to GRBP, GRSG regulations?

- What are the texts that would need to be amended to adapt to upcoming technologies? Example of an “all-in-one” system:

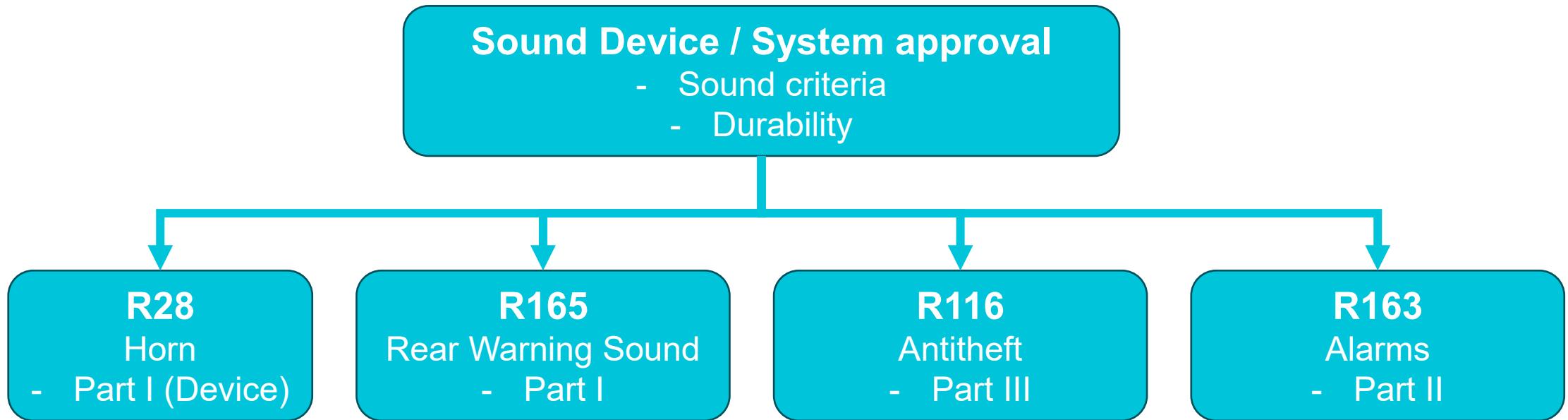


- OK with all other GRBP, GRSG regulations (so far)
- UN-R28 : amendment needed to allow system approval by OEMs
 - Amendment proposal for GRPB 83

PLANS FOR TASK 3

Towards a “Sound System Approval” ?

- Amend, or draft a new regulation gathering Device/Sound System approval requirements?



- What would be the benefit?
- This task would need to be addressed in a dedicated Task Force



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THANK YOU FOR YOUR ATTENTION!