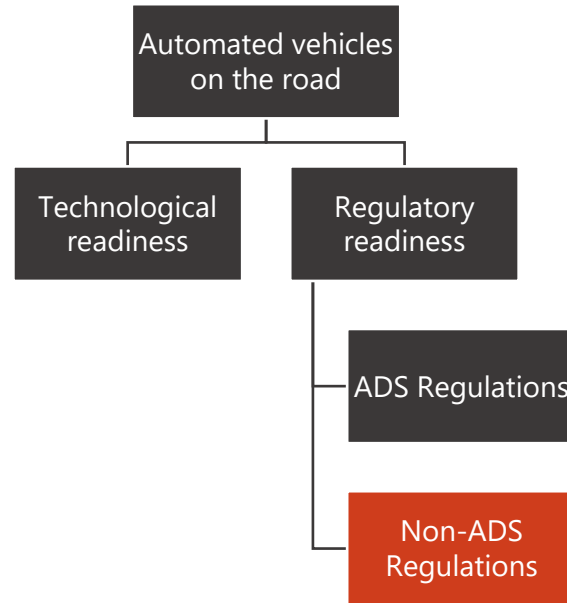


Taskforce on regulatory **Fitness** for **ADS**

Status report

Short reminder on the context of the screening



- Contracting Parties and the industry need a Regulatory environment for automated vehicles
- Existing Regulations must be checked to determine which ones may be applicable to automated vehicles
- Screening taskforces were established by WP.29 for each GR to determine the overall status of all Regulations

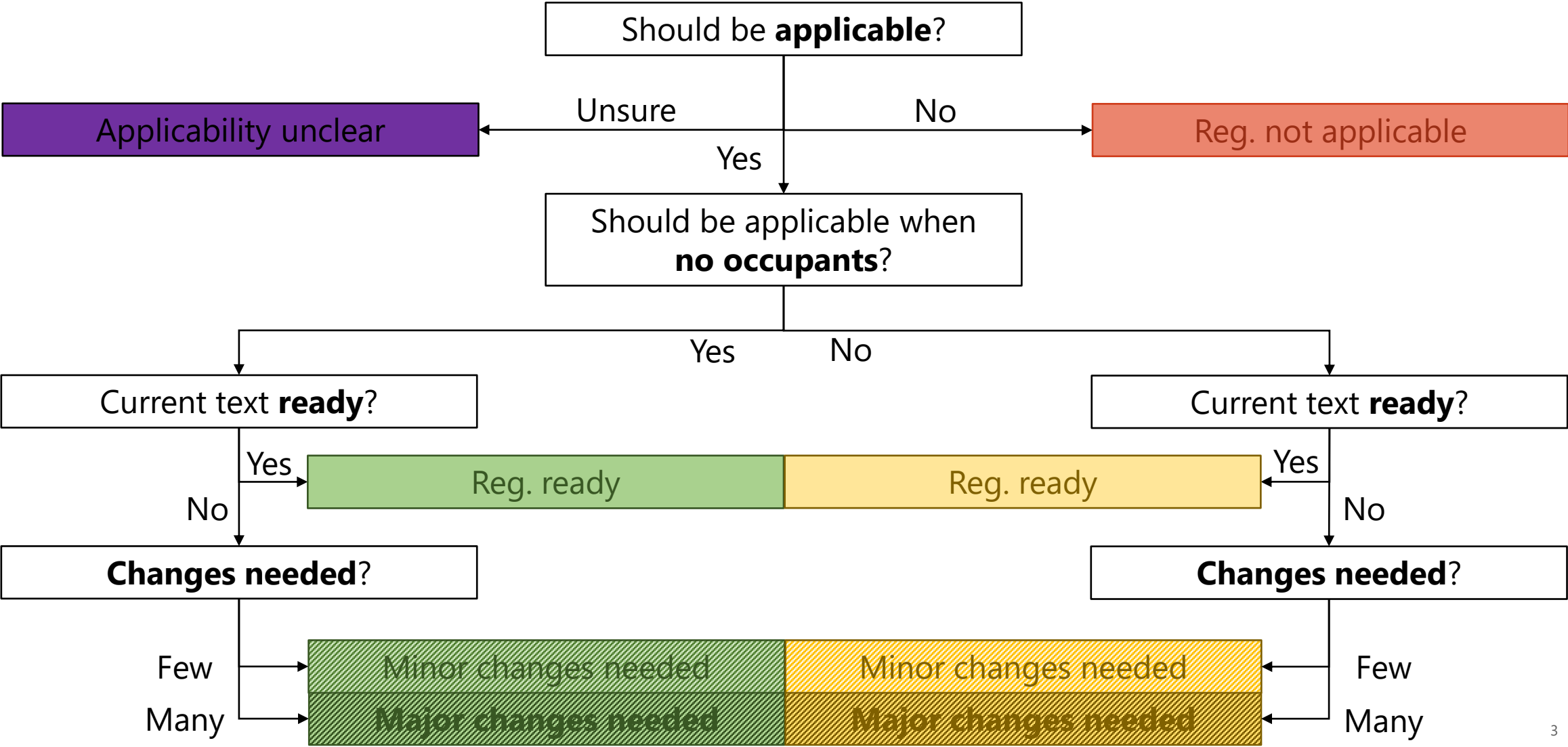
Mandate (given by WP.29 186th session):

- Scan all **167** UN Regulations and **23** Global Technical Regulations
- Expected at 190th session in June 2023: **Report, summary** and **details** for each Regulation, instructions for **drafting new Regulations**

Focus (given by GRVA 14th session):

- All use cases should be considered, especially dual-mode vehicles, vehicles without manual driving capabilities and vehicles without occupants

Screening process of a Regulation



Important precisions

- **“Applicable”** means applicable to **fully automated vehicles** without manual driving capabilities
- **“Ready”** means that the **current text** of the Regulation can be understood and applied by approval authorities and technical services when the approved vehicle is automated
 - This includes Regulations with opportunities to add provisions for FAVs (e.g., R160)
- **“Not Applicable”** includes Regulations for systems replaced by the ADS (e.g., active safety Regulations)
- All Regulations are applicable to **“dual-mode vehicles”** in manual mode
- Most Regulations for **components** are Applicable and Ready
- **“Excluded from the screening”** are Regulations superseded by more recent Regulations (e.g., R44 superseded by R129)

Focus on GRVA Regulations

Ready No changes needed	R155 Cybersecurity	R156 Software Updates		
Applicable Major changes required	R13 Braking (HDV)	R13-H Braking (cat. M1 & N1)	R79 Steering	R90 Replacement brake parts
Not applicable Performance covered by ADS	R131 AEBS (HDV)	R140 / GTR8 ESC	R152 AEBS (cat. M1-N1)	
Not applicable	R130 LDWS	R139 BAS	R157 ALKS	
Other	R78 Braking (cat. L)	R89 (A)SLD/F	GTR3 <i>Braking (cat. 3-1 to 3-5)</i>	

Focus on GRVA Regulations (cont.)

- **R155** and **R156** are recent Regulations, already used for vehicles equipped with an ALKS
- **R13**, **R13-H** and **R79** regulate basic vehicle characteristics on braking and steering, and need major changes
- **R90** requires testing on a representative vehicle, and certain provisions must be reworked
- **R130**, **R139** and **R157** become irrelevant for FAVs
- **R131**, **R140**, **R152** and **GTR8** are not applicable as standalone Regulations, but ADS Regulations should specifically guarantee the same level of performance
- **R78** is applicable to light two-, three- and four-wheeled vehicles. Light automated quadricycles should be treated in priority: this could be done by expanding the scope of R13-H instead of amending R78.
- **GTR3** only applies to two- and three-wheeled vehicles: low priority should be given
- **R89** is still to be decided (see Open Issues)

Open Issues for GRVA Regulations

- **All Regs** — Categories for automated vehicles
 - A clear roadmap from GRVA and GRSG is needed
- **R13, R13-H, R79** — Impact of the ADS ODD on performance and testing provisions
 - FRAV/VMAD input will be required on whether to consider the ODD when amending Regulations
 - Examples in R13-H: Fade test and parking braking tests for vehicles with ODDs in flat, urban areas
- **R152 etc.** — Suspension and reactivation of active safety functions in dual mode
 - What should the behavior of active safety functions be while in automated mode (suspension of the function, modification of the control strategy, automatic deactivation)?
 - Should the functions be enabled automatically during transitions from automated to manual mode?
- **R89** — Speed Limiting Devices and Functions
 - Are SLDs compatible with fully automated vehicles?
- **R13, R79** — Reliance on physical abilities of the driver
 - Examples: hearing air venting (R13), feeling vibrations of the steering wheel (R79)
- **R13, R13-H, R79** — Requirements related to the safety concept
 - Should non-ADS Regulations include a safety concept assessment for the execution of the control demand initiated by the ADS?

Taskforce activity report

- 8 meetings since October 2022, including:
 - 1 meeting in Geneva on 10 March
 - 1 meeting in Tianjin, China on 9-12 May
- Continuous liaison with all screening taskforces
- Presentations done at WP.29, GRPE, EU/MVWG
- 1 meeting planned on 13 June to finalize report
- Meetings to resume after Summer for next steps



Next steps

- The report to WP.29 (190th session – June 2023) is being drafted
- Once completed, the taskforces recommend to start working on amendments immediately
- Highest priority should be set on Regulations which require major changes and are critical for safety
 - GRVA should focus on amending **R13**, **R13-H** and **R79**
- Use cases with high priority: Fully automated vehicles with and without occupants, dual-mode vehicles
- Use cases with low priority: bidirectionality, new seating positions, two- and three-wheeled vehicles, etc.

Contact

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