



Department
for Transport

Vehicle categorisation

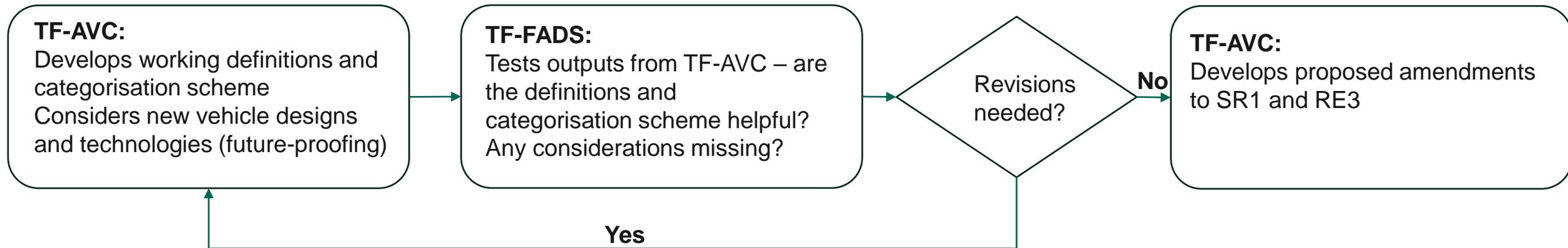
Initial views

Dr Michael Braisher
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Approach – working with TF-FADS

Purpose of this task force – to support the work of TF-FADS* in coordinating revisions to UNECE regulations and Global Technical Regulations:

- Harmonised terms and definitions
- Identify key vehicle design characteristics for automated vehicles which affect applicability of requirements in UN-Rs and GTRs



Key vehicle design characteristics

- 1) Does the vehicle have an ADS fitted?
- 2) Does the vehicle have controls for manual driving?
- 3) Does the vehicle have provisions for occupants?
- 4) Does the vehicle have provisions for standees?
- 5) Does the vehicle have a low maximum design speed?
- 6) Does the vehicle have a low maximum permissible mass [and small size]?
- 7) Does the vehicle allow for driving beyond line of sight?
- 8) Does the vehicle have very low maximum design speed and very small payload?
- 9) Does the vehicle have bidirectional capability?
- 10) What is the ODD of the vehicle? (is this a better indicator of risk than speed and mass?)

Step 1 – develop harmonised phrases (/terms and definitions)

- Important for consistency across UN-Rs and GTRs
- Defines the vehicle designs that need considering when amending UN-Rs and GTRs

Step 2 – which key design characteristics (or combination) benefit from defining as a ‘category’, ‘class’ or ‘type’?

- How big of an impact do the design characteristics have on the technical requirements?
- Useful for writing in/out of scope of UN-Rs and GTRs

Initial thoughts...

Key design characteristics	Initial thoughts	Priority	Effort
Vehicles fitted with an ADS	Term and definition developed by FRAV: “ ADS vehicle ” means a vehicle equipped with an Automated Driving System (ADS) – FRAV/VMAD GRVA-18-50	High	Green
ADS vehicles with controls for manual driving (“Dual mode” vehicles)	Term and definition not needed. Vehicles with these design characteristics are vehicles of existing designs with an ADS fitted.	High	Green
ADS vehicles without controls for manual driving	Harmonised phrase (or term and definition) needed. Probably benefit from a category because whole regulations may apply or disapply.	High	Yellow
ADS vehicles without provisions for occupants (whether seated or standing)	Harmonised phrase (or term and definition) needed. Probably benefit from a category because whole regulations may apply or disapply.	High	Yellow
ADS vehicles with provisions for standees	Current vehicle categories address standees. M1 category doesn’t prohibit standees → do we wish to fix this in R.E.3 to align with S.R.1 (and GB/EU approval frameworks?) Discussions needed on permitting standees in low occupancy vehicles: <ul style="list-style-type: none"> • If allowed, do these fit better as an M1, or an M2? (new class of M1 or M2?) • Lots of work with either approach (e.g. amend R14 on safety-belt anchorages) • Limiting maximum speed and restrict to ‘low-risk’ operational design domains 	?	Red

Initial thoughts...

Key design characteristics	Initial thoughts	Priority	Effort
ADS vehicles with low maximum design speed	<p>Harmonised phrase (/term and definition) needed.</p> <p>Suggest limiting to only vehicles without controls for manual driving (reduce workload).</p> <p>Need to agree on defining speed [32 kph? 50 kph?]. Possible work needed to develop appropriate occupant protection and pedestrian impact standards.</p>	High	
ADS vehicles with small size and low mass	<p>Two approaches:</p> <ol style="list-style-type: none"> 1) Rely on current L-categories 2) Treat more like automated M and N vehicles → new 'M0' and 'N0' or category of M/N? <p>Limit maximum design speed?</p>	?	
ADS vehicles with capability to be driven beyond line of sight	<p>Is any form of remote driving needed? (e.g. for exceptional circumstances such as vehicle recovery?)</p> <p>If so, is there a need to amend UN-Rs and GTRs to accommodate?</p>	?	
ADS vehicles with very low maximum design speed (< 6km/h?) and very small payload	<p>'micro goods vehicles'/'pavement bots' – in scope of TF-AVC?</p> <p>Simplest approach → New category because existing UN-Rs and GTRs are unlikely to be suitable for such vehicles</p>	?	
ADS vehicles with bidirectional capability	<p>Is there a need to accommodate bidirectional vehicles?</p> <p>If so, harmonised phrase (/term and definition) needed.</p> <p>Will impact some important vehicle systems so could be considerable work for GRs to accommodate.</p>	?	

Other considerations...

- 2.4 Amendments to S.R. 1
 - 2.4.1 Amending S.R. 1 shall be pursuant to the procedure prescribed in paragraph 6.4., Article 6 of the 1998 Agreement.
 - 2.4.2 The Contracting Party, which proposes the amendments of the S.R. 1, shall also submit the amendment proposals relating to the definitions of all gtrs currently in force.

