FR proposal on FRAV requirements

General comment: the FR contribution is accompanied by a position paper explaining the importance of two linked notions: “reasonably foreseeable” and “traffic scenarios”. Comments addressed in this document try to clarify the notion induced by the “reasonably foreseeable” as a global principle guiding scenario generation.

In particular, FR proposes to consider the “reasonably foreseeable” concept as it is use as guiding principle. Giving a definition of this concept should not be valuable to guarantee applicability of this concept to an undefined set of situations. Nonetheless, avoid creating wrong associations between several terms that could be detrimental to maintain safety and in particular, to maintain the integrity of passengers and road others shall be a guideline.

1.7.8.1.	Requirements to ensure safe ADS performance of the DDT address the functional and behavioural objectives described by the WP.29 Framework Document on Automated Vehicles: ADS operation of the vehicle shall not cause crashes or disrupt traffic and ADS shall avoid crashes where preventable.	(FRAV-33-05) Requirements to ensure safe ADS performance of the DDT address the functional and behavioural objectives described by the WP.29 Framework Document on Automated Vehicles: ADS operation of the vehicle shall not cause crashes or disrupt traffic and ADS shall avoid crashes where reasonably foreseeable and preventable. (FRAV-33-36) Requirements to ensure safe ADS performance of the DDT address the functional and behavioural objectives described by the WP.29 Framework Document on Automated Vehicles: ADS vehicles shall not cause any traffic accidents resulting in injury or death that are reasonably foreseeable and preventable. (FRAV-33-40) Proposal to delete.	FR comment Cf. FR proposal concerning “reasonably foreseeable”, “preventable” and “scenario” concepts

3.18.1.	*"Critical scenario"* means a traffic scenario representing unusual and/or unexpected objects, object behaviours, and/or road conditions.	(proposal to align with UE definition of critical driving situation cf annex A) Critical scenario means a traffic scenario described as a one or more critical driving situations that may occur during a given trip	
3.18.3.	*"Nominal scenario"* means a traffic scenario representing usual and/or expected objects, object behaviours and/or road conditions.	(proposal to align with UE definition of nominal driving situation cf annex A) Nominal scenario means a traffic scenario described as a one or more nominal driving situations that may occur during a given trip	
Annex A			
2.4.	Such competencies track the three broad categories of driving situations that may be encountered in performance of the DDT: nominal, critical, and failure.	Such competencies track the three broad categories of driving situations that may be encountered within the reasonably foreseeable conditions in performance of the DDT: nominal, critical, and failure.	
2.4.1.	Nominal driving situations are those in which behaviour of other road users and the operating conditions of the given ODD are reasonably foreseeable (e.g. other traffic participants operating in line with traffic regulations) and no failures occur that are relevant to the ADS's performance of the DDT.	"nominal driving situation" means a driving situation in which the operating conditions of the given ODD and behaviour of other road users are free from an immediate safety risk for the system (e.g. no immediate risk of collision), and no failure occur that are relevant to the ADS's performance of the DDT	Ensure consistency with definitions of "traffic scenario" (3.18) and "nominal scenario" (3.18.3.).
2.4.2.	Critical driving situations are those in which the behaviour of one or more road users (e.g., violating traffic regulations, …) and/or a sudden and not reasonably foreseeable change of the operating conditions of the given ODD (e.g. sudden storm, damaged road infrastructure, …) creates a situation that may result in an	"critical driving situation" means a driving situation in which a sudden change if the operating conditions of the given ODD or the behaviour of one or more road users may result in an immediate risk of collision or an immediate risk for system safety (e.g.	Ensure consistency with definitions of "traffic scenario" (3.18) and "critical scenario" (3.18.1.).

	immediate risk of collision. In this case, as it is recognised that in some cases the ADS may not be able to avoid a collision, the ADS performance are compared with safety model performance to set the threshold between where avoidance is required and where it is not feasible, but mitigation may be possible.	ORU violating traffic rules, sudden storm or damage to road infrastructure).	
3.3.1.	The development of these competencies requires analysis of (1) what constitutes such unreasonable behaviour by ORUs and/or a sudden change of the operating conditions that are not reasonably foreseeable and (2) what constitutes an appropriate ADS response to avoid or mitigate the imminent crash. Additionally, it is also important to identify the occurrence of unplanned emergent behaviour in critical situations.	The development of these competencies requires analysis of (1) what constitutes such behaviours by ORUs and/or a sudden change of the operating conditions that may result in an immediate risk of collision and (2) what constitutes an appropriate ADS response to avoid or mitigate the imminent crash. Additionally, it is also important to identify the occurrence of emergent behaviour in critical situations.	
4.2.	This approach suggests two complementary methodologies to derive reasonably expectable situations which might occur for a given ODD: • Knowledge-based (e.g., goal-based) • Data-based.	This approach suggests two complementary methodologies to derive reasonably foreseeable situations which might occur for a given ODD: • Knowledge-based (e.g., goal-based, combination of attributes, variation of parameters) • Data-based	
7.	Performance Evaluation and Targets		
7.1.	As previously highlighted, nominal situations are considered reasonably foreseeable and preventable for a given ODD and therefore it is expected that the ADS would be capable of handling them without any resulting collision.	It is expected that the ADS would be capable of handling all reasonably foreseeable traffic scenarios in a given ODD if possible.	