

Consolidated working draft text for the ADS GTR and UN Regulation

The following table provides:

- In the first column, the reference used to draft the proposed text;
- In the second column, the proposed regulatory text in which the track changes outline the modification compared to the GRVA-19-15r1e (Guidelines and recommendations for ADS safety requirements, assessments and test methods to inform regulatory development);
- In the third column, proposals for revision and comments
- In the fourth column, session discussion and/or outcomes of the session.

Reference (GRVA-19-15r1e)	Proposed text (track changes refers to the GRVA-19-15r1e)	Proposals and comments	Session discussion and outcomes
	[General Requirement]		
Section 8	4.5 In service monitoring and reporting		
8.1.7.	The ADS's safety performance remains the responsibility of the manufacturer throughout the lifetime of the ADS.	<p>OPI: Proposal for changing the text (note: The proposed text requires discussion within the ADS IWG and with the ADS Workshop):</p> <ul style="list-style-type: none"> • UNR: While based on the documentation provided by the manufacturer and evidence resulting from testing by the TAA (or the TS acting on behalf of the TAA) the ADS is deemed to be free from unreasonable risk, the ADS's safety performance remains the responsibility of the manufacturer throughout the lifetime of the ADS. • GTR: While based on the documentation completed prior to self-certification, the ADS is deemed to be free from unreasonable risk, the ADS's safety performance remains the responsibility of the manufacturer throughout the lifetime of the ADS. 	
8.1.9.	It is recommended that The Manufacturer shall put in place a feedback loop (fleet monitoring) is put in place to confirm the safety argument and confirm the validation carried out by the manufacturer before market introduction.	<p>OPI: Proposal for changing the text (note: The proposed text requires discussion within the ADS IWG and with the ADS Workshop):</p> <ul style="list-style-type: none"> • UNR: The Manufacturer shall put in place a 	

Commented [RJM(1): We have the issue that we can only regulate the vehicle (not the manufacturer) this may require rewording throughout. - Perhaps this is best placed as an open-item if we don't want to change too much text.

Commented [RE(2R1): Moved as open item

Commented [RE(3): As agreed in the meeting (17/06/2024): Text was modified to be applicable to 1958 and 1998 agreement

Commented [RJM(4): Suggest: The ADS shall be equipped with methods to maintain its safety performance throughout the ADS's lifetime.

Commented [RJM(5R4): Or include this as part of the SMS

Commented [RJM(6): Suggest something like: The vehicle shall report information to the manufacturer for the purposes of identifying potential safety defects or deviations from expected behaviour according to pre-market validation.

Commented [RJM(7R6): Or include as part of SMS

Commented [RE(8): As agreed in the meeting (17/06/2024): Text was modified to be applicable to 1958 and 1998 agreement

Commented [RE(9): As proposed in the meeting (17/06/2024), this text was moved from the Specification to the general requirements

		<p>feedback loop (fleet monitoring) to confirm the safety argument and confirm the validation carried out by the manufacturer before the granting of the approval market introduction.</p> <ul style="list-style-type: none"> • GTR: The Manufacturer shall put in place a feedback loop (fleet monitoring) to confirm the safety argument and confirm the validation carried out by the manufacturer before the self-certification -market introduction. 	
8.1.10.	This information ISMR shall enable the identification of unreasonable risks related to the use of an ADS on public roads and the evaluation of its safety performance during real-world operation.		
8.2.6.	This information shall enable the identification of Unanticipated situations, risks, and hazards might be identified during real-world ADS operation, and this information could shall be used to develop new scenarios, for a future scenario catalogue.	Canada: Open Item, Scenario characterization from ISMR data	
8.2.7.	In the early phase of market introduction of ADS vehicles, it is essential that the whole community learns from safety-critical situations involving an ADS. The manufacturer shall also put in place It is important therefore that there is a mechanism that allows information from the ISMR and recommendations from its analysis to be shared with the relevant authority. ADS community. This will allow others to react and should lead to developments that reduce or prevent that situation from occurring in another ADS.	OPI/Industry: Open Item, Relevant Authority to be clarified	
8.1.6	In this regard, ISMR requires ADS manufacturers to shall collect and analyse the safety-relevant information related to their in-service ADS' operation and report data on safety related concerns, occurrences and performance metrics to the relevant authority (i.e. carry-out the In-Service Monitoring and Reporting (ISMR)).	<p>OPI: Open Item, this point (others as well) is linked to Annex 10 of GRVA-19-15r1e</p> <p><i>"Consideration of data recording under ISMR and the activities of the EDR/DSSAD informal group"</i></p>	

Commented [RE(10): As proposed in the meeting (17/06/2024), this text was moved from the Specification to the general requirements

Commented [RJM(11): Switch monitoring to information for consistency with proposed above

Commented [RE(12R11): Agreed

Commented [RJM(13): I think this part needs to be removed here and put into the interpretation document. Alternatively we could require the information gathered be reported to an authority of some kind.

Commented [RE(14R13): This is an objective of the ISMR. There is currently an occurrence dedicated and a template to be used. However, we can add an open item for the for scenario characterization from ISMR data. Propose to move to open item

Commented [RE(15): As proposed in the meeting (17/06/2024), this text was moved from the Specification to the general requirements

Commented [RE(16): As proposed in the meeting (17/06/2024), this text was moved from the Specification to the general requirements

Commented [RE(17): Industry proposal:
1. Defining relevant authority would help identify the right items and information to be reported. Eg: TAA, HNTSA etc.
2. Helps define harmonised way of reporting to the identified authorities.
3. Avoids confusion and duplication
4. helps maintain confidentiality as reports might contain several IP related info.

Commented [RJM(18): Likely guidance material? This applies to the manufacturer.

Commented [RJM(19R18): Could perhaps place some of these elements into the SMS section as an alternative.

Commented [RE(20R18): This is linked to all the reporting requirements in the specification part

Commented [RE(21): UK: 8.1.6 Are safety related concerns defined? If not, then I don't think manufacturer will regard this. I suggest rewording as:

8.1.6. - ADS manufacturers shall collect and analyse the safety-relevant information related to their in-service ADS' operation and report data that identifies situations where the ADS:
8.1.6.1 - Experiences new unknown situations,
8.1.6.2 - Caused a traffic infraction (will need to be defined)
8.1.6.3 - Acted in a way, not in line with the safety claims made by the manufacturer, the conditions under which type approval was granted or in a manner which invalidates the safety case.

Commented [RE(22R21): Already covered by short term and periodic reporting. Propose to close the comment

Commented [RJM(23): This may be better as part of the SMS

	<p><u>Alternative text:</u> ADS manufacturers shall collect and analyse the safety-relevant information related to their in-service ADS' operation and report data that identifies situations which fall into the cases specified for Short term and periodic reporting</p>	<p>OPI: Open Item, Discussion on Relevant Authority could be needed</p>	
8.2.2.	<p>The ISMR shall aim to fulfil three main objectives: (a) Identify safety risks related to ADS performance that need to be addressed, including instances of non-compliance with ADS safety requirements (objective 1); (b) Support the development of testable traffic scenarios through capturing information when the ADS does not perform safely in unanticipated situations (objective 2); (c) Share information and recommendations to promote continuous improvement of ADS safety performance (objective 3).</p>	<p>OPI: this point is linked with 8.1.10., 8.2.6., 8.2.7.</p>	
8.5.1.11.1. 8.5.1.11.2.	<p>Manufacturers may be expected to collect data relevant to typical operations such as dealer reports, customer reports, etc. to complement the data that should shall be collected and uploaded by the manufacturer from ADS vehicles,</p>	<p>OPI, Industry, UK: Open Item, Data collected from other sources is an open item</p>	
Section 5.9., 8.	<p>Requirements/Specifications</p>		
	<p>5.7 In service monitoring and reporting</p>		
8.4	<p>ISMR Processes</p>		
8.4.1.	<p>Before the deployment of the ADS, the manufacturer should shall establish processes to demonstrate its capabilities to execute an effective ISMR.</p>	<p>OPI: Proposal (note: The proposed text requires discussion within the ADS IWG and with the ADS Workshop): UNR: Before the deployment of the ADS, Before the granting of the approval, the manufacturer shall establish processes to demonstrate its capabilities to execute an effective ISMR. GTR: -Before the deployment of the ADS, Prior to self-certification of the ADS, the manufacturer shall establish processes to demonstrate its capabilities to execute an effective ISMR.</p>	

Commented [RE(24): UK: 8.5.1.11.1., 8.5.1.11.2. I think this is a very significant section and should be fleshed. It should require the manufacturer to have mechanisms for collecting third party data, requirement to process the data and key examples of the data provenances. I suggest rewording as shown below, similar to the ATO but with some changes:

- 3.1. The manufacturer shall have mechanisms for receiving and addressing safety relevant feedback and reports from other sources that could identify critical occurrences.
- 3.2. The feedback and reports shall include but is not limited to:
 - 3.2.1. ADS related maintenance and inspection feedback
 - 3.2.2. Public feedback (including through a helpline, web page, social media and other sources)
 - 3.2.2.1. Public feedback shall be collected in accordance with the Data Protection laws of the relevant jurisdiction.
 - 3.2.3. Enforcers (including the police) and other authorities' reports
 - 3.2.4. Service operator, customer and dealer feedback

3.3. The manufacturer shall use these reports to trigger a review of the safety monitoring data, including those collected in accordance with 1.2 and 1.4. This review shall initiate further investigation when necessary. (1.2 and 1.4 are around the triggered data and continuous data. They should map to relevant sections of the reg)

3.4. The manufacturer shall establish clear processes for handling the reports received in accordance with 3.1, distinguishing false reports from actual events and conducting thorough investigations when necessary.

Commented [RE(25R24): This is an open item already included in the Annex 10 if the Integration document. Propose to move to open item

Commented [RJM(26): Better placed in SMS

Commented [RE(27R26): As general comment: The SMS should only specify the general processes for ISMR. This section provides for details concerning ISMR goals, provision and implementation aspects

Commented [RE(28): This text was moved from general requirements to the Specification

Commented [RE(29): As agreed in the meeting (17/06/2024): Text was modified to be applicable to 1958 and 1998 agreement

Commented [RJM(30): Better placed in SMS - manufacturer

Commented [RE(31R30): We can consider to merge with SMS

8.4.1.	The ISMR processes should shall be part of the SMS of the manufacturer.		
8.4.2., 5.9.1., 5.9.2., 5.9.3.	The processes for ISMR should shall demonstrate the capabilities: (a) To monitor critical and non-critical occurrences caused by the ADS; (b) To manage potential safety-relevant gaps during the in-service operation and to update the ADS accordingly. phase and to update those vehicles. (c) To perform event investigation (d) To report safety-relevant occurrences to the relevant authority when they occur; (e) To confirm the compliance with the defined safety case; (f) To share learnings derived from incidents and near-miss analysis; (g) To contribute to the continuous improvement of automotive safety.	OPI: the proposal is based on the 8.4.2 except for the italic text (e.g., letter b) is taken from 5.9.1 and letter c is taken from 5.9.3) OPI: Open Item, Discussion on Relevant Authority could be needed Industry: near misses can be an open item	
8.4.3.	The manufacturer should shall define appropriate Key Performance Indicators (KPI) to measure the effectiveness of ISMR activities for the ADS operations.		
8.5.1.	In-Service Monitoring		
8.5.1.1.	The manufacturer and (where applicable) the fleet operator shall set up a monitoring program aimed at collecting and analysing vehicle data, and data from other sources.		
8.5.1.1.	The manufacturer shall should provide evidence of the in-service safety performance of the ADS and confirmatory evidence of the audit results of the Safety Management System requirements established by the Audit Pillar. (Note: The in-service monitoring is intended to be applicable to all individual ADS types, not to a subset selected by the manufacturer or where applicable, by the fleet operator).		
8.5.1.2.	The monitoring program should shall include a data acquisition strategy, data retention strategy, data access, security and protection policy.	OPI: included in the Open Item related to EDR/DSSAD	
8.5.1.3.	The data acquisition strategy shall ensure a representative collection of		

- Commented [RE(32):** This text was moved from general requirements to the Specification
- Commented [RJM(33):** Should split between vehicle and manufacturer requirements - place in SMS/guidance or requirements
- Commented [RE(34):** UK: 8.4.2.b. Consistency is needed when using ADS and vehicle. I suggest rewording as:
To manage potential safety-relevant gaps during the in-service operation and to update the ADS accordingly.
- Commented [RE(35R34):** Agreed. Propose to close the comment
- Commented [RE(36):** Industry Proposal: Delete as "near miss" has not yet been defined.
- Commented [RJM(37):** Better placed in SMS
- Commented [RE(38R37):** In my view this fits better with this section
- Commented [RJM(39):** Better placed in SMS
- Commented [RE(40R39):** As above
- Commented [RE(41):** UK: 8.5.1.1. I think this could be split up for clarity:
8.5.1.1. The manufacturer shall set up a monitoring program aimed at collecting and analysing the ADS data, and data from other sources.
8.5.1.1.1. The manufacturer shall provide evidence of the in-service safety performance of the ADS and confirmatory evidence of the audit results of the Safety Management System requirements established by the Audit Pillar. (Note: The in-service monitoring is intended to be applicable to all individual ADS types, not to a subset selected by the manufacturer).
- Commented [RE(42R41):** Agreed. We propose to close the comment
- Commented [RE(43):** Industry proposal:
Manufacturer cannot be made responsible for data from other sources due to privacy (eg GDPR) and other regulations preventing such data to be collected and mapped.
Moreover, such data that is not available to the OEMs cannot be guaranteed to be reliable, in-time and hence this requirement should be sourced by the relevant directly from the other sources
- Commented [RJM(44):** Would remove this part of the text - mention of audit pillar; note
- Commented [RE(45R44):** Agree, but the note should remain as it clarify the applicability of the ISMR
- Commented [RE(46):** UK: 8.5.1.1. I think this could be split up for clarity:
8.5.1.1. The manufacturer shall set up a monitoring program aimed at collecting and analysing the ADS data, and data from other sources.
- Commented [RE(47):** Industry Proposal:

	data to monitor the ADS in service performance.		
8.5.1.4.	The retention strategy should <u>shall</u> ensure that the dataset is retained until the corrective action and review processes are complete. In addition, the strategy should <u>shall</u> ensure the retention of the data for longer-term trend analysis (i.e. subset of the collected data).	To discuss with DSSAD/EDR	
8.5.1.5.	The data access, security and protection policies should <u>shall</u> ensure that information access is allowed only to authorised persons and contains safeguards to ensure the security and protection of the data.	OPI: included in the Open Item related to EDR/DSSAD	
8.5.1.6.	The data monitoring program should <u>shall</u> allow the manufacture and (where applicable) the fleet operator to: (a) Identify areas of operational risk and quantify current safety margins (e.g. Safety performance indicator -in-service safety performance monitoring); (b) Identify when the ADS prevents incidents/accidents (e.g., MRC fallbacks, collision avoidance, emergency manoeuvres); (c) Identify and quantify operational risks by collecting data to characterize and analyse occurrences; (d) Use metrics and thresholds to assess safety risks and discover trends that suggest the emergence of unacceptable risks; if that trend continues; (e) Put in place procedures for remedial action when an unacceptable risk is discovered or predicted by trends; (f) Confirm the in-service safety level and effectiveness of any remedial action.		
8.5.1.7.	The data monitoring program should <u>shall</u> ensure that the data analysis is performed with sufficient frequency so that remedial action can be taken promptly and in line with reporting requirements.		
8.5.1.8.	The analysis techniques should <u>shall</u> comprise the following: (a) Routine measurements: a selection of parameters should <u>shall</u> be collected to characterise each trip and to allow a comparative analysis. These	Industry: Open item, near misses	

Commented [RE(48): UK: Should be data, dataset is not used elsewhere

Commented [RE(49R48): Ok, agreed: propose to close the comment

Commented [RE(50): UK: 8.5.1.5. Safeguards to ensure the security and protection of the data from what? I suggest fleshing out to include collision protection up to a certain degree (like the EDR) and perhaps include fire protection up to a certain degree

Commented [RE(51R50): This concern the data collected for performing the monitoring. This data will be probably stored in an internal cloud and they must be protected from authorised uses.

Maybe DSSAD requirement?
Propose to close the comments

Commented [RE(52): UK: 8.5.1.6.a. I'm not sure I understand the use of 'in-service safety performance monitoring' as an example as a measure for safety. Does it mean safety performance indicator (SPI)?

Commented [RE(53R52): Agreed, propose to close the comment

Commented [RE(54): UK: 8.5.1.6.b. Is it necessary to specify this situation class (ADS prevents an accident)? It could make it seem like other situations like collision, near-miss etc. are less relevant. I suggest rewording as:

8.5.1.6.b. Identify when the ADS is involved in a safety occurrence.

Commented [RE(55R54): The is focused on Data to be collected to characterise positive outcome /safety benefit from ADS.
I propose to close the comment

Commented [RE(56): UK: 8.5.1.6.d. Trends form over a period of time due to reoccurrences hence I think this phrase is superfluous.

Commented [RE(57R56): Agreed, propose to close the comment

Commented [RE(58): UK: "each trip" - is this a high bar to achieve for a mass produced vehicle?

Commented [RE(59R58): There is no intention to require evidence for each trip. Anyway, I do suggest to deleted each and close the comment.

	<p>measurements should <u>shall</u> aim at identifying and monitoring emerging trends and tendencies before the trigger levels associated with exceedances are reached. (e.g. vehicle performance monitoring);</p> <p>(b) Exceedance detection: a set of core "value" should <u>shall</u> be selected to cover the main areas of interest for the ADS operation with aim at searching for deviations from vehicle safety performance and limits. Typically, the main areas of interest are derived from the assessment of the most significant risks before the market introduction. However, they should <u>shall</u> be continuously reviewed to reflect the current operations. (e.g., speed limits exceedance, near misses, harsh braking, etc.);</p> <p>(c) Occurrence analysis: recorded data should be able to characterize and investigate all the occurrences listed in the Annex 8; it shall be possible to characterize and investigate all the occurrences listed in this section using the recorded data.</p> <p>(d) Statistics: Data Series should <u>shall</u> be collected to support the analysis process with additional information. These data should <u>shall</u> provide information to generate rate and trends. (e.g. driven km, operating hours).</p>		
8.5.1.9.	<p>The data monitoring programme should <u>shall</u> identify KPIs to assure that the monitoring is performing at an optimal level, and address any issues affecting the effectiveness of the monitoring program (e.g., data corruption or loss, or result in delayed or degraded event detection). Examples of KPIs for monitoring are trip collection rate, i.e. time between actual safety occurrence and detection of the occurrence (Date of detection of the occurrence by the In-service Monitoring — Date of the actual occurrence of the event).</p>		
8.5.1.12.	<p>[Monitoring of Performance]</p>		
	<p>The monitoring of the ADS performance shall <u>is intended</u>:</p> <p>(a) To provide evidence of in-service safety performance of the ADS as per the objectives of the periodic reporting;</p>	<p>OPI: Open Item, this point is linked to Annex 10 of GRVA-19-15r1e (<i>Relationship between In-Service Monitoring and Reporting (ISMR) and the behavioural competencies demonstrated during the original ADS assessment</i>)</p>	

- Commented [RE(60):** Should it be "expected" or "nominal" vehicle's safety behaviour and performance. Not sure you need "limits" as this is covered by the behaviour and performance.
- Elsewhere the text uses "safety performance" so that may be better here.
- Commented [RE(61R60):** Changed in safety. Propose to close the comment
- Commented [RE(62):** Industry Proposal to delete near miss or define performance based criterias
- Commented [RE(63):** 8.1.5.8.c. I don't think this is clear. I suggest rewriting as:

It shall be possible to characterise and investigate all the occurrences listed in this section using the recorded data.
- Commented [RE(64R63):** Agreed. Propose to close the comment

Commented [RE(65): This text was changed compared to the previous version. Some should still present in the previous version. To discuss with the group.

Commented [RJM(66): This section may fit in SMS as well

Commented [RE(67R66): AS above

Commented [RJM(68): This seems out of place. Are we asking this to be provided to someone? In some cases, it might provide evidence against the safety performance as well.

Commented [RE(69R68): This should be part of the periodic reporting

	(b) Enable the identification of To identify a drift or deviation from the demonstrated declared performance including the ones that end in an occurrence.		
8.5.1.12.2	Following the results obtained from the monitoring, the manufacturer should shall evaluate: (a) In-service safety performance; (b) The adequacy of the metrics and thresholds; (c) Any remedial actions	OPI: as above	
8.5.2.2.	Recommended reporting by the manufacturer		
8.5.2.2.1.	The manufacturer should shall report, as required by the relevant Authority, in accordance with this section and the subsections below on "Occurrence reporting" and "Tools for reporting". It is expected that two types of reports on the in-service safety performance shall will be produced. These are short-term and periodic.	OPI: Open Item, Discussion on Relevant Authority could be needed	
8.5.2.2.2.	Short term reporting of occurrences and safety concerns is required for matters of such safety importance that they may require the manufacturer to take remedial action, including: (a) Indications of failure to meet safety requirements; (b) Critical occurrence where the ADS was involved known to the ADS manufacturer or OEM; (c) Other safety-relevant performance issues.		
8.5.2.2.3	The manufacturer shall notify the relevant Authority as soon as practical about any critical occurrence the manufacturer becomes aware of or At National level, there may be further requirements for immediate reporting/notification to the authority in the event the ADS manufacturer becomes aware of a failure/defect which poses an immediate risk to public safety.	OPI: point to be further discussed	
8.5.2.2.4.	The manufacturer should shall also undertake periodic reporting of performance metrics and occurrences to the safety-relevant authority.	OPI: Open Item, Discussion on Relevant Authority could be needed	
8.5.2.2.5.	The periodic report shall provide evidence of the in-service ADS safety performance. In particular, it shall demonstrate that:	OPI: this point is linked to ADS performance of the DDT and ADS interactions with user(s) sections.	

Commented [RE(70)]: UK: Is "demonstrated" the correct word?

Commented [RE(71R70)]: Changed in declared. Propose to close the comment

Commented [RJM(72)]: This should be done as part of the manufacturer's SMS - and action taken.

Commented [RE(73R72)]: I do agree on the link between ISMR and SMS. However, in this section, we are providing more details

Commented [RE(74)]: UK: This section needs some reordering, especially the short term reporting section and "underlying" incident investigation activity. Also needs some careful rewriting to develop requirements rather than commentary.

Commented [RE(75R74)]: Agree on the reorganization (we need a dedicated meeting)
Incident investigation activity is under the responsibility of the Authority (to be established). So we have moved in the recommendation section this part

Commented [RE(76)]: UK: Looking at R155, it isn't specific but the 'more frequently' has been taken to mean ad-hoc incident reports.

The DCAS regulation defines 3 types of reports - Notification, Incident and Annual.

Commented [RE(77R76)]: The notification is part of the Short term. So I do prefer to keep as sub-case of the short term

Commented [RJM(78)]: Need to make sure we have a good definition of critical occurrences

Commented [RE(79R78)]: "Occurrence" means a safety-relevant event involving an ADS vehicle
"Non-critical Occurrence" means an operational interruption, defect, fault, or other circumstance that influenced or may have influenced ADS safety but did not result in a collision or serious incident.¹
"Critical Occurrence" means an occurrence during which at least one of the following criteria is fulfilled:
(a) at least one person suffers an injury that requires medical attention or dies as a result of being in the vehicle or being involved in the event.
(b) the ADS vehicle, other vehicles or stationary objects sustain physical damage that exceeds a certain threshold.
(c) any vehicle involved in the event experiences an airbag deployment.

Commented [RE(80)]: I assume UN Regulations usually have a general section that mentions national legislation similar to R155. Does this need to be a requirement. R155 - paragraph 1.3, is not quite aligned with this but places this in the context of National legislation. - "This Regulation is ..."

Commented [RE(81R80)]: I will take this as an action for ADS workshop

	<p>(a) No inconsistencies have been detected compared to the ADS safety performance declared prior to market introduction.</p> <p>(b) The ADS fulfils the performance requirements and as evaluated in the test methods.</p> <p>(c) Any newly discovered significant ADS safety performance issues that pose an unreasonable risk to safety have been adequately addressed and how this was achieved including modifications made by the ADS manufacturer.</p>	<p>OPI: this point is linked to Annex 7 of GRVA-19-15r1e "ISMR and safety requirements matrix"</p> <p>OPI: this requirement has been modified according to the proposal included in the GRVA-19-13e</p>	<p>Commented [RE(82)]: UK: 8.5.2.2.5. Should this be prior to market introduction or should the comparison be with the safety case? I.e., no inconsistencies are detected compared to the ADS safety case.</p> <p>Commented [RE(83R82)]: Not sure that all the performance are part of the safety case. The current text is more general</p> <p>Commented [RE(84)]: UK: .5.2.2.5. I'm not sure 'fulfils the performance requirements' is the right phrase to use here. How about: no known violations of the performance requirements, or of any conditions attached to the approval are detected.</p>
8.5.2.2.7.	During the occurrence investigation, the relevant authority should shall be informed about the data processing (for example: filtering and conditioning) procedure and agree on the steps undertaken to deliver the data supporting the report.	OPI: Open Item, Discussion on Relevant Authority could be needed	<p>Commented [RE(85R84)]: To be discussed. The reference to the the approval conditions is too TA centric.</p> <p>Commented [RE(86)]: UK: 8.5.2.2.5.e. I suggest rewriting as the below for clarity: ...</p> <p>Commented [RE(87)]: UK: Does there need to be a reordering to make a heading for the "short term reporting" ...</p>
8.5.2.2.9.	The relevant authority, where necessary if deemed necessary, may verify the information provided and, if needed, may make recommendations to the enforcement authority and/or to the ADS-manufacturer to remedy any detected conditions constituting an unreasonable risk to safety.	OPI: Open Item, Discussion on Relevant Authority could be needed	<p>Commented [RE(88R87)]: This requirements applies for both reporting</p> <p>Commented [RJM(89)]: The authority should not be put in a position to make recommendations. There may be ...</p> <p>Commented [RE(90R89)]: This is critical point. The intention of ISMR is also to ensure a safety improvement ...</p> <p>Commented [RE(91)]: UK: This don't seem appear to be a requirement</p>
8.5.2.2.10.	If a serious safety risk is identified, the safety-relevant authority may recommend temporary safety measures, including immediately restricting or suspending the relevant operations, and require actions to restore an acceptable level of safety.	OPI: Open Item, Discussion on Relevant Authority could be needed	<p>Commented [RJM(92)]: Same as above</p> <p>Commented [RE(93)]: UK: Should be clear that it is the authority requiring it to be made available not that the ...</p> <p>Commented [RE(94R93)]: Changed the text</p> <p>Commented [RE(95)]: Industry Proposal: ...</p>
8.5.2.4.1.	<p>The short term and periodic reports should shall be made available, as required by to the relevant Authority, in two parts:</p> <p>(a) A report (according to reporting template in the Annex x8), that contains a summary and the information relevant to the requirements for reporting;</p> <p>(b) The data underpinning the report, exchanged with the relevant Authority by means of an agreed data exchange file.</p>	<p>OPI: the template should be included in a dedicated annex to ensure harmonization and sharing of information</p> <p>OPI: Open Item, this point is linked to Annex 10 of GRVA-19-15r1e "Consideration of ISMR templates and reporting from other stakeholders."</p> <p>OPI: Open Item, Discussion on Relevant Authority could be needed</p>	<p>Commented [RJM(96)]: What data would this include?</p> <p>Commented [RE(97R96)]: The vehicle data used to characterise the occurrences (ex. Vehicle Dynamics data)</p> <p>Commented [RJM(98)]: This implies an agreement needs to be reached on the data exchange file with each authority ...</p> <p>Commented [RE(99R98)]: This can be potentially be a problem for the self-certification regime</p> <p>Commented [RJM(100)]: Submitted or made available? If it is submitted, how and to who?</p> <p>Commented [RE(101R100)]: IT should be submitted. How and to Who could be different for the different ...</p>
8.5.2.4.2.	Short term reporting is expected to shall be submitted for each critical occurrence.		<p>Commented [RE(102)]: Seems like the term "short term reporting" is being used both to describe the (incident ...</p>
8.5.2.4.3.	Short term reporting is due within one month 30 days of the manufacturer's knowledge of the matter. Short term		<p>Commented [RJM(103)]: In 8.5.2.4.1 it says "as required by the relevant authority" but here we imply a due date.</p> <p>Commented [RE(104R103)]: The timeline for the short term is fixed, while the information to be reported require ...</p>

	reporting is needed to provide awareness of situations in which the ADS may be or is posing an unreasonable risk to safety in-service.																										
8.5.2.4.4.	Manufacturers are required to shall notify such concerns promptly upon their identification and to issue a report within 30 days from the knowledge of the matter.																										
8.5.2.4.5.	The reporting scheme applies to automated vehicle features of an ADS (which was active during a critical occurrence or up to 30 seconds prior to the critical occurrence).																										
8.5.2.4.6.	Periodic reporting should shall be submitted regularly, at least every year, in the form of aggregated data (e.g., per hour of operation and distance driven) for ADS-vehicle type and related to ADS operation (i.e., when ADS is activated).																										
8.5.2.4.8	<p>The following is a list of occurrences that have been derived from the ADS-safety requirements to be reported by the manufacturer. It is recommended that these form the basis of the reporting requirements For each occurrence, its relevance to the short-term and/or periodic reporting has been flagged in the table below.</p> <table border="1"> <thead> <tr> <th>Occurrence</th> <th>Short term reporting [1 Month/30 days]</th> <th>Peri Rep [1 Y]</th> </tr> </thead> <tbody> <tr> <td>1) Occurrence related to ADS performance of the DDT</td> <td></td> <td></td> </tr> <tr> <td>1.a. Safety-Critical occurrences known to the ADS manufacturer or OEM²</td> <td>X</td> <td>X</td> </tr> <tr> <td>1.b. Occurrences related to ADS operation outside its ODD</td> <td>X</td> <td>X</td> </tr> <tr> <td>1.c. ADS failure to achieve a minimal risk condition when necessary</td> <td>X</td> <td>X</td> </tr> <tr> <td>1.d. Communication-related occurrences</td> <td></td> <td>X</td> </tr> <tr> <td>1.e. Cybersecurity-related occurrences</td> <td></td> <td>X</td> </tr> <tr> <td>1.f. Interaction with remote operator if applicable-Events where an activated ADS feature required interaction with a remote</td> <td></td> <td>X</td> </tr> </tbody> </table>	Occurrence	Short term reporting [1 Month/30 days]	Peri Rep [1 Y]	1) Occurrence related to ADS performance of the DDT			1.a. Safety-Critical occurrences known to the ADS manufacturer or OEM ²	X	X	1.b. Occurrences related to ADS operation outside its ODD	X	X	1.c. ADS failure to achieve a minimal risk condition when necessary	X	X	1.d. Communication-related occurrences		X	1.e. Cybersecurity-related occurrences		X	1.f. Interaction with remote operator if applicable-Events where an activated ADS feature required interaction with a remote		X	<p>OPI: the list of occurrence is an Open Item</p> <p>OPI: this requirement has been modified according to the proposal included in the GRVA-19-13e</p>	
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Commented [RE(105): UK: This should be rephrased into a requirement from a justification

Commented [RE(106): UK: 8.5.2.4.4. I suggest rewriting as follows for clarity:

Manufacturers shall notify situations in which the ADS was known to pose an unreasonable risk to safety in-service, promptly upon their identification and issue a report to the relevant authority within 30 days of being made aware of the issue.

Commented [RE(107): UK: "30 days" here and "within one month" above. Best use the same words in both paragraphs

Commented [RE(108): Should be clear it is the short term reporting scheme

Commented [RJM(109): We are not certain if this is too much or too little, may be situation dependent. Should be aligned with DSSAD

Commented [RE(110R109): Ok, point taken

Commented [RE(111): These paragraphs appear out of place as they refer to either reporting in general or to the periodic reporting

Commented [RE(112): UK: Consider adding under periodic reporting: Occurrences where the vehicle deviates from its safety case performance.

Commented [RE(113): UK: For some cases e.g. serious cyber attack, would a shorter reporting timescale e.g. 10 days be appropriate

	<i>assistant to navigate a driving situation (if applicable)</i> ²		
2)	Occurrences related to ADS interaction with ADS vehicle users		
2.a.	<i>Driver/Fall-back user unavailability (where applicable)</i> ² and other user related occurrences		X
2.b.	Occurrences related to Transfer of Control failure		X
2.c.	Prevention of takeover under unsafe conditions <i>(where applicable)</i> ⁴		X
3.a.	Occurrences related ADS failure		X
3.b.	Maintenance and repair problems <i>to ADS and its components</i>		X
3.c.	Occurrences related to unauthorized modifications		X
3.d.	Modifications made by the ADS manufacturer or OEM to address an identified and significant ADS safety issue	X (if the issue presented an unreasonable risk to safety)	X
4.	Occurrences related to the identification of new safety-relevant scenarios	(already covered under 1.a, 1.b, 1.c and 3,d)	X
<p>¹ If such an occurrence also belongs to one of the remaining sub-categories listed in the occurrence table, the following provisions apply:</p> <ul style="list-style-type: none"> • Short term report: there is no need to double-report such occurrence also as part of one of the remaining categories listed in the table. • Periodic reporting: the occurrence should be double-reported both as part of critical occurrence and as occurrence belonging to one of the remaining categories listed in the table. However, the report shall specifically note this aspect. <p>²This occurrence does not cover remote driving, but rather events in which the ADS will require remote assistance to cope with very specific situations.</p> <p>³At aggregate level, this information can provide useful information on the validity of the HMI concept and on the need to provide more effective</p>			

	<u>procedures for keeping the fall-back user available.</u> <u>It is acknowledged that there is no obligation to implement such design solution. However, such information can provide useful information to evaluate the safety benefit of implementing such solution.</u>		
8.5.2.5.3.	The reporting shall be carried out according to the laws applicable in each contracting party and according to the information available to the reporting actors (manufacturers and/or operators).		
8.5.2.5.4.	The short term template (Annex 8x) provides a list of information with corresponding specifications that should <u>shall</u> be made available to the <u>relevant</u> authority following the occurrence of an event flagged under the "Short term reporting".	OPI: Open Item, this point is linked to Annex 10 of GRVA-19-15r1e "Consideration of ISMR templates and reporting from other stakeholders." OPI: Discussion on Relevant Authority could be needed	
8.5.2.5.5.	In particular, the short-term reporting provisions shall contribute to identify: (a) Safety-relevant occurrences caused by an ADS; (b) Traffic situations unforeseen in the original validation that resulted in ADS behaviors inconsistent with the expected behavioral competencies; (c) ADS noncompliance with the ADS safety requirements; (d) Safety concerns in need of remedy.	OPI: text could be aligned with 8.5.2.2.2.	
8.5.2.5.6.	It shall also be noticed that the information reported in the short term template will remain confidential.	OPI: Further discussion on confidentiality is needed	
8.5.2.5.7.	The periodic reporting template (Annex x8) provides a list of information with corresponding specifications that should <u>shall</u> be made available to the <u>relevant</u> authority on a yearly basis in accordance with the occurrences under the "Periodic reporting".	OPI: Open Item, this point is linked to Annex 10 of GRVA-19-15r1e "Consideration of ISMR templates and reporting from other stakeholders." OPI: Discussion on Relevant Authority could be needed	