



ADS-IWG-08 In-Service Monitoring and Reporting

Status report

14-18/04/2025

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Recap

- 3 ISMR Meetings since the 7th ADS IWG
 - Review of the Open Items
 - Definition: review of definition of occurrence and critical occurrence
 - Review of some occurrences
 - Refinement of the text for the requirement and assessment section
 - Preliminary discussion on Annex on template
 - One remaining open item for critical occurrence annex (Not discussed yet)

Status of the Open Items

Definitions

Item number	Description of item, task(s) and updates	Actions and timeline for resolving	Status
1	'Occurrence definitions	New proposal discussed and agreed in ISMR work-stream <i>Action to be closed by Tokyo meeting</i>	Preliminary agreement
2	Critical occurrence definition <ul style="list-style-type: none"> Propose to change wording from 'other vehicles' to 'other road users'. Link with critical occurrence Definition of Vulnerable road user secondary safety system 	New proposal discussed and agreed in ISMR work-stream <i>Action to be closed by Tokyo meeting</i>	Preliminary agreement
2	Proposed definitions for remote assistance and remote driving (ADS-07-03)	In the 7h meeting, it was agreed to introduce/modify a dedicated footnote <i>See table next page</i>	To be discussed in Tokyo

Safety management systems and auditing

Item number	Description of item, task(s) and updates	Actions and timeline for resolving	Status
1	'Without prejudice to applicable laws regarding data' statement (6.1.5.1 ADS-07-02Rev.1)	Content of text agreed. Need to find a more appropriate place for the text (perhaps 'scope', as per UNECE R155) <i>Action to be closed by May when the technical requirement will be merged with the Administrative procedure</i>	Preliminary agreement

Feedback from ADS IWG: Open Items

Requirements and assessment section

Item number	Description of item, task(s) and updates	Actions and timeline for resolving	Status
1	Without prejudice to applicable laws on the provision of information to other authorities (6.4.2 of ADS-07-02Rev.1)	Text agreed, but final location to be decided and may be in the scope of the UNR. <i>Action to be closed by May when the technical requirement will be merged with the Administrative procedure</i>	Preliminary agreement
2	Occurrence list: text refinement	<i>To be discussed in small group as per the Annex on Critical Occurrence</i> <i>Action to be closed by May</i>	Open
3	'Occurrence list Transfer of control' in occurrence table Align text with terminology in regulation	Transfer of control will be replaced by "System-initiated deactivation of the ADS to a fallback user" <i>Action to be closed by Tokyo meeting</i>	Preliminary agreement
4	Remote assistance	Add footnote to clarify meaning <i>Action to be closed by Tokyo meeting</i>	To be discussed in Tokyo
5	Occurrence list – complex/emergency manoeuvres Proposal to add a new item in the occurrence list	<i>To discuss in Tokyo and decide priority</i>	To be discussed in Tokyo
6	Occurrence list - Deviation of behavioural competencies of the ADS	<i>Action to be closed by Tokyo meeting</i>	To be discussed in Tokyo
7	Assessment section 7.1.4.6(d), <i>documentation review</i>	<i>Action to be closed by Tokyo meeting</i>	Preliminary agreement
	Assessment section 7.4.1, Compliance to SMS processes	<i>Action to be closed by Tokyo meeting</i>	Preliminary agreement
	Assessment section 7.4.6 Authority actions	<i>Action to be closed by Tokyo meeting</i>	Preliminary agreement
8	Assessor v assessment Language review	To be decided when and if make this changes	Open

Feedback from ADS IWG: Open Items

Item number	Description of item, task(s) and updates	Actions and timeline for resolving	Status
1	Character limit in reporting entries	<i>Remove text limitation</i> Action to be closed by Tokyo meeting	Preliminary agreement
2	Road conditions proposal by Canada within periodic reporting optional field for exposure evaluation	<i>OPI proposal to include "road condition"</i> Action to be closed by Helsinki meeting	Open (briefly discussed)
3	Concept of "immediate" for short-term reporting of mandatory information	<i>OPI proposal to revise text to make sure "immediate" is properly understood</i> Action to be closed by Helsinki meeting	Open (briefly discussed)
4	Confidentiality of information	<i>Welcome OICA/CLEPA contribution on a suitable text</i> Action to be closed by Helsinki meeting	Open (briefly discussed)
5	Root-cause analysis in case the ADS is not at fault	<i>OPI proposal to clarify the meaning of the root-cause analysis (interpretation document?)</i> Action to be closed by Helsinki meeting	Open (briefly discussed)
6	Corrective action can require more the 30 days	<i>OPI proposal to clarify template is not mandating corrective action, just flagging</i> Action to be closed by Helsinki meeting	Open (briefly discussed)
7	Use of DSSAD/EDR triggers – consider 'heavier' vehicles (beyond M1/N1)	<i>Discussion needed on two options: 1) keep text as is, 2) further tailor risking disaggregation</i> Action to be closed by Helsinki meeting	Open (not discussed)
8	Threshold in case of collision making any of the ADS features not in a safe state to continue the journey	<i>ISMR group agreed to have provision removed and embedded into tow-away</i> Action closed in the 7th ADS IWG meeting	Closed

Open Items addressed by ISMR work-stream

Definitions: Occurrence

Text in the ADS-08-04r1

- 3.16. “Occurrence” means a safety-relevant event during which at least one of the following criteria is fulfilled:
 - a) Collision involving the ADS vehicle
 - b) ADS vehicle system/component failure
 - c) ADS vehicle produces a noncompliance with respect to the requirements of this regulation
 - d) Injury/fatality as a result of being in the ADS vehicle or being involved in the event
 - e) Normal operations which are relevant to argument specific ADS design choices and/or the safety case.

New proposal

*“Occurrence” means a safety-relevant event involving an ADS vehicle**

** The occurrences to be reported are listed in the 6.4.9*

Definitions: Critical Occurrence

Text in the ADS-08-04r1

- 3.16.2. “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 a deployment of any non-reversible occupant restraint system, vulnerable road user secondary safety system or the delta-V thresholds to be met, whichever occurs first.

New proposal to be included in the definition

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 - (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 a deployment of any non-reversible occupant restraint system, vulnerable road user secondary safety system or the delta-V thresholds to be met, whichever occurs first.

* *The thresholds for critical occurrences are defined in the annex [X]*

Definitions: Critical Occurrence

Text in the ADS-08-04r1

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 - (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 a deployment of any non-reversible occupant restraint system, **vulnerable road user secondary safety system** or the delta-V thresholds to be met, whichever occurs first.

New proposal to be included in the definition section

- *Vulnerable road user secondary safety system" means a deployable vehicle system outside the occupant compartment designed to mitigate injury consequences to vulnerable road users during a collision.*

Requirements: Occurrence List

Text in the ADS-08-04r1

- Occurrences related to **Transfer of Control failure**

New Proposal

- Occurrences related to Failures of System-initiated deactivation of the ADS to a fallback user

Assessment Section: compliance to SMS

Text in the ADS-08-04r1

- 7.4.1. (UNR) The Type Approval Authority or its Technical Service shall receive **and review** confirmatory evidence **produced by** ~~that the information provided by the manufacturer during the ADS~~ **during its** operations (e.g. Notification, short term and periodic reports) ~~is in compliance with~~ **and assess that it is in accordance with capabilities described in the manufacturer's SMS [ref. 7.4.1.7-7.4.1.10].**

New proposal

- The Type Approval Authority or its Technical Service shall receive information provided by the manufacturer and assess that it is in accordance with the manufacturer's SMS

Assessment Section

Text in the ADS-08-04r1

- 7.1.4.6. *The documentation review shall provide evidence that, at least:*
 - (c) *ADS safety performance will be verified in reference to the safety performance indicators and safety performance targets as indicated in the Safety Case*
 - (d) *the risk assessment, including residual risks, will be evaluated regularly through the information coming from the monitoring activities*

New proposal

- 7.1.4.6. *The documentation review shall provide evidence that, at least:*
 - c) *ADS safety performance will be verified in reference to the safety performance indicators and safety performance targets as indicated in the Safety Case*
 - d) *The risks are managed and controlled based on the information coming from the monitoring activities*

Assessment: Authority actions

Text in the ADS-08-04r1

- **7.4.6 (UNR):** If an serious unreasonable safety risk is identified, the Type Approval Authority may **inform** the **Contracting Party on the need of** recommend temporary safety measures, including immediately restricting or suspending the relevant operations via remote termination, and on **the need to** require **actions** to restore an acceptable level of safety as per the applicable laws.
- **Alternative for UNR:** If an serious unreasonable safety risk is identified, the **Contracting Party** may recommend temporary safety measures, including immediately restricting or suspending the relevant operations via remote termination, and **may** require **to take** actions to restore an acceptable level of safety as per the applicable laws
- **7.4.6 (GTR)** If a serious unreasonable safety risk is identified, the Contracting Party may recommend temporary safety measures, including immediately restricting or suspending the relevant operations via remote termination, and may require to take actions to restore an acceptable level of safety as per the applicable laws:-
- **Alternative proposal GTR:** If an unreasonable risk to safety is identified, the Contracting Party may carry out its enforcement authorities to the maximum extent under applicable law. Depending on national law, options could include ordering remedies, suspending relevant operations, and recommending or requiring actions to remedy the safety risk

New proposal

- **UNR:** *Where ISMR reports show that the ADS presents an unreasonable safety risk, the requirements of Article 4 of the 1958 Agreement shall apply.*
- **GTR:** *Where ISMR reports show that the ADS presents an unreasonable safety risk, the Contracting Party may carry out its enforcement authorities to the maximum extent under applicable law.*

Art. 4 1958 Agreement

Article 4


1. Should a Contracting Party applying a UN Regulation find that certain wheeled vehicles, equipment or parts bearing approval markings issued under the said UN Regulation by one of the Contracting Parties, do not conform to the approved types or the requirements of the said UN Regulation, they shall advise the approval authority of the Contracting Party which issued the approval. The Contracting Party that issued the approval shall take the necessary steps to ensure that the non-conformity is rectified.
2. When the non-conformity is due to non-compliance with the technical requirements specified in a UN Regulation, as referred to in Article 1.2.(b), the Contracting Party that issued the approval shall immediately inform all other Contracting Parties about the situation and shall provide regular advice to Contracting Parties of the steps it is taking, which may include, if necessary, the withdrawal of the approval. After having considered the potential impact on vehicle safety, protection of the environment, energy saving or the performance of anti-theft technology, Contracting Parties may prohibit the sale and use of such wheeled vehicles, equipment or parts in their territory until this non-conformity is rectified. In such a case, these Contracting Parties shall inform the secretariat of the Administrative Committee of the measures taken. For resolution of disputes between the Contracting Parties, the procedure provided in Article 10.4 shall apply.
3. Notwithstanding the provisions of paragraph 1 of this Article, if a non-conforming product, as referred to in paragraph 2 of this Article, has not been brought into conformity within a period of three months, the Contracting Party responsible for the approval shall temporarily or permanently withdraw the approval. By exception, this period may be extended by a period not exceeding three months unless one or more Contracting Parties applying the concerned UN Regulation object. When the period is being extended, the Contracting Party that issued the approval shall, within the initial three-month period, notify all Contracting Parties applying the concerned UN Regulation of their intention to extend the period in which the non-conformity shall be rectified and provide a justification for such extension.
4. When the non-conformity is due to non-compliance with the administrative provisions, approval markings, conditions for conformity of production or the information document specified in a UN Regulation, as referred to in Article 1.2.(d) and 1.2.(f), the Contracting Party that issued the approval shall temporarily or permanently withdraw the approval if the non-conformity has not been rectified within a period of six months.
5. Paragraphs 1 to 4 of this Article also apply in the situation where the Contracting Party responsible for issuing of the approval itself finds that certain wheeled vehicles, equipment or parts bearing approval markings do not conform to the approved types or the requirements of a UN Regulation.

Character limit in reporting entries

- **Proposal** to remove character limit as not necessary for the time being

Open Items briefly discussed
by ISMR work-stream (to be
closed before 10th ADS IWG)

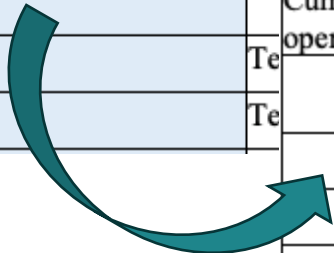
Road conditions (Canada) periodic reporting

- In principle stakeholders agree, however industry would appreciate some further clarification on what is meant by road conditions and how is it different to what is already reported
- Options:
 - Roadway state: dry, wet, icy, snow.... 
 - Roadway quality: well maintained, cracked, potholes, under construction...
- Add a clarification footnote:

“Road conditions” refers to the state of the road at the time of operation, such as: dry, wet, icy, snowy, or muddy.

Cumulative distance travelled by operational ADS*, segmented by		Number(10)
<ul style="list-style-type: none"> • Country/province of operation 		Text
<ul style="list-style-type: none"> • Times of the day 		Text
<ul style="list-style-type: none"> • Weather conditions 		Text
		Text

Cumulative distance travelled by operational ADS*, segmented by		Number(10)
<ul style="list-style-type: none"> • Country/province of operation 		Text
<ul style="list-style-type: none"> • Times of the day 		Text
<ul style="list-style-type: none"> • Weather conditions 		Text
<ul style="list-style-type: none"> • Road conditions 		Text



“immediate” for short-term reporting

- Proposal to remove “immediate” in relevant provision:
- The data elements marked with an asterisk (*) represent information **immediately** available to the manufacturers and that shall be reported as part of the mandatory reporting requirements in 6.4.9.
- The data elements marked with an asterisk (*) represent information ~~immediately~~ available to the manufacturers **or that manufacturer [are expected/shall exert all reasonable efforts] to gather within either 30 days (short-term reporting) or on a yearly basis (periodic reporting). Such information and** ~~that~~ shall be reported as part of the mandatory reporting requirements in 6.4.9.

Confidentiality of information

- Current text:
- The data elements potentially containing business confidential or sensitive data shall remain confidential.
- Comments:
 - Who is in the scope of “confidentiality” (other authorities, public...)

To be further discussed in the sub-group

Root-cause analysis when ADS not at fault

- The field can still be applicable even in case the ADS is not at fault, example:
 - Mitigated risk collision, e.g., the ADS vehicle leaves the lane and collides with a barrier to avoid a wrong-way driver
- Proposal to add a footnote to clarify what is meant:

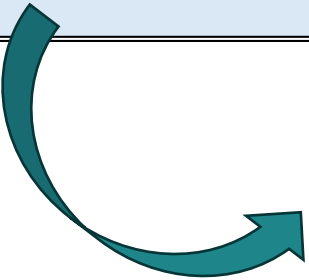
[In case the ADS was not at fault, the field can provide justification for that]

Corrective action can require 30+ days

- The purpose of the template is *not to mandate* corrective action but to report if there has been or identified the need for one:
- Proposal to restructure Analysis section in short-term template as following:

Corrective implementing action	
--------------------------------	--

Corrective implementing action needed		[Y/N]
Corrective implementing action implemented		[Y/N]
If implemented, description of corrective implementing action		<u>Text</u>



Use of DSSAD/EDR triggers

- Current approach from M1/N1 (UNR160) includes delta speed from M2-M3/N2-N3 (UNR169)
 - Delta speed trigger M1/N1 (UNR160): 8 km/h in 150 ms or 4.8 m/s^2 (1.5g)
 - Delta speed trigger M2-M3/N2-N3 (UNR169): 3.25 m/s^2 for at least 700 ms

Not discussed in the sub-group yet

Open Items not agreed in the ISMR work-stream

Occurrence List

Text in the ADS-08-04r1

- Events where an activated ADS feature required interaction with a **remote assistant** to navigate a driving situation (if applicable)³

³This event does not cover remote driving, but rather events in which the ADS will require remote assistance to cope with very specific situations.

New proposal

Events where an activated ADS feature required interaction with a remote ~~users~~ assistant to navigate a driving situation (if applicable)³

³ *In the frame of this regulation, the remote user is intended to be only a support at “tactical level”, while the ADS continues to perform the entire dynamic driving task, taking into consideration the input provided by the remote user. In other words, any “tactical” input to the system does not directly trigger an operational action from it. The ADS decides if, when and how to use this input to perform the DDT.*

Occurrence List

Text in the ADS-08-04r1

~~Unknown scenarios encountered by the ADS~~ [Unexpected behaviours of the ADS, including unexpected triggering of the fall back strategy]

New proposal

Deviation of behavioral competencies of the ADS from the ones identified and documented in the safety case

Rationale: this occurrence covers behaviors which are different from what is expected but isn't necessarily inherently unsafe. This information give a better understanding of how the ADS performs on the roads

Occurrence list: Emergency/complex manoeuvres

FR: The table with “Occurrence and safety-relevant event” should include this safety-related event: *“Emergency/complex maneuvers to prevent a collision”*.

Text in the ADS-08-04r1

[Manoeuvres performed to reach an MRC and manoeuvres linked to a prompt action of the ADS to avoid or mitigate a collision]

New proposal :

- 1) Maneuvers performed to reach MRC*
- 2) Maneuvers linked to a prompt action of the ADS to avoid or mitigate a collision.*

Remark: This occurrence was non in the occurrence list. However, these examples were provided in the integration document to support the definition of non-critical occurrence. The ADS shall decide whether keeping this occurrence or move to next phase

Other topics

Other Topics

- Recommendations beyond the scope of the Regulation
- Implementation of ISMR
 1. What happens to 'non confidential' information
 2. What, if any, information is made public
 3. What authority to share to
 4. What information sharing happens between authorities
 5. Scenario work, what info is shared
 6. Possibility from other TAAs to have access to reports
 7. What happens after reporting? Recall, TAA's role/possibility
- Is the discussion on the above topics needed?
- ***Action: to discuss if the interpretation document is suitable for this information***

Thank you



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