

*Preliminary information:*

*This document, in the original structure provided by Canada, aims to compare the User Workstream text section with the OICA-CLEPA proposal.*

*Preliminary background on the structure:*

*executed a comparison of the structure of the 2 proposals, resulted similar in structure except for some differences*

- *Different naming of similar sections (i.e. “ADS that permits a manual driving” vs. “ADS system design that anticipate a user to perform the DDT)*
- *OICA-CLEPA proposal having an additional layer for “Vehicle designed to carry occupants”*
- *User Workstream proposal having two additional sections: Documentation (that OICA-CLEPA proposes do move away from user section) and Remote operation of the ADS vehicles*
- *In OICA proposal, “ADS feature deactivation” includes manual and automatic deactivation, and the Transition of control requirements*

<b>OICA CLEPA &amp; NL INPUT COMPARISON</b>	
<b>Structure of Proposals - Overview:</b>	
FRAV 39 09 (OICA CLEPA)	FRAV 39 10 (User Workstream)
5.11 ADS interactions with ADS vehicle users.	5.11 Interactions between ADS users and the ADS Introduction
5.11.1. Scope and purpose.	5.11.1 The ADS shall interact safely with the user
5.11.2. Vehicles not designed to carry occupants.	5.11.2 ADS system designs that anticipate a user to perform the DDT
5.11.3. Vehicles designed to carry occupants.	5.11.2.1 General requirements
5.11.3.1. General requirements.	5.11.2.2 Activation
5.11.3.2. ADS vehicles that permit manual driving.	5.11.2.3 Transition of Control
5.11.3.2.1. ADS feature activation.	5.11.2.4. Deactivation (Take-over)
5.11.3.2.2. ADS feature deactivation	5.11.2.5 Documentation
5.11.3.3. ADS vehicles [and/or features] that prohibit manual driving.	5.11.3 ADS system designs that do not anticipate a user to perform the DDT (e.g. shuttle, robotaxi)
	5.11.4 ADS system designs for the transport of goods only
	5.11.5 Remote operation of ADS vehicles

*Please find here some indication necessary for the understanding of the document:*

- *Column 1: User proposal*
- *Column 2: OICA-CLEPA proposal. Here you will find*
  - *In black: OICA-CLEPA requirements of the corresponding section*
  - *In Orange: OICA-CLEPA requirements from other section of the OICFA-CLEPA doc, recalled by Column 3 (OICA-CLEPA comments) that cover some in a straightforward way the User requirements*
- *Column 3: OICA-CLEPA comments*

*In addition, the necessary text color legenda:*

- **Highlighted green**: *text in common between User proposal and OICA-CLEPA proposal*
- **Green**: *text sections we agree on*
- **Red**: *text to delete*
- **Orange**: *see above*
- **Light Blue**: *requirements of OICA-CLEPA proposal reported 2 times in this document for coherence with sections*

User Stream Text	OICA/Clepa Text	OICA-CLEPA comments
<p>5.11.1 The ADS shall interact safely with the user</p> <p>A high-level commonality in the interaction processes and interface between the vehicle and a user for all brands and models will help drivers to develop and apply a mental model<sup>1</sup> of how their responsibilities relate to the level of automation and of how to interact with the systems. It will also help to reduce the risk of user confusion (e.g., mode confusion) when changing between vehicles with ADS from different manufacturers. Such commonality cannot be defined now, but it is vital to establish it as a goal of future design.</p>		<p>5.11.1 red text: proposal to delete.</p> <p>The safety by design process of the OEM should establish the safety concept and fulfill the requirements in the FRAV document, identifying the relevant aspects to enable safe ADS feature interaction</p>
<p><b>5.11.2 ADS system designs that anticipate a user to perform the DDT</b></p> <p>5.11.2.1 General requirements</p> <p>5.11.2.1.1 These recommendations deal with the following user roles: driver, fall-back user (when applicable), passenger (in the driver seat)</p> <p>5.11.2.1.2 The interaction should be simplified:</p> <p>(a) When activating the ADS all features are activated</p>	<p>ADS interactions with ADS vehicle users.</p> <p>5.11.1. Scope and purpose.</p> <p>5.11.1.1. This section recommends functional requirements with regard to the safety of driver, fallback-user, and passenger interactions with an ADS.</p> <p>5.11.3. Vehicles designed to carry occupants.</p> <p>5.11.3.1. General requirements.</p> <p>[5.11.3.1.1.] [Subject to safety concept of the ADS, the ADS shall signal the presence of a</p>	<p>5.11..2: OICA-CLEPA propose to replace the name of this section in the more straightforward way “</p> <p>5.11.2.1.2. is contradict OICA-CLEPA approach, i.e.:</p>

<sup>1</sup> A mental model is an explanation of someone's thought process about how something works in the real world.

<p>(b) The number of response options for critical events should be limited</p> <p>(c) An activated ADS is completely responsible for the DDT</p> <p>(d) A driver performing the DDT is completely responsible for the DDT</p> <p>(e) If an engaged feature reach the end of its ODD a transition of control will be initiated.</p> <p>5.11.2.1.3 The ADS HMI shall provide information and signals clearly noticeable under all operating conditions, multimodal, simple and understandable. (covered by 5.11.2.1.7)</p> <p>5.11.2.1.4 The vehicle shall indicate its ADS capabilities in terms of their automated [features] and their ODD.</p> <p>5.11.2.1.5 The ADS shall inform the user on the current conditions (dependent on the activated or deactivated state):</p> <p>(a) ADS status information.</p> <p>(b) The availability of automated features (ADS).</p> <p>(c) Responsibilities for the user.</p> <p>(d) Permitted NDRA or not-permitted NDRA.</p> <p>(f) "Standard" safety related information.</p> <p>(i) e.g., range, speed, seat-belts, a.o.</p> <p>(g) Any failure of the ADS.</p>	<p>[5.11.3.1.2.] [Subject to safety concept of the ADS, the ADS shall signal its intention to place the vehicle in an MRC to the ADS user or vehicle occupants.]</p> <p><b>5.11.3.2. ADS vehicles that permit manual driving.</b></p> <p>ADS use-cases and/or features permitting manual driving, [in relation to their activation or deactivation, particularly in motion], shall have means to monitor parameters relevant to engagement or disengagement of [driver/user] for the DDT.</p> <hr/> <p>Reference to requirements in other sections of OICA-CLEPA proposal mentioned in "OICA CLEPA comment" column:</p> <p>5.11.3.2.2.3. ADS feature deactivation may be delayed, suppressed, canceled, ignored, aborted or by other means prevented from being executed if it is estimated by the ADS that the situation is unsuitable for the subsequent</p>	<p>(a) is not always valid (we can have highway chauffeur and AVP)</p> <p>(c) and (d) are not user-section related</p> <p>(b) covered by OICA-CLEPA 5.11.3.2.2.3</p> <p>(a) contradicts with (e) and with 5.11.2.1.4.</p> <p>5.11.2.1.3</p> <p>This requirement is addressing ADS HMI in general without addressing what interactions is of concern. To require that any ADS interaction is multimodal is excessive.</p> <p>This section is covered later by User section 5.11.2.1.7, that's corresponds to OICA-CLEPA section 5.11.3.2.1.5</p> <p>5.11.2.1.4: agree</p> <p>5.11.2.1.5</p> <p>The safety relevant information provided by the ADS should be defined in manufactures safety by design process</p> <p>(a): covered by OICA-CLEPA 5.11.3.2.1.4</p> <p>(b) covered by OICA-CLEPA 5.11.3.2.1.2, to discuss the impact on user annoyance</p> <p>(c) ADS should not address responsibility/liability, covered in</p>
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<p><b>5.11.2.1.6 The ADS shall inform the user in time on the upcoming events:</b></p> <p><b>(a) Upcoming actions or change in roles.</b>  <b>(b) Estimated time until transition of control in nominal conditions (when applicable).</b></p> <p>5.11.2.1.7 The ADS shall ensure that safety related information is prioritised and presented in a clear and unambiguous manner. Indicators, tell-tales and warnings not related to the operation of ADS (feature) may be disabled, de-activated inhibited or by other means be made un-available to support user (vehicle mode) understanding.</p> <p><b>5.11.2.1.8 The ADS shall be designed to prevent misuse and errors in operation by the user.</b></p> <p><b>5.11.2.1.9 The controls dedicated to the ADS shall be clearly distinguishable from other controls to accommodate the appropriate interactions.</b></p> <p><b>5.11.2.1.10 The ADS shall be designed to prevent inadvertent activation or deactivation.</b></p> <p><b>(a) The vehicle controls should be disabled, suppressed, de-activated, inhibited or by other means made un-available, as needed to limit errors in operation, misuse and reduce ambiguous states of vehicle control.</b></p>	<p>mode of vehicle operation.</p> <p>5.11.3.2.1.5. Upon feature activation, indicators, tell-tales, and warnings not related to the operation of ADS feature may be disabled, deactivated, inhibited, or by other means be made unavailable to the user</p> <p>5.11.3.2.1.4. An ADS feature activation intended to change the user role shall signal its activation state.</p> <p><b>[5.11.3.2.1.2]. [Subject to safety concept of the ADS, the ADS shall signal the availability of a feature for activation.]</b></p> <p>5.11.3.2.2.5. ADS features using automatic deactivation in motion, when the subsequent mode of operation is not ADS, should use a set of conditions to support an assessment of readiness to re-engage in the driving task and if the conditions cannot be fulfilled, the ADS shall trigger a fallback to an MRC</p> <p>5.11.3.1.1. [Subject to safety concept of the ADS, the ADS shall signal the presence of a fault that prevents the ADS from performing the DDT functions required by its feature(s) pursuant to para. 4.9.]</p> <p>5.11.3.2.2.2. Controls enabling ADS feature deactivation, shall, at least when the vehicle is in motion, also be associated with additional conditions for the purpose of enabling protection for unintended deactivation in motion.</p> <p>5.11.3.2. ADS use-cases and/or features permitting manual driving,</p>	<p>transition of control section and covered by OICA-CLEPA 5.11.3.2.2.5</p> <p>(d) The safety relevant information provided by the ADS should be defined in manufactures safety by design process</p> <p>(f) covered by USER proposal 5.11.2.1.7. or OICA-CLEPA 5.11.3.2.1.5</p> <p>(g) covered by OICA-CLEPA 5.11.3.1.1</p> <p>5.11.2.1.6 OICA-CLEPA proposal to cover this in deactivation section, with 5.11.3.2.1.2</p> <p>5.11.2.1.8: proposal to cover with OICA-CLEPA 5.11.3.2.2.2 in “deactivation” section, reason why proposal to delete</p> <p>5.11.2.1.9: proposal to cover with OICA-CLEPA 5.11.3.2.1.5 (feature activation), reason why proposed to delete</p> <p>5.11.2.1.10: covering 5.11.2.1.7, and present in OICA-CLEPA 5.11.3.2.1.5, delete</p>
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<p>(b) Indicators, tell-tales and warnings not related to the operation of the ADS should be disabled, de-activated, inhibited or by other means be made un-available to support user vehicle mode understanding.</p> <p>5.11.2.1.11 The ADS shall provide prompt feedback when the user attempts to enable unavailable features.</p> <p>5.11.2.1.12 The ADS shall have a Driver Monitoring System to support correct engagement of the [fallback] user.</p> <p>5.11.2.1.13 The HMI of an ADS shall be consistent with the entire vehicle HMI.</p> <p>5.11.2.1.14 The vehicle and ADS HMI need to take into account potential impairments of users (such as colour blindness, impaired hearing) which do not require specific hardware adaptations of the vehicle.</p>	<p>[in relation to their activation or deactivation, particularly in motion], shall have means to monitor parameters relevant to engagement or disengagement of [driver/user] for the DDT.</p>	<p>5.11.2.1.11: we are not displaying feedback for what is unavailable, but just indicating what is activating. Driver monitoring system will reduce the risk of driver disengagement that could be, i.e. , driver activationg ADS outside of ODD. Covered by OICA-CLEPA 5.11.3.2 (DMS)</p> <p>5.11.2.1.12: to be covered in deactivation section</p> <p>5.11.2.1.13 the HMI should be covered by the OEM safety by design process</p> <p>5.11.2.1.14 not possible evaluate all the potential impairment existng. This is a requirement not present in todays vehicles. Potential impairments is an open ended requirement, especially as a design pre-requisite</p>
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<p><b>5.11.2.2 Activation</b></p> <p>5.11.2.2.1 The ADS shall ensure safe ADS activation.</p> <p>5.11.2.2.2 The ADS shall inform the user that preconditions for activation are met.</p> <p>5.11.2.2.3 The activation shall follow a <b>common sequence of actions and states</b>.</p> <p>5.11.2.2.4 The ADS shall provide confirmation that the system is activated.</p>	<p><b>5.11.3.2.1. ADS feature activation.</b></p> <p>5.11.3.2.1.1. The ADS controls relevant to safety shall accommodate the appropriate interactions for that ADS feature.</p> <p>[5.11.3.2.1.2]. [Subject to safety concept of the ADS, the ADS shall signal the availability of a feature for activation.]</p> <p>5.11.3.2.1.3. If an ADS feature activation changes a user role, and the ADS feature has controls relevant to safety, the controls shall be [identified] in the context for the user relevant to safety.</p> <p>5.11.3.2.1.4. An ADS feature activation intended to change the user role shall signal its activation state.</p> <p>5.11.3.2.1.5. Upon feature activation, indicators, tell-tales, and warnings not related to the operation of ADS feature may be disabled, deactivated, inhibited, or by other means be made unavailable to the user.</p> <p>5.11.3.2.1.6. Upon feature activation, vehicle controls not related to the operation of the ADS feature may be disabled, suppressed,</p>	<p>5.11.2.2: not related to HMI section but to operational safety</p> <p>5.11.2.2.2: not safety relevant to communicate the meaning of preconditions. Indication of activation is safety relevant, and covered by OICA-CLEPA 5.11.3.2.1.3</p> <p>5.11.2.2.3: feature activation is safe by definition. Feature activation will be part of OEM ADS design safety content.</p> <p>5.11.2.2.4: proposal to delete because covered by OICA-CLEPA 5.11.3.2.1.4</p>
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	<p>5.11.3.2.1.7</p> <p>deactivated, inhibited, or by other means made unavailable to the user.</p> <p>The ADS may control the operation of closures, if available, as relevant to occupant safety, or to restrict or enable access to compartments. Controls related to closures may be disabled by the ADS.</p>	
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<p>5.11.2.3 Transition of Control</p> <p>5.11.2.3.1 A transition of control in nominal situations should be indicated in timely manner to support that the fallback user may re-engage to the driving task as appropriate.</p> <p>5.11.2.3.2 The Transition of control process shall follow a common sequence of actions and states.</p> <p>5.11.2.3.3 Transition of control shall return control of the DDT to the driver without any continuous control assistance (temporarily intervening safety systems such as ESC will remain activated).</p> <p>5.11.2.3.4 The ADS shall          (a) continuously verify whether the fallback user is available for the Transition of Control and          (b) adapt the Transition of Control process, including the time budget where feasible, to the state of the fallback user and/or to the ADS. (and suggest a minimum time budget)          (c) provide a warning when the user is not available when required.</p> <p>5.11.2.3.5 The ADS shall verify that the fallback user is in stable control of the vehicle to complete the Transition of Control process.</p> <p>5.11.2.3.6 During transition, the ADS shall remain active until the Transition of control has been completed or the</p>	<p>5.11.3.2.2.6. [For ADS allowing manual driving], an automatic ADS feature deactivation in normal use, such as ODD exit, should be indicated in timely manner to support that the user may re-engage to the driving task as appropriate.</p> <p>5.11.3.2.2.5 “ADS features using automatic deactivation in motion, when the subsequent mode of operation is not ADS, should use a set of conditions to support an assessment of readiness to re-engage in the driving task and if the conditions cannot be fulfilled, the ADS shall trigger a fallback to an MRC.”</p> <p>5.11.3.2.2.5. ADS features using automatic deactivation in motion, when the subsequent mode of operation is not ADS, should use a set of conditions to support an assessment of readiness to re-engage in the driving task and if the conditions cannot be fulfilled, the ADS shall trigger a fallback to an MRC.</p>	<p><b>OICA-CLEPA proposal covers TOC section in “Deactivation”</b></p> <p>5.11.2.3.2: delete, see comment above.</p> <p>5.11.2.3.3: ADS goal shall be to have DMS ensuring that the driver is engaged to allow the TOC (refer to OICA-CLEPA 5.11.3.2)</p> <p>5.11.2.3.4: covered by OICA-CLEPA 5.11.3.2.2.5          (1) better covered by OICA-CLEPA proposal above          (b) no added safety value          (C) covered by OICA-CLEPA 5.11.3.2.2.5</p> <p>5.11.2.3.5: creating a circular reference, ADS shall verify the driver engagement, not the stable control (stable control can be evaluated only if ADS is deactivate, not before). Better covered by OICA-CLEPA 5.11.3.2.2.5</p>
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<p>ADS reaches a minimal risk condition.</p> <p>5.11.2.3.7 The ADS shall provide clear, specific feedback of the completion of the transition of control.</p> <p>5.11.2.3.8 After the transition of control the ADS shall have no control at all over the vehicle and shall only indicate relevant status information.</p>	<p>5.11.3.2.2.10. If fitted, indicators, tell-tales, warnings not related to the operation of the ADS feature, that were disabled, de-activated, inhibited or by other means made unavailable when the ADS feature was activated, shall no longer be influenced by the ADS feature.</p> <p>5.11.3.2 ADS use-cases and/or features permitting manual driving, [in relation to their activation or deactivation, particularly in motion], shall have means to monitor parameters relevant to engagement or disengagement of [driver/user] for the DDT.</p> <p>5.11.3.2.2.7. ADS features operating control of closures, shall no longer influence closures or the controls associated with closures.</p> <p>5.11.3.2.2.8. If fitted, controls associated with the operation of the ADS feature shall no longer influence the ADS feature.</p> <p>5.11.3.2.2.9 If fitted, controls inhibited or suppressed by the ADS feature shall not be influenced by the ADS feature after deactivation.</p> <p>5.11.3.2.2.10. If fitted, indicators, tell-tales, warnings not related to the operation of the ADS feature, that were disabled, de-activated, inhibited or by other means made unavailable when the ADS feature was activated,</p>	<p>5.11.2.3.6 as above, covered by OICA-CLEPA 5.11.3.2.2.5</p> <p>5.11.2.3.7 Upon deactivation all controls are set again to allow manual driving; all previously disabled information (OICA-CLEPA 5.11.3.2.2.10) will become available as per the safety concept; additional assessments on driver engagement are done on as defined by OICA-CLEPA 5.11.3.2</p> <p>5.11.2.3.8 better covered by OICA-CLEPA 5.11.3.2.2.7, 5.11.3.2.2.8, 5.11.3.2.2.9 and 5.11.2.3.3.10</p>
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	shall no longer be influenced by the ADS feature	
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<p><b>5.11.2.4. Deactivation (Take-over)</b></p> <p>5.11.2.4.1 The ADS shall be designed to ensure a safe user-initiated takeover process. .</p> <p>5.11.2.4.2 The ADS shall allow the user to initiate a take-over process</p> <p>5.11.2.4.3 The take-over process shall follow a common sequence of actions and states</p> <p>5.11.2.4.4 The ADS shall momentarily delay deactivation of driving control when immediate human resumption of control could compromise safety</p> <p>5.11.2.4.5 The ADS shall verify that the user is in stable control of the vehicle to complete the user-initiated takeover of control process.</p> <p>5.11.2.4.6 The ADS shall provide clear, specific feedback of the completion of a user initiated take over.</p> <p>5.11.2.4.7 The user initiated take over shall return control of the DDT to the driver without any continuous control assistance.</p> <p>5.11.2.4.8 The ADS shall provide clear, specific feedback of the completion of the deactivation of the ADS.</p> <p>5.11.2.4.9 Upon ADS deactivation, the vehicle controls, indicators, warnings and tell-tales shall be restored to an activated state.</p>	<p><b>5.11.3.2.2. ADS feature deactivation</b></p> <p>This section covers manual and automatic ADS feature deactivation [including the case resulting in Transition of Control].</p> <p>5.11.3.2.2.1. Controls that enable ADS feature deactivation, shall provide an indication signaling attempt to deactivate and or deactivation, when operated.</p> <p>5.11.3.2.2.2. Controls enabling ADS feature deactivation, shall, at least when the vehicle is in motion, also be associated with additional conditions for the purpose of enabling protection for unintended deactivation in motion.</p> <p>5.11.3.2.2.3. ADS feature deactivation may be delayed, suppressed, canceled, ignored, aborted or by other means prevented from being executed if it is estimated by the ADS that the situation is unsuitable for the subsequent mode of vehicle operation.</p> <p>5.11.3.2.2.4 If a feature allows an initiation of transfer of controls through the driver controls or</p>	<p>5.11.2.4.2 proposal to have “may” instead of “shall”, base on feature design (i.e.. a feature deactivating controls to bring children to school)</p> <p>5.11.2.4.3 delete, see previous comments</p> <p>5.11.12.4.4. proposal to delete and to cover with OICA-CLEPA 5.11.3.2.2.3</p> <p>5.11.2.4.5: duplicated, same requirements of User proposal 5.11.2.3.5 (reason why OICA-CLEPA did not distinct in 2 section manual and automatic deactivation). Creating a circular reference, ADS shall verify the driver engagement, not the stable control (stable control can be evaluated only if ADS is deactivate, not before). Better covered by 5.11.3.2.2.5</p> <p>5.11.2.4.6: duplicated, redundant with User proposal 5.11.2.3.7, (reason why OICA-CLEPA did not distinct in 2 section manual and automatic deactivation).</p> <p>5.11.2.4.7 duplicated, redundant with User proposal 5.11.2.3.3, (reason why OICA-CLEPA did not distinct in 2 section manual and automatic deactivation).</p> <p>5.11.2.4.8 duplication of User requirement 5.11.2.4.6</p>
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	<p>controls that enable ADS feature deactivation, the deactivation conditions in Requirements 5.11.3.2.2.1, 5.11.3.2.2.2 and 5.11.3.2.2.3 above continue to apply.</p> <p>5.11.3.2.2.5. ADS features using automatic deactivation in motion, when the subsequent mode of operation is not ADS, should use a set of conditions to support an assessment of readiness to re-engage in the driving task and if the conditions cannot be fulfilled, the ADS shall trigger a fallback to an MRC.</p> <p>5.11.3.2.2.6. [For ADS allowing manual driving], an automatic ADS feature deactivation in normal use, such as ODD exit, should be indicated in timely manner to support that the user may re-engage to the driving task as appropriate</p> <p>5.11.3.2.2.7. ADS features operating control of closures, shall no longer influence closures or the controls associated with closures.</p> <p>5.11.3.2.2.8. If fitted, controls associated with the operation of the ADS feature shall no</p>	<p>5.11.2.4.9 alternative to OICA-CLEPA requirements 5.11.3.2.2.7, 5.11.3.2.2.9, 5.11.3.2.2.10</p>
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	<p>longer influence the ADS feature.</p> <p>5.11.3.2.2.9. If fitted, controls inhibited or suppressed by the ADS feature shall not be influenced by the ADS feature after deactivation.</p> <p>5.11.3.2.2.10. If fitted, indicators, tell-tales, warnings not related to the operation of the ADS feature, that were disabled, deactivated, inhibited or by other means made unavailable when the ADS feature was activated, shall no longer be influenced by the ADS feature.</p>	
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<p>5.11.2.5 Documentation  Explanatory: The documentation, tools and/or instructions that are provided by the ADS manufacturer / vehicle manufacturer on the ADS will ensure that the user of an ADS can develop a general mental model of how the system functions, its capabilities, the user responsibilities and a more specific mental model of how to interact with the systems. A correct mental model is necessary for correct usage and expectations of the ADS. This section is phrased in a generic way. The complexity of the mental model for the user that is necessary for correct interaction depends highly on the involvement of the user in the driving task.</p> <p>5.11.2.5.1 The ADS shall be supported by documentation and tools to facilitate user understanding of the functionality and operation of the system.</p> <p>5.11.2.5.2 The owner’s manual should contain at least:  (a) An operational description of the ADS capabilities and limitations (the information should also refer to specific scenarios and/or ODD).  (b) A description of the roles and responsibility of driver/user and ADS when an ADS (feature) is on/off .  (c) A description on the permitted transitions of roles and the procedure for those transitions.  (d) A general overview of NDRA allowed when an ADS is active.</p>		<p>Not needed</p>
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<p>(below requirement might be at another section of the document)</p> <p>5.11.2.5.3 The ADS manufacturer / vehicle manufacturer (as appropriate) shall provide documentation available for audit on:</p> <ul style="list-style-type: none"><li>(a) The details of their user-centred design process</li><li>(b) Its intended educational approach for theoretical and practical training</li></ul>		
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<p><b>5.11.3 ADS system designs that do not anticipate a user to perform the DDT (e.g. shuttle, robotaxi)</b></p> <p>5.11.12 The following recommendations apply to ADS vehicles with a system design that does not anticipate a user to perform the in the vehicle.</p> <p><b>5.11.12.1 The user in the vehicle is a passenger (in a passenger seat).</b></p> <p><b>5.11.12.2 The ADS vehicle shall provide safety-related information to the passengers.</b> (e.g., emergency stop instructions(MRM), communication to remote operator for assistance)</p> <p>5.11.12.3 ADS features may control the operation of closures, if available, as relevant to occupant safety, or to restrict or enable access to compartments. Controls related to closures may be disabled by the ADS feature whilst the vehicle is in motion.</p> <p><b>5.11.12.4 The ADS vehicle shall provide users with means to request a minimal risk manoeuvre to stop the ADS vehicle.</b></p> <p>(a) MRM request shall be accessible to the users</p> <p>(b) The MRM request shall automatically alert the <b>remote operator</b></p>	<p><b>5.11.3. Vehicles designed to carry occupants.</b></p> <p><b>5.11.3.1. General requirements.</b></p> <p>[5.11.3.1.1.] [Subject to safety concept of the ADS, the ADS shall signal the presence of a fault that prevents the ADS from performing the DDT functions required by its feature(s) pursuant to para. 4.9.]</p> <p>[5.11.3.1.2.] [Subject to safety concept of the ADS, the ADS shall signal its intention to place the vehicle in an MRC to the ADS user or vehicle occupants.]</p> <p><b>5.11.3.3. ADS vehicles [and/or features] that prohibit manual driving.</b></p> <p>5.11.3.3.1. The ADS shall provide vehicle occupants with means to request to stop the fully automated vehicle.</p>	<p>5.11.13 proposal to use a straightforward naming as per OICA-CLEPA proposal “ADS vehicles that prohibit manual driving”</p> <p>5.11.12.1 a passenger could be located in any seat or standing</p> <p>5.11.12.2 green part supported</p> <p>5.11.12.3 agree to add, relevant for all the ADS</p> <p>5.11.12.4 covered by OICA-CLEPA 5.11.3.3.1</p>
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<p><b>5.11.4 ADS system designs for the transport of goods only</b>                  Systems designed for the transport of goods only will not have a user in the vehicle and have no need of in-vehicle user-vehicle interaction. This section does not cover external human machine interaction (f.ex. for intervention of humans that are near the automated vehicle and should see a need for an emergency stop).</p>	<p>5.11.2. Vehicles not designed to carry occupants.</p> <p>5.11.2.1. ADS vehicles designed without accommodations for a driver or passengers shall be exempt from requirements under para. 5.11.3.</p>	
<p><b>5.11.5 Remote operation of ADS vehicles</b>                  To be determined.</p>		