

Action Name

Related Task/s

Develop common procedures for training of AI-based vehicle control systems

Services-related

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Why is this action important? 	Key uncertainties 	Action description 	Possible impacts 																					
<ul style="list-style-type: none"> Crucial for higher level of automation L4 and L5 Currently, massive parallel development are made in AI for environmental perception, prediction and decision making using sensor systems. However, there exist only few regulations and aligned procedures on what systems a company might release. Reliability of an AI CAD function in rare or unexpected circumstances (and how to measure it) It is essential to promote trustworthy AI and therefore users acceptance AI inferring our habits and preferences while intervening with our driving 	<ul style="list-style-type: none"> How to specify training datasets that are required for training an AI CAD function? How to assess the completeness of the training dataset used in training an AICAD function? How to compile a training dataset in such a way that no bias is expected? How to handle the validity of a training dataset over time? <p>Further key uncertainties?</p> <p>Specific key uncertainties for truck or urban?</p>	<p>In the form of machine learning, AI presents the indispensable technology for the development of autonomous driving functions. Modern automated vehicles, L2 and L3, already feature a range of sophisticated AI-powered systems such as remote-controlled parking, automated lane departure warning.</p> <p>With increasing level of automation, L4 and L5, automated driving vehicles are expected to rely more and more of AI-powered systems.</p> <p>The validation and successful implementation of these systems hinges on the availability of training data. And the effectiveness of the training depends on both the quantity and the quality, i.e. diversity, of test scenarios.</p>	<ul style="list-style-type: none"> Ease procedure towards new standards for safety validation and traffic regulation for CAD Provide solutions for several issues concerning liability AI CAD function Increase users trust and acceptance for AI CAD functions Promote/accelerate development of AI CAD functions <p>Further possible impacts?</p>																					
<p>Further arguments?</p>	<p>Cause-effect or working mechanism </p> <ul style="list-style-type: none"> Cause: massive parallel development are made in AI by different stakeholders Effect: alignment in the development of training AI CAD functions to speed up innovation and foster trustworthy AI Working mechanism: <ol style="list-style-type: none"> Develop common procedures for training and testing of AI CAD functions and prepare standardization Establish flexible frameworks that allow for rapid change and updates in AI <p>Questions/ Feedback?</p>	<p>A trustworthy AI with the necessary safety levels that can foster user acceptance, has to start with good development practices, including approved common procedure for training and testing of AI.</p> <p>Questions/ Feedback?</p>	<p>Stakeholders </p> <table border="1" data-bbox="1493 825 2086 1093"> <thead> <tr> <th>Actor</th> <th>Task</th> <th>Role</th> </tr> </thead> <tbody> <tr> <td>EU</td> <td>Define common approach and procedure for training and testing AI CAD functions</td> <td>Encourage and stimulate collaboration via EU calls/projects</td> </tr> <tr> <td>standardisation bodies</td> <td>Review and recommendation for proposed procedures</td> <td>approval type</td> </tr> <tr> <td>universities and research institutes</td> <td>Develop methodologies for selection/construction and assessment of training datasets</td> <td>Research and development</td> </tr> <tr> <td>OEMs</td> <td>Bring industrial experience and expertise</td> <td>CAD functions developers</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Further stakeholders?</p>	Actor	Task	Role	EU	Define common approach and procedure for training and testing AI CAD functions	Encourage and stimulate collaboration via EU calls/projects	standardisation bodies	Review and recommendation for proposed procedures	approval type	universities and research institutes	Develop methodologies for selection/construction and assessment of training datasets	Research and development	OEMs	Bring industrial experience and expertise	CAD functions developers						
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<p>Evaluation criteria </p>		<p>Key references </p>																						
<ul style="list-style-type: none"> Reliability of an AI CAD functions also in rare or unexpected circumstances Users acceptance for AI control functions <p>Further evaluation criteria?</p>		<ul style="list-style-type: none"> Position paper on Big Data and AI and their application, 2018 (CARTE project) STRIA Roadmap on Connected and Automated Transport, 2019 <p>Further key references?</p>																						