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From automation to collaboration: AuthUMate launches to redefine trust and safety in assisted driving

A new Horizon Europe project developing adaptive human–technology interaction strategies for safer and more human-centered vehicle automation.



Aachen, Germany, 5 May 2026 – The Horizon Europe project **AuthUMate** (Adaptive User Training & Human-Technology Interaction Strategy for Enhanced Traffic Safety) has officially launched with a Kick-off Meeting hosted by RWTH Aachen University in Aachen, Germany. The AuthUMate project, initiated by Dr. Stefan Ladwig, Head of the Traffic Psychology Division, brings together a multidisciplinary consortium of research institutions, universities, leading industry companies, and mobility experts from across Europe. It aims to improve road safety by addressing one of the key challenges in assisted and automated driving: the gap between advanced vehicle technologies and real-world human behaviour. In light of recent incidents involving TESLA and XIAOMI systems, Prof. Dr. Lutz Eckstein, director of ika, sees the European



project as an opportunity to jointly explore design principles for trustworthy interaction with automated driving functions.

As SAE Level 2-3 driver assistance and automation systems become increasingly widespread, many drivers still struggle to fully understand how and when these systems should be used. This can lead to both overreliance on automation and mistrust or disuse of assistance systems, ultimately compromising safety. AuthUMate will develop a self-learning Human-Technology Interaction (HTI) strategy capable of adapting in real time to the driver's state, behaviour and surrounding driving context. By combining advanced driver monitoring, contextual sensing technologies and inclusive multimodal interfaces, the project seeks to support safer, more intuitive and more trustworthy interactions between drivers and automated systems.

The project introduces a novel “team-up” philosophy, where automation acts as a collaborative partner rather than a passive tool or commanding authority. Through adaptive communication and personalised support, AuthUMate aims to reduce mode confusion, improve driver readiness and strengthen calibrated trust in assisted driving technologies. A major innovation of the project is its dual training approach, combining immersive VR/AR pre-driving experiences with adaptive micro-coaching during real driving situations. This hybrid model is designed to help drivers build a more accurate understanding of automated systems while preparing them for rare but critical traffic scenarios.

AuthUMate also places strong emphasis on inclusiveness and societal readiness. The project will consider the needs of diverse user groups, including young and inexperienced drivers, elderly users, professional drivers and people with accessibility needs, ensuring that future assisted driving systems are designed to be both technically robust and socially accepted. The project contributes to Europe's broader ambitions for safer, more sustainable and human-centred mobility, supporting the EU Road Safety Policy Framework 2021-2030 and the Vision Zero objective of eliminating road fatalities by 2050.

Over the coming months, the consortium will focus on developing the technical requirements for adaptive interfaces, driver-in-context models, training methodologies and validation activities.

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About AuthUMate

AuthUMate (Adaptive User Training & Human-Technology Interaction Strategy for Enhanced Traffic Safety) is a Horizon Europe research and innovation project focused on improving the safe and inclusive use of assisted and automated driving technologies through adaptive Human–Technology Interaction strategies. The project combines expertise in engineering, behavioural sciences, mobility, human factors and automation to create personalised, context-aware interaction and training approaches for SAE Level 2–3 automated driving systems.

Project acronym: AuthUMate

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For more information, project updates and future announcements, follow the upcoming AuthUMate communication channels.

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