



The 2021 "SocAlty" study: Audi is addressing a social dimension of autonomous driving

- A new study from &Audi Initiative provides answers to legal, ethical, and political questions about autonomous driving
- Well known experts support a holistic debate about future technology
- Audi CEO Duesmann: "Autonomous driving can make traffic safer and mobility more inclusive."

Ingolstadt, December 2, 2021 – From the appropriate legal framework to ethical questions to digital responsibility: the 2021 "SocAlty" study from the &Audi Initiative examines the overall societal dimension of autonomous driving. In the process, leading experts from Europe, the US, and Asia comment from their various specialized perspectives and thereby initiate an ongoing discourse on the mobility of the future.

"After electromobility, the next, clearly more radical change is the transition to more intelligent and, ultimately, autonomous vehicles," says Markus Duesmann, CEO of AUDI AG. "For us, autonomous driving is a key technology that can make traffic safer and mobility more comfortable and inclusive." With the Volkswagen Group's software company CARIAD, Audi is driving the introduction of that technology forward in the second half of this decade at full speed.

Both the technological maturity of the driving systems and the social dimension are very important for autonomous driving to gain broad acceptance: apart from the general legal and political conditions, people's attitudes are critical for new technologies like autonomous driving to catch on. Nineteen scientific, policy, and economic experts discussed central issues concerning the future of autonomous driving; the results have now been published by the &Audi Initiative in the roughly 70-page "SocAlty" study.

An image of the future in 2030: The mobility landscape is becoming more diverse, compartmentalized, and inclusive

The study addresses three focal points: the chapter "Law and progress" deals with, among other things, current questions about liability, while "Relationships of trust between human and machine" looks at the ethical dimension of autonomous driving, and "Networked security" addresses the relevant data protection and security aspects.

"All in all, the result is an image of a mobility landscape that will look different in 2030 from what it looks like today, but will manage without science fiction," says Saskia Lexen, Project Manager for the &Audi Initiative at AUDI AG. "So Audi wants to establish appropriate expectations for the possibilities and limits of technology in society and to create trust."





One central insight of the study is that the mobility landscape in 2030 will be more diverse and compartmentalized and will produce more mobility solutions that are suited to their goals. Additionally, diversity of forms of micromobility will increase, particularly in cities. Demand will also increasingly be determined by the person's location. Similar needs increasingly prevail in large cities: places like New York, London, and Shanghai have comparable basic conditions and needs with respect to mobility, flexibility, and customer expectations. Most of the experts see the US as a driving force behind the technology of autonomous driving. Not all new technologies will necessarily be primarily developed there, but they will be put on the road with the help of capital and expertise. "The US often takes on the role of incubator; it breaks new ground early on. In China, on the other hand, new technology is often quickly rolled out and scaled across the board", says Uta Karen Klawitter, Head of General Counsel Legal Services at AUDI AG.

China is seen as a trailblazer in scaling and widespread technology penetration. The reasons for this include a determined expansion of infrastructure and a high degree of social appreciation for new technologies. In the experts' opinion, Germany and Europe will primarily be innovation sites for vehicle technologies and high-volume production, in addition to playing an important role as sales markets in ten years. As a result, European consumer rights and data protection regulations will impact global conditions and product standards for the entire industry.

Acceptance largely depends on personal experience

In 2030, mobility will be heavily characterized by a new kind of mixed traffic, in which autonomous vehicles will encounter vehicles driven by people. Road users will gradually adapt and will have to learn new rules. The prognosis: for this significant cultural shift, people will need time to establish a good trusting relationship with autonomous driving. "Only the increase we expect to see in comfort, safety and availability will sufficiently justify acceptance and confidence in the new technology", says expert Hiltrud Werner, Member of the Board of Management responsible for Integrity and Legal Affairs, Volkswagen AG.

Apart from the potential for more efficient and therefore also more ecologically sustainable traffic, networked and data-driven mobility concepts can also have an enormous social impact. That includes new services that are oriented to human needs and, ideally, lead to a new form of more inclusive and more social mobility. "It is also about better access to mobility. Because mobility is the key in getting access to jobs, medical care, to clean food and so forth", adds expert Huei Peng, Professor of Mechanical Engineering & Director of Mcity, University of Michigan.

Accident and risk avoidance, not artificial thought experiments

"Who do we prioritize avoiding? If this is how we keep setting the agenda, we're not going to get very far", points out Christoph Lütge, Director of the Institute for Ethics in Artificial Intelligence at the Technical University of Munich. Contending with dilemmas in accident situations is inevitable for understanding the ethical aspects of autonomous driving. However, the discussion is often emotional and, from the perspective of some experts, ideologized based on safety-related and ethical considerations.





For that reason, the experts agree that the next important step consists of clearly defining ethical foundations based on realistic situations and taking up actual challenges and questions that companies and legislators have to contend with.

About the &Audi Initiative

Audi created the &Audi Initiative in 2015. The auto manufacturer wants to use the Initiative to stimulate interdisciplinary exchange about new technologies like artificial intelligence and autonomous driving. Additionally, it is intended to support positive acceptance of new technologies over the long term and establish appropriate expectations regarding the possibilities and limits in society. With the current "SocAlty" study, the &Audi Initiative's objective was to contribute to public debate around autonomous driving and its responsible application in the mobility of the future.

You'll find more information about the study &Audi here.
The complete study and additional content can be found at <u>audi.com</u>.

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The Audi Group, with its brands Audi, Ducati and Lamborghini, is one of the most successful manufacturers of automobiles and motorcycles in the premium segment. It is present in more than 100 markets worldwide and produces at 20 locations in 12 countries. 100 percent subsidiaries of AUDI AG include Audi Sport GmbH (Neckarsulm, Germany), Automobili Lamborghini S.p.A. (Sant'Agata Bolognese, Italy), and Ducati Motor Holding S.p.A. (Bologna/Italy).

In 2020, the Audi Group delivered to customers about 1.693 million automobiles of the Audi brand, 7,430 sports cars of the Lamborghini brand and 48,042 motorcycles of the Ducati brand. In the 2020 fiscal year, AUDI AG achieved total revenue of €50.0 billion and an operating profit before special items of €2.7 billion. At present, around 87,000 people work for the company all over the world, 60,000 of them in Germany. With new models, innovative mobility offerings and other attractive services, Audi is becoming a provider of sustainable, individual premium mobility.