

Automation offers more than driverless cars – short-term contribution to sustainable mobility

The Ministry for Climate Protection, Environment, Mobility, Urban and Housing Development
Freie Hansestadt Bremen

The public perception of automated road transport (ART) focuses often on driverless cars – but in fact, the technologies offer much more than currently discussed. Sensor technologies, road sign recognition and speed adaptation can make transport safer and will support other modes – especially walking and cycling.

The ART Forum project, co-ordinated by the City of Bremen, created a debating ground to realistically discuss opportunities but as well risks – thus guiding policy development. The project ART Forum delivered not only knowledge with various trials but used the insights for some critical review in transnational workshops and also various national and transnational platforms.

What are the key outcomes?

Many technical pilots try to develop driverless operations on public streets, but the short-term (and achievable) potential of the technology – safer roads, more efficient transport and better use of street space – is rarely discussed. The technology would allow adaptive dynamic green waves between traffic lights – building on further development of ISA, detection of pedestrians and cyclists, also using AI. Additionally, georeferenced parking could avoid illegal occupation of street space. It could deliver practical

support to the implementation of sustainable mobility plans. It requires that drivers shift some autonomy to the car – which might be the main obstacle.

All in all, better governance of automated transport is required on all levels: local, regional, national and European to exploit the potential. A huge task for the next years!

» Automation is more than technology – it requires some shift of autonomy from the driver to the car.



What remains unanswered?

ART Forum delivered a start in the wider public debate on automated transport. During the project lifetime of ART-Forum and in discussions with policymakers and stakeholders, it became clear that the complexity of the topic of automated road transport continues to raise new questions. Especially the workshops on local (in cooperation with the DLR) and on regional level (organised by the City of Bremen in cooperation with the metropolitan region) delivered new insights for local and regional authorities. In this context, some questions still remain unanswered

- Acceptance of level-5-cars: To what extent do drivers want autonomous cars or keep their own autonomy of driving? The emotional role of steering the car needs further evaluation.
- Coexistence of automated and non-automated cars? To what extent can driverless cars deal with the behaviour of 'testosterone-powered' cars and the complex behaviour patterns of pedestrians, cyclists, e-scooter riders etc.
- Reduction of speed levels? – A core measure to promote automated driving, reduce complexity of vehicle design (crash worthiness) and improving road safety
- Does automation promote individual transport or how can it be used for collective transport?



- Currently, there is much focus on short and mid-term application of partly automated cars on highways and as well long-term scenarios for fully automated vehicles in various environments.

Next steps

ART Forum has created many questions that future projects and public debates will have to deal with! We need to promote a better use of technology modules for sustainable transport.

For the City of Bremen, the potential of automated transport will be further assessed. ART-Forum Partner Mobile Zeiten developed in ART Forum a feasibility study – examining possible routes in Bremen for testing automated vehicles up to level-4. It would deliver new practical insights about the mix of automated and non-automated transport in urban environments.

» *We don't have to wait for driverless cars to exploit the potential – shifting some autonomy from drivers to reliable technology.*

Contact

To get in touch with ART-Forum, please visit our website

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