

European Cooperation in the Field of connected and automated driving, in view of the Dutch EU Presidency

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Introduction

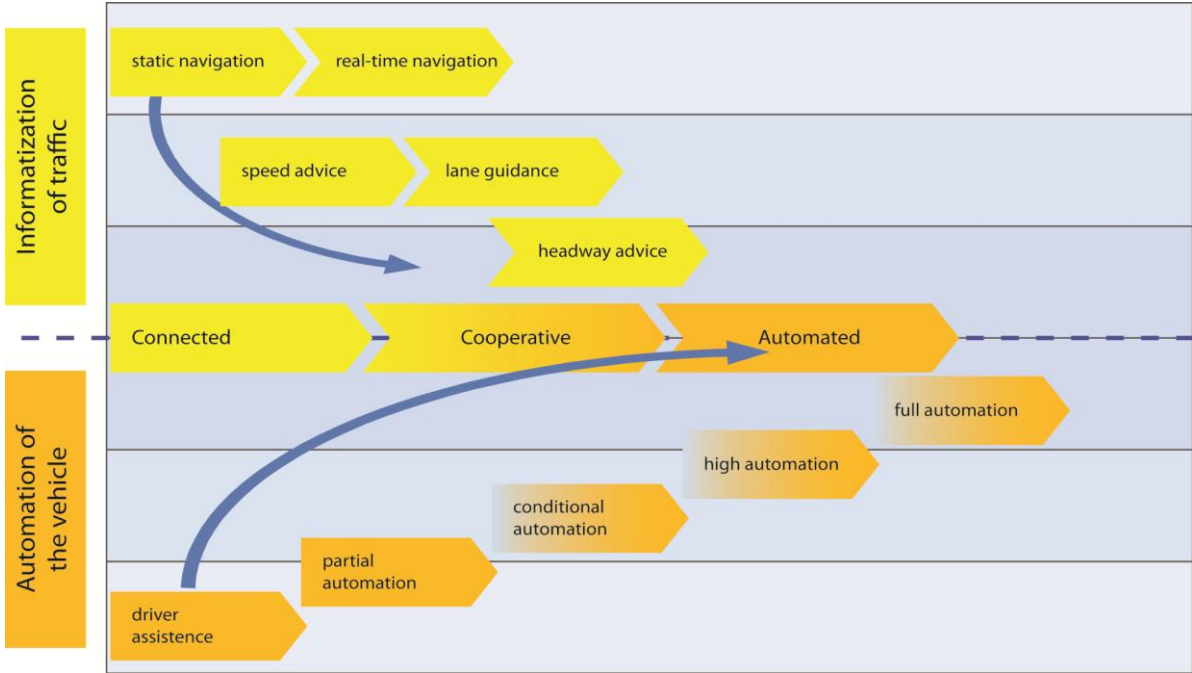
On 1st January 2016 the Netherlands will have the pleasure of taking the helm of the EU Presidency. Preparations are in full swing, including the program of the informal Council for ministers of Transport and the Environment, which will take place on the 14-15th April 2016 in Amsterdam. The theme will be Smart Solutions for Sustainable Mobility (working title) and the session for the transport ministers will be dedicated to the theme of highly connected and automated driving vehicles.

The Netherlands firmly believe in the potential of cooperative ITS systems and (highly) automated vehicles. Innovations in this field should improve traffic flows on our roads in terms of safety, efficiency and environmental impact, and can give an important boost to Europe’s competitive strength, jobs and economic growth.

The Netherlands is convinced a coordinated approach at a European level is required to allow these innovative systems to become available on the market, and is preparing this discussion together with Member States, European Commission and industry.

1. The EU is on the edge of a new era because of rapid developments in connected and automated driving

Considering the worldwide developments in automotive, ICT and telecom industry, it is clear that the EU is on the edge of a new era. It is to be expected that connected and automated vehicles will make more progress in the next twenty years, than in the previous one hundred years. Technologies such as Lane Keeping Assistance and Self Parking Systems are already in use by consumers. And more advanced technology, such as truck platooning, autopilot on the highway, and even autonomous vehicles, are already being tested on public roads. To harvest the societal benefits, the developments of automation and cooperation should come together.



2. These developments will have a great impact on society

Automation and connectivity potentially contribute to several societal goals, such as:

- Safety: in 2011 there were more than 30,000 traffic fatalities in the EU alone. Furthermore, 90% of the traffic accidents are caused by human error.
- Keep moving: if 10% of the vehicles use adaptive cruise control, there are 30% fewer traffic jams.
- Cleaner and more efficient: grouping trucks into platoons leads to a 5 to 15% decrease in fuel use (benefits environment, reduces costs).
- Eventually there may even be a societal impact beyond aforementioned goals. Consider for instance the increased mobility for elderly people, the improvement of quality of life in cities, the city planning when there is a shift from owning a car towards using a car, and the associated reduced demand for parking space.

Governments also have a duty to safeguard the public interest in this market development (E.g. road safety, privacy, etc.).

3. Supporting these developments can have a positive impact on the economic growth and competitiveness of the EU

European manufacturers are world leaders in the automobile industry and in innovative technologies. Europe also has an upstream ICT industry and highly respected knowledge institutes. Europe has to keep and strengthen its position as a world leader in innovative mobility.

At the same time, other regions are closing in fast. In Asia and in the US also major developments are taking place. A clear and consistent policy of governments, particularly at a European level, is needed to support innovation on connected and automated vehicle, and thus to maintain the position and export opportunities of European industries.

4. There are many more challenges than only a technological transition

A variety of questions that relate to automated and connected vehicles need to be answered. For instance: What is the role of the driver in current legislation? What do these developments in technology mean in terms of liability? How can we ensure safety? What are the consequences for privacy? How can we protect ourselves against cybercrime? And how can we get public support? Most of these questions are not only to be answered by individual Member States, but require an international approach.

5. There are currently many initiatives within the European Union to support this innovation, but few of them are linked or integrated

In Europe there are already several Member States and DGs of the European Commission, which support Cooperative-ITS and automated driving by several activities. All these national and ITS-related activities are needed to bring this development further: diverse experiences will be useful for this innovation. However, now only few of these initiatives are linked or integrated. This is a missed opportunity for more focussed R&D investments and to learn from each other's experiences.

6. The transboundary nature of mobility demands Member States to work together

Vehicles cross borders. Even in this early stage of the transition, a patchwork of regulations and systems could hinder industry to develop these systems and prevent societal benefits from becoming reality.

From the perspective of industry, it is very difficult for manufacturers to adapt their systems to national differences: the European market has the risk to become 28 separate markets. For

example legislation on testing/exemption procedures on public roads, liability and privacy. In addition, road users expect that new services and systems will be compatible when crossing borders. A very specific example that can hinder the developments of platooning trucks and cooperative driving is the different legislation on the prescribed distance between vehicles. In some countries this is 2 seconds, in other countries 50 meters of described as a 'safe distance'.

7. The Netherlands would like to discuss the possibilities for a closer cooperation and specific actions during the Dutch presidency

Cooperation on European level between EU DGs, Member States, industry, and knowledge institutes through joined learning processes will not only save time, money and efforts, but will also contribute to a shared direction. Determining and anticipating on a joint direction in research, development, tests, demonstrations and deployment, will support smart investment decisions.

8. Possible themes for the Dutch EU Presidency

1. How to achieve a **continuous dialogue** between: Member States, European Commission, industry and knowledge institutes on (highly) automated systems and its integration with C-ITS. This has to be established by bringing together existing platforms resulting in structure and focus. The aim is to continue this process also after the Dutch Presidency, and to set out a consistent policy on this matter that supports the market introduction of connected and automated vehicles.
2. Come to a **common approach on regulation or deregulation** of European and (inter)national legislation, and to ensure compatibility in order to test and make market introduction of autonomous cars possible. E.g. Vienna Convention, traffic law, liability, privacy laws.
3. Enable, facilitate and stimulate **large scale cross border test possibilities in Europe** (Learning by doing). Set out general principles under which conditions testing of automated and autonomous cars on public roads are allowed. E.g. guiding principles on a joint exemption (procedure), agreements on mutual recognition, define cross border corridors + urban networks (cities) to test, and give insight in the possibilities within Europe to test.
4. Ensure **new services and systems are compatible on a EU level** and are deployed in a coherent way across the EU. E.g. by using the results of current initiatives, like C-ITS.
5. Ensure **privacy and data ownership**. Privacy should be secured. Who is the owner of the data these vehicles produce and who can have access to it? How could this data be used to seize societal benefits? Data of governments should be open to public use and services.
6. Coordinate and **target investments attuned to these developments**. These investments may concern, for example, the introduction and harmonization of G5/Wi-Fi-p, 4G/LTE, road markings, and roadside equipment.
7. Harmonize **security policies**. This concerns, among others, the development of joint instruments to avoid cybercrime and ensure that data is reliable and accurate for driving automated vehicles.
8. Stimulate and coordinate **research, development and experiments**. By disseminating knowledge and experiences, the results of research and tests can serve as input for joint future processes.
9. **Gain and maintain public support**, and manage societal expectations.
10. Shared and **common definitions and priorities** of (highly) automated / autonomous and connected / cooperative driving.

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