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THE NEWSLETTER OF THE CONNECTED AUTOMATED DRIVING IN EUROPE INITIATIVE

# #EUGoesDriverless

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# Into 2018

## Moving Forward to Automated Driving



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ITS WORLD CO





# CONGRESS 2017

**“LEADERSHIP AND INNOVATION TOOK PLACE AS CITIES ACROSS THE GLOBE ARE USING TECHNOLOGY TO CREATE THEIR VISION OF NEXT GENERATION INTEGRATED MOBILITY SOLUTIONS”**

# EDITORIAL



## Dear Reader

For many, Automated Driving is still a hype. Gartner tells us we are at the Peak of Inflated Expectations. There is indeed not one day without product announcements, mergers, and start-up news. During the next years, a series of disillusion, such as the latest announcement of Drive Me pilot, will bring us back to reality before real products come to market.

So, before our numerous pilots have been conducted and funding reaches its limit, we need to prepare the European expert community for some years of consolidation. Beyond what the media says, it is important to stay both feet on the ground and progress step by step, dividing the challenges and providing potential solutions towards sustainable and viable Automated Road Transport solutions.

This is exactly what Industry, research and public organisation stakeholders are doing together in European-funded Coordination Actions like CARTRE and SCOUT. At the last ITS World Congress in Montreal, CARTRE partners supported a series of sessions on Connected and Automated Driving (CAD) with topics like digital transformation, standardisation, certification, evaluation of impacts,

connectivity and truck platooning. CARTRE also extends its cooperation with nations like Canada, South Korea, Australia, and Singapore. They take active part to the Trilateral EU-US-Japan Working Group on automation in Road Transport – which may eventually need to change its name. China, Russia, Brazil and India are also asking Europe to answer strategic deployment questions.

To answer these big questions, the CARTRE community contributes actively to the ERTRAC deployment roadmaps, research challenges, and common technology and market approaches as a guidance to build better road transport for the future. Public administrations support by bringing more regulatory certainty and keeping the market going where needed. Industry gives signs of strong commitment by aligning their business models to more sustainable mobility solutions and combine efforts in large industry alliances. Research organisations further deepen the European expertise and bring new knowledge from cross-cutting fields of research.

**It is with great honour I act as coordinator of such a large group of CAD experts and stakeholders in the CARTRE coordination action. I wish to all of you a great collaborative new year 2018!**

*Maxime Flament*

# CARTRE

## Breakout Sessions - ITS World Congress in Montreal

For the ITS World Congress in Montreal, Canada (29 October – 2 November 2017), CARTRE organised 7 Special Interest Sessions, around several of the thematic areas and in direct line with the Special Sessions organised at ITS Europe in Strasbourg:

- SIS02 on international cooperation in connected and automated driving
- SIS08 on standardization and certification needs for automated vehicles deployment
- SIS13 on connectivity needs and challenges for automated vehicles deployment
- SIS59-Part 1 & 2 on data collection and datasharing needs and challenges for automated vehicle pilots
- SIS69 New Evaluation Methods for Piloting Automated Road Transport
- SIS98 on digital Transformation for Automated Vehicles

Moreover the 10th international FOT-Net Workshop was organised in conjunction with the Congress and CARTRE was present on the EU Pavilion in the exhibition to promote its activities, as well as the ERTRAC European Roadmap on Automated Driving.

## 10th International FOT-Net Workshop in Montreal



CARTRE arranged the 10th international FOT-Net Workshop in conjunction with the ITS World Congress in Montreal. The workshop has over the years gathered different stakeholders from the three regions (Europe, Asia-Pacific and North America), who have discussed common FOT and pilot issues, such as data handling and sharing, methodology and deployment. With CARTRE focus on automation, the 10th international workshop discussed how to further develop the FOT methodology and data sharing to suit connected automated vehicle pilots. The workshop was divided in two parts, starting with an expert meeting with

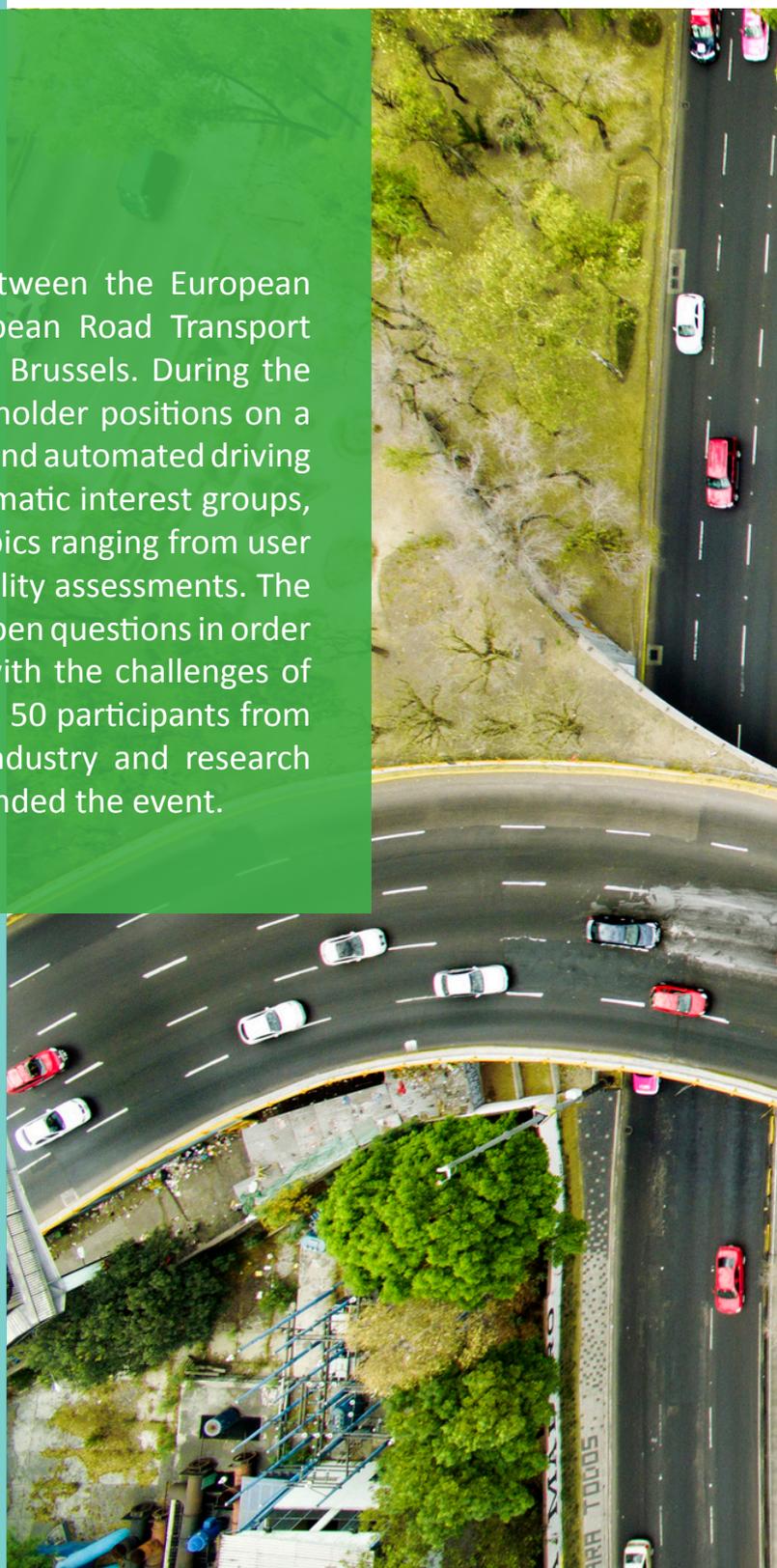
participants deeply involved in data handling and impact assessment of FOT and pilot data. The outcome from the meeting was later presented and discussed in an ITS World Congress session. One expert group focused on what data categories are most important for automation evaluation and which means and strategies are used to enable data re-use. The other group addressed which regulations can be created based on pilot results and which societal impacts can be evaluated in these first pilots. Many interesting viewpoints were put forward and new data sharing ideas are soon to be realized.

Read the full report at [connectedautomateddriving.eu](http://connectedautomateddriving.eu)



## Joint workshop between the European CARTRE project and ERTRAC

On 28 September, a joint workshop between the European CARTRE project and ERTRAC, the European Road Transport Research Advisory Council, took place in Brussels. During the event, CARTRE's role in galvanising stakeholder positions on a wide range of topics related to connected and automated driving was presented. In line with CARTRE's thematic interest groups, there were pitches and discussions on topics ranging from user acceptance to infrastructure or sustainability assessments. The workshop focused on the formulation of open questions in order to foster European Transport Research with the challenges of autonomous driving clearly in mind. Over 50 participants from different stakeholder groups, bridging industry and research organisations as well as associations, attended the event.



# SCOUT

## CAD: identification of user expectations, goals, ideas, reservations and requirements

Within the human-centered design approach of the SCOUT project, one of the work and aims performed during the past months is to deliver input during the inspiration phase and to start the ideation process as a step towards the development of business models and the roadmap on connected and automated driving (CAD). All relevant stakeholders are involved in a co-creation process to develop a vision of CAD in Europe in 2030, based on the understanding expectations, ideas and goals, reservations and requirements of individual and institutional users.

- One of the project results focuses on user expectations, goals, ideas, reservations and requirements. It identifies the main stakeholders involved in CAD in Europe and reviews expectations and reservations regarding a general viewpoint as well as regarding perspectives of individual user and main stakeholders.

The study shows that expectations towards CAD are generally high. Current promises are mixed between reasonable expectations from users and stakeholders who are aware of the reality regarding

CAD and excessive expectations of other users and different stakeholders, having a very optimistic view towards the development and deployment of CAD. Sometimes, too high expectations can be far beyond what CAD can offer in the shortterm or even mid-term range.

However, CAD will lead to increased safety, free-time and mobility as well as lower emissions, land usage, incidences and presumably lower insurance costs. It can also have great impacts on economy, thinking about new entrants, new challenges, new employment and more competition in the automotive world.

But there are still technological challenges remaining amongst those are reliability, robustness and performance and improvement in the overall “driver’s” performance. The successful implementation of CAD will depend on the reliability of the technologies related to CAD, vehicle costs, the introduction and/or adaption of the relevant legal frameworks and, moreover, on the final decision of the users, taking reservations and concerns into account.

Read the full report at <https://connectedautomateddriving.eu/publication/eu-tp1129/>

## Plans, targets and activities on international level for implementing connected and

Monitoring the current status, trends and developments regarding safe and connected automation in road transport at EU and international level is one of the main tasks within the SCOUT project. It is especially the basis for the development of recommendations for international collaboration and the required boundary conditions in the field of connected and automated road transport.

As initial step, an analysis of existing international funding programmes for the development and implementation of connected and automated driving technologies worldwide, with emphasis on the US, Japan and China, has been performed, looking at the currently available funding budgets on an international level in light of the global

competition, in comparison to Europe.

European funding in Horizon 2020 and the Connecting Europe Facility amounts to approx. €240 million per year together. In comparison, the US spends around USD137 million (€122 million) per year for research related to connected and automated driving. Most funding is undertaken by the Department of Transport; other awarding authorities include the Department of Energy and the National Science Foundation, but there are also effort taken on a state level. Japan invests JPY2.45 billion (€20 million) annually in connected and automated driving related to the major funding programme (SIP-ADUS). In China, the “Made in China 2025” programme, the equivalent to Europe’s “Industry 4.0”, is a USD300 billion-heavy programme that also partially tackles connected and automated driving.

The work performed delivers also input for the update of the Roadmaps on Automated Driving by ERTRAC and EPoSS.

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## Validation of the SCOUT vision for connected and automated driving at the AMAA Conference

During the past months, the work within the SCOUT project has been focused on the analysis of user expectations, reservations and requirements of connected and automated driving as well as business models and the state of the art regarding technology developments and legal aspects. As final step of this analytical phase, an expert and networking workshop entitled “European vision & strategies for

connected and automated driving” has been held on July 20th 2017 in Brussels. External experts supported the elaboration of a comprehensive future vision for connected and automated driving in 2030 and the identification of relevant paths for the roadmap development process, to be accomplished in the second year of the project.

This vision for connected & automated driving in 2030 has been validated and modified in an interactive session at the 21st International Forum on Advanced Microsystems for Automotive Applications (AMAA 2017), that was held in Berlin on 25th September 2017.



This year's topic of the forum was “Smart systems transforming the Automobile”. The conference included several sessions, addressing challenges of new technologies transforming the mobility sector and challenges concerning the continuously changing demands of road transport. The opening session addressed key policy initiatives and regulation needs linked to smart mobility, mobility as a service, automation and connectivity as well as zero and ultralow-emission vehicles, on national and European level. Maurizio Maggiore (DG RTD - Surface Transport, European Commission) outlined the key elements of the “Europe on the move” package that includes policy initiatives, regulatory frameworks and financial instruments. Andreas Kirchner (Federal Ministry of

Education and Research, German Federal Government) presented the strategy for automated and connected driving in Germany and the new German traffic law that covers digital infrastructure and legal aspects. The need of a new regulatory strategy has been addressed by Tom Vöge (International Transport Forum of the OECD). Jochen Langheim presented the EURIPIDES initiative, focusing on the key technologies for the automobile of the future. The thematic sessions were focused on key aspects for connected and automated driving, such as infrastructure, cyber & data security, functional safety & testing, legal frameworks & impact, sensor & ADAS technologies and on-going pilot projects. Finally, user-centered aspects of automotive transport have been discussed.

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# EVENTS

**16-19 April 2018: TRA Vienna**

**19-20 April 2018: European CAD Symposium**

## Other CAD Activities

### **PEGASUS Symposium - HOW SAFE IS SAFE ENOUGH?**

Before highly automated driving functions can find their way into production vehicles, it has to be proven that they are sufficiently safe according to socially accepted standards. Since critical scenarios occur relatively rarely in traffic according to conventional testing methods, the manufacturers would have to cover large number of test kilometers, which lead to an enormous cost and time expenditure.

The German PEGASUS project is working on methods and tool for automated vehicles

in order to provide the necessary safety assurance. The main use case of the project is a level 3 motorway chauffeur.

The PEGASUS half-time event took place at the Institute for Automotive Engineering (ika) at RWTH Aachen University on November 8th. All project partners presented their interim results. An international symposium took place on November 9th with many international presentations and visitors from Europe, Japan, USA and many more countries. Experts presented the PEGASUS approach and discussed how safe is safe enough.

## GEAR 2030 Final Report: European automotive competitiveness in 2030

On 18 October 2017, the High-Level Group on the Competitiveness and Sustainable Growth of the Automotive Industry in the European Union, set-up by the European Commission, adopted its final report “Ensuring that Europe has the most competitive, innovative and sustainable automotive industry of the 2030s and beyond”.

The group brought together Member States’ authorities and key stakeholders representing the industry, services, consumers and environmental protection and road safety. This Report sets out the HLG’s analysis of the situation and recommendations to address the main challenges and opportunities for

the sector in the run-up to 2030 and beyond. It examines the developments in global competitiveness and changes in the value chain. In this context, given the profound impacts of the transformation on the entire value chain, the HLG decided to focus on connected and automated driving (CAD) and on zero emissions and zero emissions-capable vehicles (ZEVs and ZECs).

Regarding automated and connected vehicles, the HLG stresses that Europe needs a shared strategy. These technologies are already coming to the EU market in line with a global trend and represent challenges and opportunities for the EU competitiveness and for EU policies. EU governance is needed in particular to take the full benefit of large scale testing and research and financing programmes both at the EU and at Member State level. Strategic planning and public private partnerships could help. As these vehicles will take over some tasks of the driver there is a need to develop rules on data recording (black boxes) and associated data access rules. The expected tasks of the driver and performance of the vehicles also need to be regulated in traffic rules and vehicle rules in a coherent manner within the respective responsibilities at EU and national levels. This also calls for a new approach on vehicle approval. The EU framework should encourage the necessary investment in connectivity in vehicles and in the infrastructure. Finally, the longterm impact of increasingly automated and connected vehicles, in particular on jobs and ethical issues should be assessed, discussed and included in broader EU policies (e.g. transport, regional development, jobs and skills) to ensure social acceptance.



The complete report is available here:  
<https://connectedautomateddriving.eu/wp-content/uploads/2018/02/GEAR-2030-Final-Report.pdf>

Join our stakeholder community and become an Associated Partner:

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# Scout



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