



13th ITS EUROPEAN CONGRESS FULFILLING ITS PROMISES

Brainport Eindhoven, the Netherlands | 3-6 June 2019

Programme

www.2019.itsineurope.com

Organised by:



Hosted by:



Gemeente Helmond



Supported by:



Ministerie van Infrastructuur
en Waterstaat



Provincie Noord-Brabant

ACKNOWLEDGEMENTS

The Organisers and Host of the 13th ITS European Congress would like to thank the Sponsors, the Partners the Programme Committee and the National Committee for their contribution and support to make this Congress a success pushing forward the intelligent mobility agenda.

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WELCOME LETTER

Dear ITS Colleagues,

On behalf of ERTICO, the host cities of Eindhoven and Helmond, the European Commission and the support partners Connekt/ITS Netherlands, Ministry of Infrastructure and Water Management, Province of North-Brabant and Brainport Eindhoven welcome to the 13th ITS European Congress 2019!

With the theme "Fulfilling ITS Promises," this year's Congress is all about impactful and innovative solutions that make life and mobility safer, cleaner and more efficient.

This Congress will be a great opportunity to join the discussion on smart mobility, share knowledge and learn about the latest technologies and policy developments. The Congress presents a unique occasion for all mobility stakeholders to join forces to advance the smart mobility agenda in developing and deploying innovative mobility solutions.

As organiser of the Congress, ERTICO is always looking at cities that dedicate their efforts and resources to advance mobility technology and solutions - and the Brainport region is well known for its innovations and pioneering spirit in making solutions available to all.

This year's Congress will welcome more than 3000 participants from over 50 countries, and features over 100 sessions and workshops focussing on a different

stream each day - Smart Cities, Automation and MaaS. To build your personalised programme, download the congress app in the App or Google Play store by searching for ITSNL2019.

Over the course of the week the main Congress programme will take place at the Evoluon conference centre while demonstrations will run between Eindhoven and the Automotive Campus in Helmond.

Moreover, this is going to be the largest exhibition to date at an ITS European Congress, with over 100 companies and organisations from all over Europe showcasing their intelligent transport and smart city technologies and solutions. Make sure you visit the start-ups area that offers an exciting opportunity for start-ups to plug into the ITS ecosystem, connect with an extensive network of experts and lay the foundations for their future development. Also be sure to pass by the ERTICO stand and the Dutch Street to see how The Netherlands makes Smart Mobility a reality.

The ITS European Congress is going to be an excellent opportunity to meet up with other ITS experts and network with our commercial partners, exhibitors and demonstrators.

We wish you a successful week at ITS Brainport 2019!

Organised by:



Hosted by:



Supported by:



European Programme Committee

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Dylnniq

Dylnniq is a dynamic, high-tech and innovative company offering integrated mobility and energy solutions and services internationally. The company has 1600 employees who design, develop, engineer, integrate and maintain technology solutions that enhance the flow of everyday life. Dylnniq's mission is to enable people, data and goods to reach their destinations safely, sustainably and efficiently through advanced technology solutions. The company has a comprehensive knowledge of managing mobility, parking and energy using systems engineering approach. The solutions Dylnniq offers enable the efficient connection of mobility and energy flows that create a vital and strong infrastructure. The Dylnniq Group includes the organisations WPS Parking Systems and YSP, and the products and services of Peek. Dylnniq's experienced and knowledgeable staff work closely together with their clients in Europe, South America, the United States and Canada. In doing so, they engage with their clients in a reliable, open and pro-active way: 'we take a seat in your world.'

Platinum



Transdev

Transdev the Netherlands offers people the freedom to travel. As a leading mobility provider, we operate throughout the country under various brand names, such as Connexion, Hermes and Witte Kruis. We provide traditional and innovative data driven mobility solutions for passenger transport. Our sustainable vehicles and initiatives contribute to the energy transition in our country. We always put our passengers and employees first. We work closely together with local and regional authorities. We benefit from a wealth of expertise and experience that comes from being part of a large international organisation with 82,000 employees, located in 20 different countries. In return, we share our expertise and experience as the leader in zero-emission passenger transport and innovative mobility.

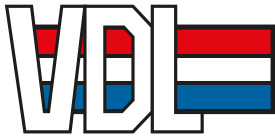
Diamond



Goudappel Coffeng

Smart Mobility: Purpose driven, integrated and evidence-based Goudappel Coffeng is committed to improving the quality of life by deploying our mobility expertise and so to contributing to a healthy, sustainable and attractive society. We have over 50 years experience in mobility engineering in a country where mobility really matters: the Netherlands. Together we are 250 urban planners, traffic engineers, researchers, psychologists, process managers and IT-professionals (within DAT.Mobility) specialized in just one thing: knowledge leadership in mobility, in its full depth and diversity: fact-based, user-oriented, multimodal by using our brands Goudappel Coffeng (mobility consultants), DAT Mobility (mobility data and it services) and Excellent Cities (urban mobility program for cities abroad). We believe (smart) mobility to be a key driver for liveability and economic vitality; when user-friendly technology is combined with the city's heartbeat. We foresee cities to become both more important and more complex to manage. We cherish our strong track record, like the strong culture on bike and long tradition for integral planning. We believe that this knowledge and experience provide effective solutions worldwide. Goudappel Coffeng, therefore, is your purpose driven, integrated and evidence-based Smart Mobility partner. www.goudappel.nl and www.goudappel.eu

Diamond



VDL Groep

Strength through cooperation. That is the cornerstone of VDL Groep, the international industrial family business headquartered in Eindhoven, the Netherlands. The company was founded in 1953 by Pieter van der Leegte. Initially VDL Groep specialised in metalworking. Later, when his son Wim van der Leegte took over the company, the portfolio was expanded to include plastics processing, the development, manufacture and sales of buses and coaches, and hightech subcontracting for the semiconductor industry and others. Today VDL Groep is a major player in the subcontracting and semi-finished products sectors, produces its own finished products, such as suspension systems, is active in automotive factory automation, builds heat exchangers and container handling systems, and the family business owns VDL Nedcar in Born, the Netherlands' only large passenger car assembly factory, which carries out assembly line production of cars for third parties. VDL Groep innovates through a combination of craftsmanship, entrepreneurship and highquality machinery. The group of companies combines the strength of a multinational with the flat organisation and open, informal working atmosphere of a family business where priority is given to growth opportunities and continuity.

Gold



Deloitte

The world is changing dramatically, due to the rise and exponential growth of new technologies. No company or organization can ignore the consequences of this extensive digitization and computerization. Deloitte recognizes the issues in your industry and translates your future business challenges into creative and innovative solutions. Deloitte is a professional services firm with approximately 264,000 professionals and offices in over 150 countries worldwide. With well over 6,000 employees and 15 offices in the Netherlands, Deloitte is one of the largest professional services firms in the field of accounting, tax, consulting, risk management, and financial advisory. Deloitte professionals work in multidisciplinary teams, ensuring a broad perspective on the issues your business is facing. Deloitte is a trustworthy and innovative partner, providing you with insights into the opportunities of your future business.



HERE Technologies

HERE, the Open Location Platform company, enables people, enterprises and cities to harness the power of location. By making sense of the world through the lens of location we empower our customers to achieve better outcomes – from helping a city manage its infrastructure or an enterprise optimize its assets to guiding drivers to their destination safely. To learn more about HERE, including our new generation of cloud-based location platform services, visit <http://360.here.com> and www.here.com.

COMMERCIAL PARTNERS

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AKKA

As an international engineering and technology consulting group at the forefront of the digital and connected world, AKKA accelerates innovation for the world's largest industrial groups.

AKKA's passion for technology is embedded in its DNA and guided by a clear vision for the future. For 30 years, we have established ourselves as one of the global leaders in our field through a well-balanced strategy combining organic growth with targeted acquisitions.

We accelerate innovation and business performance for our clients. By anticipating market challenges as well as responding to them, AKKA catalyzes our customers' innovation processes and improves time-to-market for their digital offerings.



BMW Group

With its four brands BMW, MINI, Rolls-Royce and BMW Motorrad, the BMW Group is the world's leading premium manufacturer of automobiles and motorcycles and also provides premium financial and mobility services. The BMW Group production network comprises 30 production and assembly facilities in 14 countries, among which is the Netherlands: BMW Group produces BMW and MINI models at VDL Nedcar in Born (in Limburg). The focus of BMW Group is on expanding business in the fields of electric mobility and autonomous driving. It puts the needs and desires of its customers first while developing ground-breaking technologies covering the four ACES topics: Autonomous, Connected, Electrified and Services/Shared.



NavInfo

NavInfo is a China-based technology company leading the way to become the "digital brain of intelligent driving" with core businesses in HD map, high accuracy positioning and automotive-grade semiconductors for ADAS and autonomous driving. Founded in 2002, NavInfo is the market leader in navigation map, navigation software development, dynamic traffic information, location big data and customized connected vehicle services to both passenger and commercial vehicles. Now, NavInfo is ushering in the age of autonomous driving with a comprehensive technology development strategy and laying the foundation to become one of the most trustworthy autonomous driving solution providers in the China market and beyond.

TomTom

TomTom is the leading independent location technology specialist, shaping mobility with highly accurate maps, navigation software, real-time traffic information and services.



To achieve our vision of a safer world, free of congestion and emissions, we create innovative technologies that keep the world moving. By combining our extensive experience with leading business and technology partners, we power connected vehicles, smart mobility and, ultimately, autonomous driving.

Headquartered in Amsterdam with offices in 30 countries, TomTom's technologies are trusted by hundreds of millions of people worldwide.

www.tomtom.com



Trafı

Trafı is a technology platform for mobility, powering fully connected multimodal cities. Our technology suite help partners to operate holistic mobility services. From white label solutions to deep analytics, Trafı enables cities to take the driver seat of urban mobility. Founded in 2007, Trafı is collaborating with leading companies like Lyft, Google, Apple, the Volkswagen Group, SBB and cities including Berlin, Jakarta and Rio de Janeiro among others.

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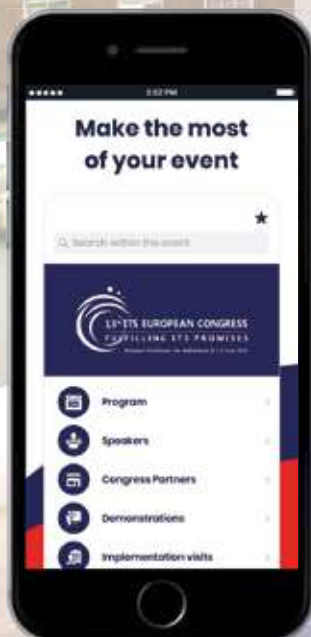
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ITS Congresses



QR code



Congress Format

Streams

This year, **Plenary and Executive** sessions will feature in streams focussing on **Smart Cities, Automation and MaaS**. All attendees are welcome to join these sessions including start-ups talks, dialogue and panel discussions addressing challenges and opportunities in the mobility sector. Policy makers and executives from the industry will exchange practices on how to prepare cities and regions for transition into smart mobility, while moving people and goods efficiently, safely and cleanly.

Special Interest sessions

Organised at the request of groups of experts developing and deploying ITS, these sessions provide the opportunity to focus on specific topics of interest.

Technical/Scientific sessions

These sessions are composed of presentations by international experts and will include topics encompassing all technical, scientific, economic, organisational and societal aspects of ITS.

Commercial paper sessions

Commercial Papers describe an activity aimed at generating or improving a specific product, device or idea for the market. Papers will be presented in groups with a moderator in the Exhibition area.

Congress Topics

With the theme “Fulfilling ITS Promises”, the Congress Programme has been shaped around the following topics:



Deploying new mobility services – from experiments to experience



A breath of fresh air



Connected, cooperative and automated mobility



Enhancing the efficiency of freight transport



Enablers of digital infrastructure



Transport network operations



Disruption, start-ups & future workforce

PROGRAMME AT A GLANCE

		Session rooms			
Philips Hall		Jupiter	Castor	Neptune	Pollux
Monday 3 June					
11.00–12.00		SIS01 Urban Mobility Labs – lessons learned from practical real world testbeds 	SIS02 IoT: bridging the gap between digital and road infrastructure 	SIS03 ITS for Climate: can we really deliver on committed goals? 	TS01 National ITS strategies 
Lunch					
13.30–14.30		SIS04 Ticketing & payment enabling MaaS 	SIS05 Mobility 2050 –Hubs 	TS03 Improving liveability through ITS 	TS04 ITS and safety 
Networking Break					
15.00–16.00		SIS06 Harmonizing evaluation of C ITS to support interoperability in Europe 	TS06 Innovation, change and disruption 	SIS07 Contribution of ITS to improve efficiency and reduce Heavy Duty Vehicle emissions 	TS07 Improving air quality 
Networking Break					
16.30–17.45	Opening Ceremony				
17.45–19.00	Welcome Reception				
Tuesday 4 June					
09.00–10.00	PL1: How do cities benefit from ITS?				
Networking Break					
10.30–11.30	Smart Cities stream	SIS08 Optimising mobility: TM and MaaS 	SIS09 Highway chauffeur and high density truck platooning in real environment 	SIS10 Possible actions for Public Authorities to facilitate Automated Driving 	TS09 Urban initiatives 
Networking Break & Lunch					
13.00–14.00	Smart Cities stream	SIS13 Touching the real infrastructure and embracing the unknown 	SIS14 Truck automation and platooning 	TS11 Standards and specifications for CCAM 	TS12 Privacy, anonymity and liability aspects of CCAM 
Networking Break					
14.30–15.30	Smart Cities stream	SIS17 Large-scale deployment of new mobility services in smart cities: create market & impact 	SIS18 Driver monitoring: towards safe transitions, personalisation and user acceptance 	SIS19 Connected (freight) Transport Corridors – real life deployment in a unique collaboration 	TS14 Platooning 
Networking Break					
16.00–17.00	Automation stream	SIS22 A new European framework for C-ITS deployment 	SIS23 Safer cities: vision zero – a multidisciplinary challenges 	SIS24 Who needs to drive MaaS – politics or business? 	TS16 CCAM for rail 
Networking Break					
17.15–18.15		TS18 Big data and data analytics 	TS19 Object and anomaly detection 	TS20 Developments with artificial intelligence 	TS21 Traffic management and CCAM 
18.00–23.00	YOUR FUTURE FESTIVAL				
Wednesday 5 June					
09.00–10.00	PL2: Automated mobility – How far are we?				
Networking Break					
10.30–11.30	Automation stream	SIS28 MaaS – from APIs to KPIs 	SIS29 Status of large scale C-ITS deployments across Europe 	SIS30 Integrated Network Management to make cities safer and cleaner 	TS24 Route optimisation 
Networking Break & Lunch					
13.00–14.00	Automation stream	SIS32 Not every MaaS will save the world – bringing together authority and industry perspective 	SIS33 International citizens' debate on automated mobility: what do the citizens' want? 	TS27 Sensors and controls for CCAM 	TS28 CCAM impacts on safety 
Networking Break					
14.30–15.30	MaaS stream	SIS36 Public Private Partnership on CCAM 	SIS37 Enabling interactive traffic management through public-private cooperation: examples from practical trials 	SIS38 Infrastructure-assisted vehicles: from security requirements and software architectures to implementation solutions 	TS30 User-centric mobility services 
Networking Break					
16.00–17.00	MaaS stream	SIS40 How can MaaS and ITS contribute to Sustainable Urban Mobility Plans? 	SIS41 New ERTTRAC Roadmap on Connected Automated Driving 	SIS42 Working towards the future of safe and smart infrastructure 	TS33 Integration of new mobility services 
19.30–23.30	ITS DINNER TIME				
Thursday 6 June					
09.00–10.00		SIS44 C-ITS hybrid communication to support interoperable services in Europe 	SIS45 Towards an integrative approach for safe and secure automated driving 	SIS46 Making bike- and scooter shares work for the cities 	TS36 HMI – human factors 
Networking Break					
10.30–11.30	PL3: Integrated mobility today				
11.30–12.30	Closing Ceremony				
Lunch					

PROGRAMME AT A GLANCE

Session rooms		Exhibition				
Saturn	Foyer	Sun	Commercial Theatre	VOF Dutch ring 3	ERTICO Room	
Monday 3 June						
TS02 MaaS – governance and architecture					11.00–12.00	
Lunch						
TS05 Parking					13.30–14.30	
Networking Break						
TS08 Traffic control and management					15.00–16.00	
Networking Break						
16.30–17.45						
				Welcome Reception		
17.30–19.00						
Tuesday 4 June						
					09.00–10.00	
					Networking Break	
TS10 Strategy and framework for data exploitation	SIS11 Automated shuttle trials – learnings, best practices and next challenges	SIS12 5G and mobility – a match made in heaven?	CP1 Technology for more liveable cities	SP01 Energy efficiency	9.00–12.30 Digital Marketplace Constructs in Smart Mobility and Smart Cities	
						10.30–11.30
					Networking Break & Lunch	
TS13 Electromobility	SIS15 Sustainable, connected, inclusive. How cities can accelerate cycling through mobility intelligent solutions	SIS16 Driver in the loop: hand over and hand back on L3	CP2 New techniques and services 1		13.00–15.00 All you need to know about Blockchain and DLT use in smart mobility	
						13.00–14.00
TS15 Evaluation and testing	SIS20 Talking Traffic; use cases and conditions for successful (international) deployment	SIS21 5G with satellite – delivering resilience and reach	CP3 New techniques and services 2	SP02 Connected, cooperative and automated mobility/ changing role of infrastructure	14.30–15.30	
Networking Break						
TS17 Communications for connected and automated driving	SIS25 Exchanging vehicle-generated data for the purpose of safety-related traffic information	SIS26 5G and GNSS high-accuracy positioning for Connected and Automated Driving			15.30–17.00 A Vision for Transport & Mobility – Moving forward	
16.00–17.00						
Networking Break						
TS22 Implications for infrastructure of CCAM	TS23 Evaluating the impact of CCAM	SIS27 Network of NAPs – Building up a harmonised European ITS Digital Infrastructure	SIS47 Traffic Management in a changing world – fulfilling ITS promises			
17.15–18.15						
YOUR FUTURE FESTIVAL						
18.00–23.00						
Wednesday 5 June						
					09.00–10.00	
					Networking Break	
TS25 Towards full autonomy	TS26 Satellite and 5G enabled ITS solutions	SIS31 EU harmonisation in access to (static) road data	CP4 Network operation services	SP03 Connected, cooperative and automated mobility/ transition phase and user acceptance	9.00–12.30 Open Data Access to Mobility Data	
						10.30–11.30
					Networking Break & Lunch	
TS29 Trials of new connected and automated services	SIS34 KPIs for digital transport infrastructure	SIS35 Trust and Security – enablers for digital infrastructure and cooperative systems in Europe	SP04 Transport network operations/Data analytics and handling big data		13.30–17.00 5G deployment for Automated Mobility	
						13.00–14.00
TS31 Information chain protocols and standards	TS32 Public-private partnership	SIS39 Safety assurance of connected and automated vehicles: challenges and solutions	CP5 MaaS in cities	SP05 Simulation, modelling and AI		14.30–15.30
						Networking Break
TS34 New paths to sustainable mobility	TS35 Modelling and prediction algorithms	SIS43 Human-centred design of automated vehicle for a safe integration into mixed traffic			16.00–17.00	
ITS DINNER TIME						
19.30–23.30						
Thursday 6 June						
TS37 Added value from new services	TS38 New mobility services: models and business cases	TS39 Cross border solutions	CP6 MaaS platforms		09.00–10.00 Architecture for European Logistics Information eXchange: the AEOLIX Platform	
09.00–10.00						
Networking Break						
					10.30–11.30	
					11.30–12.30	
Lunch						

OPENING & CLOSING CEREMONIES

OPENING CEREMONY

Monday 3 June 2019

16.30–17.45 (Philips Hall)

You are cordially invited to attend the Opening Ceremony of the 13th ITS European Congress. The Ceremony will commence with the welcome by Minister **Cora van Nieuwenhuizen**, the Mayor of Eindhoven, **John Jorritsma** and a video message from **Elly Blanksma**, Mayor of Helmond. The Ceremony will continue with dynamic interviews involving international young professionals, **Jacob Bangsgaard**, CEO of ERTICO, **Cees de Wijs**, CEO of Dynniq and **Nico Anten**, Executive Chairman at Connekt. This year we have the pleasure to have European Commissioner and First Vice-President, **Frans Timmermans**, addressing the audience.

The Opening Ceremony will conclude with the ERTICO Chairman, **Angelos Amditis**, announcing the official Exhibition opening and the Ribbon Cutting Ceremony and a Welcome Reception in the Exhibition hall.



Cora van Nieuwenhuizen



John Jorritsma



Elly Blanksma



Jacob Bangsgaard



Cees de Wijs



Nico Anten



Frans Timmermans



Angelos Amditis

CLOSING CEREMONY

Thursday 6 June 2019

11.30–12.30 (Philips Hall)

The Closing Ceremony will feature the Conclusions from the Chief Rapporteur, **Eric Sampson**, who will summarise the key topics of the week and the handing over of some Awards. The highlights video will look back at the best moments of the week, while we will already look forward to the ITS European Congress in Lisbon in 2020 and the ITS World Congress in Hamburg in 2021. On behalf of the host, **Monique List** and **Antoinette Maas**, Vice-mayors mobility, City of Eindhoven and Helmond) and the ERTICO Chairman, **Angelos Amditis** will give their closing remarks to all the attendees.



Eric Sampson



Monique List



Antoinette Maas



Angelos Amditis

PLENARY 1: HOW DO CITIES BENEFIT FROM ITS?

Tuesday 4 June

09.00–10.00 (Philips Hall)

ITS has delivered efficiency, safety and sustainability benefits for our mobility systems. In this session we review some of the key achievements, for example how reliable real-time information for users has impacted our mobility system and how network management has improved efficiency and sustainability especially in cities and rural areas. We will also draw out some of the current challenges cities face with regards to ITS, such as legacy systems, vendor lock-in, skills shortages, etc. Finally, we will look at some of the possibilities for the coming years and explore some key questions – how do we raise ITS's visibility on the political agenda? How do we encourage cross agency cooperation? How can we best raise public awareness and inclusion? How to measure the real costs and benefits of ITS and on which to invest in as a city? The session will discuss about solutions such as integrated information and ticketing (including MaaS), traffic management systems (sensors, communication, information and governance) and data management.

Keynote

Herald Ruijters, *Director Investment, Innovative & Sustainable Transport, DG MOVE, European Commission*

Moderator

Ananda Groag, *Reframe*

Invited Speakers

Cees de Wijs, *CEO, Dynniq, The Netherlands*

Jos van Kleef, *CEO, Goudappel, The Netherlands*

Sarah-Jayne Williams, *Director Smart Mobility, Ford Europe, United Kingdom*

START-UP KEYNOTE: THE ROLES OF ALTERNATIVE TRANSPORT MODES IN THE MOBILITY OPTIONS

Tuesday 4 June

10.30–10.45 (Philips Hall)

Caroline Hazlehurst, *Director of Operations, Bird, United Kingdom*

DIALOGUE: SMART MOBILITY: MORE HYPE THAN REALITY?

Tuesday 4 June

10.45–11.30 (Philips Hall)

What is a smart city and what is smart mobility? Which steps can a city take now towards smarter mobility and why? Are there business models for smart mobility?

Moderator

Ananda Groag, *REFRAME*

Invited speakers

Anat Lea Bonshtien, *Chairman and Director, Fuel Choices and Smart Mobility Initiative Prime Minister's Office*

Vasco Móra, *Mobility and Safety Deputy Mayor's Adviser, City of Lisbon*

Peter Broekroelofs, *Chief Design Officer, Dynniq*

Richard Vielvoye, *Consulting Director Public Sector, Deloitte*

PANEL DISCUSSION: URBAN AIR MOBILITY – WHAT ADDING 3RD DIMENSION BRINGS AND REQUIRES?

Tuesday 4 June

13.00–14.00 (Philips Hall)

Urban Air Mobility solutions will bring new services both for urban logistics (short/medium run) and for passenger transport (long run). There are still some technical issues, related to scenery recognition, safety, cybersecurity, data communication for instance, which still need a lot of additional research. How to integrate 3D mobility in a city's mobility strategy? To accommodate this mixed traffic of legacy cars, automated or traditional people transporters, drones, micro mobility solutions etc. will need a completely new view on mobility and its administration.

Moderator

Ananda Groag, *REFRAME*

Invited speakers

Sascha Westerman, *Project Management-Office (PMO), City of Hamburg, Germany*

Vassilis Agouridas, *Strategic Innovation Senior Manager, Airbus, France*

Robert Dingemanse, *CEO & Co-founder, Pal-V, The Netherlands*

Piia Karjalainen, *Senior Manager, ERTICO*

SMART CITIES STREAM

PANEL DISCUSSION: SUSTAINABLE MOBILITY FOR ALL

Tuesday 4 June

14.30–15.30 (Philips Hall)

How to develop a smart city concept that fully addresses the objectives of equitable access, safety, efficiency, and no emissions/pollutants? How to make sure that progress is made in all objectives in a balanced manner?

Moderator

Ananda Groag, *REFRAME*

Invited speakers

Maria Tsavachidis, *CEO, EIT Urban Mobility, Germany*

Rein Westra, *Director and Chief Strategy and Marketing Officer, Giventis International, The Netherlands*

Carolien Nijhuis, *Managing Director IoT, KPN, The Netherlands*

Manu Lageirse, *Group Performance and Technical Officer, Transdev, France*

WRAP UP (10') the appointed chair will summarise key points and outcomes of the whole stream

This stream is organised in collaboration with POLIS.

The streams are complemented by special interest sessions and technical/scientific sessions.

START-UP KEYNOTE: WING DRONES FOR GOOD

Tuesday 4 June

16.00–16.15 (Philips Hall)

Patrique Zaman, CEO & Founder, Avy, The Netherlands

DIALOGUE: WHAT DO THE CITIZENS' WANT?

Tuesday 4 June

16.15–17.00 (Philips Hall)

Citizens, as the main stakeholders affected by the impact of Connected and Automated Driving are rarely included by cities or authorities in discussions aimed at defining roadmaps, strategies and policies. Several debates have shown that the expectations and requirements from citizens are often far away from those formulated by experts and not necessarily in line with strategies defined by authorities. The session will introduce the outcomes of the ongoing debate amongst selected informed citizens, representatives from public authorities and other stakeholders about the needs, expectations, concerns, and the “red lines” for citizens on the future of mobility.

This session will use sli.do

Moderator

Antoine Vergne, Director of Strategic Partnerships, Missions Publiques, France

Invited Speakers

Kristine Hess-Akens, Project Manager CIVITAS, City of Aachen, Germany

Stephane Dreher, Senior Manager, ERTICO

Martin Russ, Managing Director, AustriaTech, Austria

Clément Aubourg, Head of Autonomous Vehicles, Keolis, France

PLENARY 2: AUTOMATED MOBILITY – HOW FAR ARE WE?

Wednesday 5 June

09.00–10.00 (Philips Hall)

Vehicle technology is supporting increasing levels of connectivity and automated operation. We have reached a point where vehicles are able to perform a range of normal driving tasks autonomously. The impact of automation on passenger vehicles, public transport and logistics is, and will be, even more significant. Nevertheless, it remains to be clarified, how automated mobility can be used to maximize benefits – what can we learn from current implementations across different transport modes and countries? Most importantly: how highly automated vehicles will impact on the user's expectation on safety and ethics? How ready is the public for these changes?

Keynote

Clara de la Torre, Director for Transport, Directorate-General for Research & Innovation, European Commission

Moderator

Ananda Groag, Reframe

Invited Speakers

Olivier Lenz, Programmes Director, FIA Region I, Brussels

Lluís Gómez, Commissioner for Economic Promotion, Enterprise and Innovation, Barcelona City Council, Spain

Karel Smits, Senior Manager Automated Vehicles, VDL, The Netherlands

Marko Sillanpää, Director-General of Road Transport, Traficom, Finland

PANEL DISCUSSION: OPTIMISING CONDITIONS FOR ROAD SAFETY

Wednesday 5 June

10.30–11.30 (Philips Hall)

In the transition towards automated driving, more and more functions in the vehicle will become automated, and advanced driver assistance systems will become more and more common. A good example being Intelligent Speed Assistance ISA, which has a huge potential to reduce the number of fatal and severe accidents. The current revision of the General Safety Regulation by the EU will give a boost to safety-related features in the vehicle. How can we further speed up the deployment of these systems for the sake of road safety? And what are the requirements from both the physical as well as digital infrastructure (e.g. HD-Maps) to facilitate deployment of these systems? On the other hand, could these ADAS-systems possibly also have negative side-impacts on road safety and should we focus more on safe human behaviour?

Moderator

Ananda Groag, Reframe, The Netherlands

Invited Speakers

Kevin Mayne, Chief Executive, Cycling Industries Europe/ECF, Belgium

Evert Schaeffer, Regional Director Product Management, TomTom, The Netherlands

Ellen Townsend, Policy Director European Transport Safety Council

Mats Rosenquist, Director External Research Collaboration, Volvo Group Trucks Technology, Sweden

AUTOMATION STREAM

PANEL DISCUSSION: THE ROAD TOWARDS HIGH LEVEL AUTOMATION

Wednesday 5 June

13.00–14.00 (Philips Hall)

Gearing up towards higher levels of automated mobility requires a number of policy actions at various levels. The session will focus on the levers of automation needed to reach highly automated driving, role and challenges of ITS to enable automated mobility. It will also provide an overview of regulatory policies that require updates or a “fit for purpose” test.

Moderator

Joost Vantomme, Smart Mobility Director, ACEA

Invited Speakers

Claire Depre, Head of Unit Sustainable and Intelligent Transport, DG MOVE, European Commission

Apostolos Malatras, Network and Information Security Expert, ENISA, Greece

Armin Gräter, Leader Division Strategy Autonomous Driving, BMW Group, Germany

Aria Etemad, Senior Project Manager, Volkswagen Group Research, Germany

Serge van Dam, Principal Advisor, Rijkswaterstaat, The Netherlands

Svetlana Dicheva, Expert in Control of Autonomous Vehicles, AKKA Technologies, France

WRAP UP (10') the appointed chair will summarise key points and outcomes of the whole stream

This stream is organised in collaboration with ACEA and DG MOVE

The streams are complemented by special interest sessions and technical/scientific sessions.

START-UP KEYNOTE: MOBILITY IS A JOINT EFFORT!

Wednesday 5 June

14.30–14.45 (Philips Hall)

Christof Schminke, *Trafi, Managing Director, Germany*

Henrik Haenecke, *Management Board Finance, Digitization and Sales, BVG, Germany*

ARE SILOS AND 'WALLED GARDENS' THREATENING OPEN MOBILITY INNOVATIONS?

Wednesday 5 June

14.45–15.30 (Philips Hall)

The 'walled garden' silo strategies are spreading to urban mobility service industry. What does this mean for the future of urban mobility? Will we enjoy a dominance of just a few global "MaaS" providers, each with their own exclusive set of transport services in their packages? What happens to local varieties of mobility and adoption of innovations? How inclusivity and affordability of mobility be affected? This topic is expected to become a pressing question in the new era of digital mobility. The session will discuss future scenarios and spark some lively debate as there are major strategy questions – and important business interests – at stake. It also discusses the possible responses of the industry and regulators in determining the vision for market development and collaboration models.

Moderator

Ananda Groag, *Reframe*

Invited Speakers

Krista Huhtala-Jenks, *Head of Go-to-Market, Head of Ecosystem & Sustainability, MaaS Global, Finland*
Isabelle Vandoorne, *Deputy Head of Unit, DG MOVE, European Commission*
Michael Grandfils, *Managing Director, Lab-Box, Belgium*
Marijke De Roeck, *Director of communication & participation, City of Antwerp Urban Development, Belgium*

MAAS CIRCULAR ECONOMY APPROACH TO MOBILITY?

Wednesday 5 June

16.00–17.00 (Philips Hall)

In a 'circular economy' resource input, waste and emissions are minimised by actively managing energy and material loops, refurbishing, and recycling – an approach that does not require changes in the quality of life of consumers, or loss of revenues or extra costs for manufacturers and other economic agents. Mobility as a Service (MaaS) offers the prospect of a revolutionary sharing economy following circular economic principles that could reduce waste, pollution, congestion and costs for community-wide travel for both people and goods. How could we take advantage of the new technologies to change the current 20th century, resource intensive systems, operations and business models in mobility? ? How can we embrace shared mobility and integrated mobility solutions in order to create new options for users, so that there is a benefit for both the individuals and the society as a whole ?

Moderator

Ananda Groag, *Reframe*

Invited speakers

Laura Eiro, *Laura Eiro, Program Director, ITS Finland*
Ozhan Yilmaz, *Smart Transport Specialist, European Investment Bank, Luxembourg*
Paul Rooijmans, *Co-founder, Tranzer, The Netherlands*

PLENARY 3: INTEGRATED MOBILITY TODAY

Thursday 6 June

10.30–11.30 (Philips Hall)

We are finally moving towards the goal of integrated mobility – moving people and goods efficiently, safely, cleanly and using all modes while giving the end-users reliable real-time information, more options, one-stop payment and an overall seamless experience. This session will report where we are in this journey; and explore whether a shift from owning vehicles to subscribing and using mobility services is a potential solution or a disruption to established businesses and governance frameworks. It will review whether Mobility as a Service is a boost for public transport or a threat; and it will look at new challenges such as delivering changes to our physical and digital infrastructure and opportunities we see arising from new transport technologies.

Keynote

Matthew Baldwin, *Deputy Director-General for Mobility and Transport, DG MOVE, European Commission*

Moderator

Ananda Groag, *Reframe*

Invited Speakers

Leen Balcaen, *Sr. Director Industry Solutions, HERE Technologies, Germany*
Eric Mink, *Programme Manager, National MaaS Pilots, Ministry of Infrastructure and Water Management, The Netherlands*
Jacob Bangsgaard, *CEO, ERTICO*
Giancarlo Scaramelli, *Commercial Director, Transdev, The Netherlands*

WRAP UP (10') the appointed chair will summarise key points and outcomes of the whole stream

This stream is organised in collaboration with MaaS Alliance

The streams are complemented by special interest sessions and technical/scientific sessions.

SPECIAL INTEREST SESSIONS



SIS01 – URBAN MOBILITY LABS – LESSONS LEARNED FROM PRACTICAL REAL WORLD TESTBEDS

Monday 3 June 2019

11:00–12:00 (Jupiter)

What does a 'mobility lab' mean for the ones coordinating those themselves? How to 'build' one? How to involve cities, citizens, scientists and companies for getting the most out of the lab for them? We have seen number of 'mobility labs' over the last years. They do come in different shapes and sizes, and can mean almost anything. But the common challenge is how can they be best utilised for encouraging new mobility innovation? This session looks at several mobility labs around Europe and their approach on enabling innovation and growing business. Focus is on urban mobility, new ways of encouraging mobility innovation, and the resulting impact on local residents and stakeholders with a living lab context in mind. This session gives recipes for cities, universities, companies and other enablers on how to grow and renew mobility solutions and business through a 'mobility lab'.

Organiser

Raimo Tengvall, Forum Virium Helsinki, Finland

Moderator

Aleksandra Maj, ERTICO – ITS Europe, Belgium

Speakers

Paul Blakeman, Urban Foresight, United Kingdom

Raimo Tengvall, Forum Virium Helsinki, Finland

Christoph Kirchberger, aspern.mobil LAB, Austria

Yves Frère, SmartwayZ.NL, The Netherlands



SIS02 – IOT: BRIDGING THE GAP BETWEEN DIGITAL AND ROAD INFRASTRUCTURE

Monday 3 June 2019

11:00–12:00 (Castor)

IoT is making Cooperative, Connected and Automated Mobility (CCAM) an integral feature of Smart Mobility by blurring the lines between digital and road infrastructure. Advances in connectivity technologies are allowing Connected and Automated Vehicles (CAVs) to rapidly become part of the Smart Mobility infrastructure. Planning and delivering road transport infrastructure has long involved a hierarchical structure with government agencies at the top. But the new business cases and value chains being created by the availability of Big Data through CAVs and other IoT devices require a reassessment of how such needs are to be addressed. In this session, experts will provide use cases to highlight some of the questions that need answering regarding the integration of public and private services, profitable business models in urban and rural environments, and matters of cyber-security, privacy and interoperability.

Organiser

Rita Bhandari, ERTICO – ITS Europe, Belgium

Moderator

François Fischer, ERTICO – ITS Europe, Belgium

Speakers

Ralf Willenbrock, T-Systems International, Germany

Manzoor Ahmed Khan, Berlin Institute of Technology, Germany

Daniel de Klein, Municipality of Helmond, The Netherlands

Gilles le Calvez, Vedecom, France



SIS03 – ITS FOR CLIMATE: CAN WE REALLY DELIVER ON COMMITTED GOALS?

Monday 3 June 2019

11:00–12:00 (Neptune)

The crisis of global warming is not matched by corresponding massive deployment of ITS systems, solutions and services proven to reduce greenhouse-gas emissions. An ITS for Climate (ITS4C) expert team is surveying and reviewing the environmental effectiveness of four types of smart mobility technologies and solutions: a) no- and low-carbon vehicles and transport technologies; b) eco-efficient network, mode and system management; c) decarbonising freight transport and logistics; and d) Mobility as a Service for Climate (MaaS4C). Teams will also address: e) climate goals for transport and mobility sector: measuring and evaluating GHG emissions; f) implementation challenges, enablers and barriers. The expert team will deliver their results at the first European symposium on ITS for Climate, in Bordeaux on 17–18 September 2019. In this SIS, a panel of team members will validate their preliminary conclusions and gather feedback and examples of successful implementation of "ITS for Climate" from Congress delegates.

Organiser

Paul Kompfner, ITS4Climate Congress, Belgium

Moderator

Paul Kompfner, ITS4Climate Symposium, France

Speakers

Paul Kompfner, ITS4Climate Symposium, France

Jaap Vleugel, TU Delft, Faculty of Civil Engineering and Geosciences, The Netherlands

Florence Ghiron, TOPOS – Digital Aquitaine, France

Patrick Hofman, MAP traffic management, The Netherlands



SIS04 – TICKETING & PAYMENT ENABLING MAAS

Monday 3 June 2019

Ticketing and payment systems that enable 3rd parties integration are one of the key elements of enabling MaaS services into a market. Currently though they are found to be blocking or at least slowing down MaaS deployment in many cities. Public transport authorities and cities are willing to explore different measures to make options for private car more desirable. We have seen recent announcements on making public transport free, following Tallinn's lead. Will ticketing become obsolete, give way to MaaS? What will be the role for ticketing in new era of "MaaS powered by free transit"? This session will explore existing experience on payment solutions for first MaaS implementations and reflect that to recent innovations on ticketing. The session will explore the pain points that need to be addressed – whether legislative, technical or role-related – to transform ticketing to better support wide-scale MaaS deployment.

13:30–14:30 (Jupiter)

Organiser

Sami Sahala, *Forum Virium Helsinki, Finland*

Moderator

Piia Karjalainen, *ERTICO – ITS Europe, Belgium*

Speakers

Søren Sørensen, *SFMCON ApS, Denmark*

Timo Tuukkanen, *PayIQ, Finland*

David Camero, *Kisio Digital, France*

Mathieu de Lophem, *Pikaway, Belgium*

Johann Peetre, *Ministry of Economic Affairs and Communications, Estonia*

Sonila Metushi, *Royal Dutch Transport Federation (KNV), The Netherlands*



SIS05 – MOBILITY 2050 – HUBS

Monday 3 June 2019

As cities are growing, the pressure on urban areas and the risk of traffic unsafety, bad air quality and noise disturbance increase. Metropolises such as Brainport Eindhoven and Hamburg are challenged to keep urban areas accessible and liveable. Innovative technology provides part of a solution, but in order to truly organise transport efficiently, we to look at mobility differently. Our vision 2050 is a holistic view on mobility in which transportation is safe, easy and efficient through 'smart hubs'. These hubs facilitate easy transferring from one vehicle to another. Different transport modes are connected (including MaaS-providers) as well as underlying data streams, and offered to consumers in a user-friendly way.

13:30–14:30 (Castor)

Organiser

Linda van de Ven, *Lindialoog, The Netherlands*

Moderator

Jan-Willem van der Pas, *Municipality of Eindhoven, The Netherlands*

Speakers

Lot Van der Giessen, *Municipality of Eindhoven, The Netherlands*

Kim Raijmakers, *Eindhoven University of Technology, The Netherlands*

Melanie Grötsch, *City of Munich, Germany*

Sascha Westermann, *Hamburger Hochbahn AG, Germany*

Paul Van de Coevering, *Breda University of Applied Sciences, The Netherlands*

Vasco Mora, *City of Lisbon, Portugal*



SIS06 – HARMONIZING EVALUATION OF C-ITS TO SUPPORT INTEROPERABILITY IN EUROPE

Monday 3 June 2019

At this session we will share experience of the evaluation of C-ITS deployments to support interoperability of services and to gain valid overlook of their impacts. We will bring in experience from C-ITS corridor pilots from across Europe to show 'best practice' evaluation initiatives are taking place and how these are similar but not the same, by focusing on areas of evaluation in relation to specific use cases and key performance indicators. This will illustrate that common approaches are needed to support interoperability and harmonization. Published evidence of the performance and impacts of C-ITS services from real world field trials is scarce. The development of a harmonized approach to evaluation through the C-ROADS Platform will help to ensure funding of C-ITS deployments and will result in learning for all that will support dissemination and the continuing deployment of C-ITS network.

15.00–16.00 (Jupiter)

Organiser

Gary Crockford, *Department for Transport, United Kingdom*

Moderator

Giacomo Somma, *ERTICO – ITS Europe, Belgium*

Speakers

Luca Studer, *Politecnico di Milano, Italy*

Satu Innamaa, *VTT Technical Research Centre of Finland, Finland*

Gary Crockford, *Department for Transport, United Kingdom*

Bart Netten, *TNO, The Netherlands*

Alexander Frötscher, *AustriaTech, Austria*

Antonio Mesones, *Applus IDIADA Group, Spain*

Tamara Djukic, *Aimsun SL, Spain*

SPECIAL INTEREST SESSIONS



SIS07 – CONTRIBUTION OF ITS TO IMPROVE EFFICIENCY AND REDUCE HEAVY DUTY VEHICLE EMISSIONS

Monday 3 June 2019

15:00–16:00 (Neptune)

This session will present an overview of ITS measures with the greatest potential for reducing CO2 emissions from Heavy Goods Vehicles. It will present key results from recent studies and demonstrations with the impact of ITS services in goods transport and logistics. Results of recent innovative activities using ITS data for Predictive Powertrain control in intelligent trucks leading to optimal fuel consumption or the potential of hybridisation. It will include a panel discussion on the way forward in terms of bringing together ITS measures and innovative truck technology to improve fuel efficiency, to reduce emissions and to allow the freight transport industry to meet its targets.

Organiser

Jean-Charles Pandazis, ERTICO – ITS Europe, Belgium

Moderator

Jean-Charles Pandazis, ERTICO – ITS Europe, Belgium

Speakers

Andrew Winder, ERTICO – ITS Europe, Belgium

Guus Arts, DAF trucks, The Netherlands

Rene Corbeij, TNO, The Netherlands

Haibo Chen, University of Leeds, United Kingdom



SIS08 – OPTIMISING MOBILITY: TM AND MAAS

Tuesday 4 June 2019

10:30–11:30 (Jupiter)

Traffic Management has the task of managing and optimising road capacity: the speed, volume and direction of traffic. Technological and organisational developments bring new opportunities to manage all types of traffic better, namely closer cooperation between (navigation) service providers and road operators. At present, this collaboration is predominantly limited to re-routing of traditional car traffic but cities are increasingly developing more multimodal transport systems which require better information and re-routing functionalities for all transport modes and users. As such, the need for more integrated multimodal traffic management becomes clearer. But what is needed and by whom to make this a reality? This session will explore how the TM2.0 and MaaS concepts and eco-systems can support one another and enable better optimised mobility systems. In addition, the associated bottlenecks and enablers of building such synergies will be discussed bringing a fresh new perspective on MaaS and TM2.0.

Organiser

Patricia Pelfrene, ERTICO – ITS Europe, Belgium

Moderator

Johanna Tzanidaki, ERTICO – ITS Europe, Belgium

Speakers

Ralf-Peter Schäfer, TomTom, Germany

Eduardo Felici, Dutch Ministry of Water Management & Infrastructure, The Netherlands

Sascha Westermann, Hamburger Hochbahn AG, Germany

Laura Coccone, Swarco, Italy

Frans van Waes, Vialis, The Netherlands



SIS09 – HIGHWAY CHAUFFEUR AND HIGH DENSITY TRUCK PLATOONING IN REAL ENVIRONMENT

Tuesday 4 June 2019

10:30–11:30 (Castor)

The gradual introduction of advanced automated driving capabilities in passenger vehicles and trucks will have a significant impact on European motorways. State-of-the-Art technologies for cooperative ITS services in such vehicle systems have the potential to be the decisive differentiation factor for user acceptance, effectiveness and efficiency of automated driving. To make this a reality and to support automated driving, interoperability testing will be carried out throughout different communication systems. A close cooperation with C-ITS and C-Roads platform involving a wide list of European Member states countries, will support this initiative.

Organiser

Eusebiu Catana, ERTICO – ITS Europe, Belgium

Moderator

Eusebiu Catana, ERTICO – ITS Europe, Belgium

Speakers

Geerd Kakes, KNP, The Netherlands

Gelau Christhard, Federal Ministry of Transport and Digital Infrastructure (BMVI), Germany

Francisco Sanchez, CTAG, Spain

Alessio Filippo, NXP, The Netherlands

Edwin Fischer, Deutsche Telekom, Germany



SIS10 – POSSIBLE ACTIONS FOR PUBLIC AUTHORITIES TO FACILITATE AUTOMATED DRIVING

Tuesday 4 June 2019

10:30–11:30 (Neptune)

Roadmaps and action plans published by policy makers and national authorities that aim at bringing automated driving to the roads are predominantly focussing on the expected benefits that AD will bring. AD under real life conditions, especially when dealing with mixed traffic however still poses serious challenges and many authorities are looking at updating the conditions for a successful transition. Cities in particular remain cautious due to uncertainties about the overall impact on mobility and their influence on CAV developments and deployment.

The EC-funded CARTRE and ARCADE projects have collected and analysed a large selection of roadmaps, action plans, pilots and test sites to identify areas where strategic alignment across governments and stakeholders could be beneficial. Public authorities and city representatives will discuss the findings, their own approaches and suggested actions in an interactive setting with the audience, to prioritise them and identify which actions will have the largest impact.

Organiser

Stéphane Dreher, ERTICO – ITS Europe, Belgium

Moderator

Tom Alkim, European Commission, DG Research and Innovation, Belgium

Speakers

Nuno Rodrigues, MAPtm, The Netherlands

Siegfried Rupprecht, Rupprecht Consult – Forschung & Beratung GmbH, Germany

Martin Russ, AustriaTech, Austria

Suzanne Hoadley, Polis, Belgium



SIS11 – AUTOMATED SHUTTLE TRIALS – LEARNINGS, BEST PRACTICES AND NEXT CHALLENGES

Tuesday 4 June 2019

10:30–11:30 (Foyer)

Automated shuttles are a promising way to bridge the first/last mile in public transport. Early adopters around the world have started trials to test automated shuttles on public roads. Some countries already adapted traffic regulations for allowing test drives, other countries grant specific test permissions for individual trials. The SIS is intended to discuss learnings, best practices and next challenges of shuttle trials in different countries. Speakers from Forum Virium Helsinki (Finland), R+V Lab (Germany), Deutsche Bahn (Germany) and Salzburg Research (Austria) will share their experiences with shuttle trials. Participants are welcome to discuss results and share their experiences as well.

Organiser

Karl Rehr, Salzburg Research, Austria

Moderator

Martin Böhm, ITS Austria, Austria

Speakers

Karl Rehr, Salzburg Research, Austria
Ulla Tikkanen, Forum Virium Helsinki, Finland

Verena Reuber, R+V Insurance, Germany

Stefan Kretzschmar, Deutsche Bahn Regio Bus, Germany



SIS12 – 5G AND MOBILITY – A MATCH MADE IN HEAVEN?

Tuesday 4 June 2019

10:30–11:30 (Sun)

In this session it is discussed how 5G technology could be put to good use in the Smart Mobility vertical. It has the potential to facilitate novel use cases which are not yet possible today. However, making that potential a reality is challenging, and requires significant value to be created for every involved stakeholder. In this session, representatives from the public authorities, the telecom sector and the ITS sector will elaborate on their views on this topic. They will i.a. discuss the needs that they see for improved mobile connectivity. Which use cases would they be able to add to their offering if connectivity would improve in terms of throughput, latency, reliability? What would the corresponding networking requirements be? Which 5G techniques would be needed to support them? What main value would this bring to their customers? And what would the corresponding deployment mean for their organization?

Organiser

Wim Vandenbergh, Ministry of Infrastructure and Water Management, The Netherlands

Moderator

Wim Vandenbergh, Ministry of Infrastructure and Water Management, The Netherlands

Speakers

Caspar de Jonge, Directorate-General for Mobility and Transport, Ministry of Infrastructure and Water Management, The Netherlands

Steven Logghe, Be-Mobile, Belgium

Matthias Sauder, VodafoneZiggo, The Netherlands



SPECIAL INTEREST SESSIONS



SIS13 – TOUCHING THE REAL INFRASTRUCTURE AND EMBRACING THE UNKNOWN

Tuesday 4 June 2019

13:00–14:00 (Jupiter)

What is or would be the concept of infrastructure when it comes to the next generation mobility ecosystem in Europe? Is a digital infrastructure simply another layer to be added to the physical infrastructure or will it be an integral part? What changes to established processes for handling challenging situations can be expected or wished for? New challenges come from environmental, financial and societal agendas as well as the initiatives from new CCAM technologies. On top of this a kind of “winner takes it all” scenario fuels concerns about future roles and value chains from the technology perspective. This special interest session takes up recent panels at EUCAD2019, ARCADE and MANTRA on this interplay between infrastructure and dynamically evolving CCAM ODDs. We plan to add newest alternative examples from Hamburg, Linz (Austria) and Transport for London's recent strategic cooperation with Bosch to land on new ideas for tackling urban mobility issues. CCAM will involve rather challenging differences in innovation cycles, investment cycles and capacity building cycles. This will contribute to changing roles of infrastructure and all infrastructure-related decision making including cities, road operators and public administration (to name only a few). Outcome of this session will contribute to a more nuanced answer for Europe's share in a global challenge to effectively cooperate with the US and Asia in a highly competitive CCAM and mobility environment.

Organiser

Walter Aigner, Hitec Marketing, Austria

Moderator

Claire Depré, European Commission, DG MOVE, Belgium

Speakers

Steve Phillips, Conference of European Directors of Roads (CEDR), Belgium

Sandra Ulrich, ARNDT IDC GmbH & Co, Germany

Manfred Harrer, ASF, Austria

Laura Cocone, Swarco, Italy

Michael Rosenmayr, City of Linz, Austria

Walter Aigner, Hitec Marketing, Austria



SIS14 – TRUCK AUTOMATION AND PLATOONING

Tuesday 4 June 2019

13:00–14:00 (Castor)

If you are interested in truck automation and truck platooning, this interactive session is designed for you. This session enables you to get an overview from different perspectives and exchange ideas on both truck automation and truck platooning (connected automated driving). We will zoom in on: 1) several ongoing national and international initiatives. 2) the latest developments from the research and industry to enable truck automation and truck platooning 3) technological challenges and opportunities on both vehicle level as well as the infrastructure perspective, i.e. the role that the existing and future infrastructure (will) play(s) in deployment of connected automated driving, specifically in the context of commercial vehicles 4) user perspective, reporting the lessons learned from the Experience Week Connected Transport in the Netherlands. Beside presentations you can debate in a multi-stakeholder setting in a plenary discussion 'on what is needed to make the next step happen'.

Organiser

Bastiaan Krosse, TNO, The Netherlands

Moderator

Bastiaan Krosse, TNO, The Netherlands

Speakers

Marike Hoedemaeker, TNO, The Netherlands

Mats Rosenquist, Volvo, Sweden

Ioannis Karaseitanidis, Institute of Communication and Computer Systems (ICCS), Greece

Robbert Janssen, TNO, The Netherlands



SIS15 – SUSTAINABLE, CONNECTED, INCLUSIVE. HOW CITIES CAN ACCELERATE CYCLING THROUGH MOBILITY INTELLIGENT SOLUTIONS

Tuesday 4 June 2019

13:00–14:00 (Foyer)

A majority of the transport sector's innovation today is focused on motorized transportation, even though cycling is the fastest growing mode. The potential for accelerating sustainable transport such as cycling through ITS and other intelligent solutions is huge. Cycling can contribute significantly to large-scale roll-out of modal shift as well as Mobility as a Service. How can the public and private sector work with transport innovations, such as smart traffic lights, (connected) e-bikes, scooters and bike-sharing, when aiming for livable mobility and better accessibility, and vibrant urban cities with high quality of life at the same time? Following the debate at ITS Copenhagen 2018, the Netherlands will continue their efforts as the world leading cycling country, delivering advice and discussions on worldwide trending topics such as 'Inclusion of women in Transport planning (EU DIAMOND-project)', 'Autonomous vehicles' impact on cycling', and 'Data management and gathering for bicycle traffic and parking'.

Organiser

Mirjam Borsboom, Movida Transport Solutions / Dutch Cycling Embassy, The Netherlands

Moderator

Kevin Mayne, Cycling Industries Europe / European Cyclist Federation, Belgium

Speakers

Jos van Kleef, Goudappel Groep, The Netherlands

Saskia Kluit, Fietzersbond, The Netherlands

Kees den Hollander, Loendersloot Groep, The Netherlands

Mirjam Borsboom, Movida Transport Solutions / Dutch Cycling Embassy, The Netherlands

Jeroen Majers, Municipality of Rotterdam, The Netherlands



SIS16 – DRIVER IN THE LOOP: HAND OVER AND HAND BACK ON L3

Tuesday 4 June 2019

13.00–14.00 (Sun)

Vehicle automation has the potential to decrease road accidents, which are nowadays mainly caused by human error. Even if full automation is not feasible today, thanks to technologies such as ADAS systems, the role of the driver can be significantly reduced. These systems are often limited to the monitoring the exterior of the vehicle, often forgetting the driver, which is a key element. In fact, to enable semi-automation, both the external context and the driver's behavior/state must be thoroughly analyzed. R&D applied to sensors, data fusion, machine learning and user feedback to better understand complete driving context, is needed to take the next step towards truly semi-autonomous vehicles. The interaction with automated vehicles will be two folded: (a) interaction is necessary between the driver/passengers and the automated vehicle and (b) interaction is needed between the vehicle and other road users. The human-machine interaction (HMI) protocols between driver and vehicle will revolve around general status information but also information for transfer of control situations including the level of support after the transfer of control to a lower level. These protocols will have an impact on the driver task and therefore on the requirements of the driving licence. Moreover these interaction protocols need to be standardised at a certain level so that drivers driving different vehicles will not miss relevant information or interactions

Organiser

Oihana Otaegui, Vicomtech, Spain

Moderator

Oihana Otaegui, Vicomtech, Spain

Speakers

Anna Anund, Swedish National Road and Transport Research Institute (VTI), Sweden

Andrea Castellano, Lab S.r.l., Italy

Marcos Nieto, Vicomtech, Spain

Marieke Martens, TNO, University of Twente, The Netherlands



SIS17 – LARGE-SCALE DEPLOYMENT NEW MOBILITY SERVICES IN SMART CITIES: CREATE MARKET & IMPACT

Tuesday 4 June 2019

14:30–15:30 (Jupiter)

The New Mobility Services (NMS) initiative is part of the European Innovation Partnership on Smart Cities and Communities. Purpose is large-scale deployment of new mobility services in smart cities enabled by CCAM, C-ITS and MaaS to contribute to wealthy, healthy, clean, spacious, liveable and accessible cities. The essence of NMS is organising a learning-by-doing community in which all European stakeholders are involved to create market and impact in cities and for citizens. April 2019 more than 180 registered partners from governments, industry, research and civil society work in 7 working groups on concrete challenges. The working groups are: On Demand Last Mile, Smart Parking Solutions, Intelligent Speed Assistance, Urban Freight Transport, Traffic Management of the Future, Excellent Governance for New Mobility Services and Smart Cycling and Walking. Speakers will present results in a very interactive dynamic format with lot of opportunities for follow up for participants.

Organiser

Edwin Mermans, Province of Noord-Brabant, The Netherlands

Moderator

Edwin Mermans, Province of Noord-Brabant, The Netherlands

Speakers

Stephanie Leonard, TomTom, Belgium

Tamara Goldsteen, City of Helmond, The Netherlands

Eléonore Venin, Charvet Digital Media, France

Sven Vlassenroot, Tractebel – Engie, Belgium

Isabelle Vandoorne, European Commission, DG MOVE, Belgium



SIS18 – DRIVER MONITORING: TOWARDS SAFE TRANSITIONS, PERSONALISATION AND USER ACCEPTANCE

Tuesday 4 June 2019

14:30–15:30 (Castor)

The introduction of automated functions in vehicles brings a new set of possibilities for safe, efficient and comfortable driving, but it also brings a new set of challenges. Before an automated vehicle makes a handover request to the driver, it needs information on the state of the driver at that moment, to calculate the time required for a successful transition to manual mode. Conversely, an automated vehicle that senses a driver's state may opt to provide more active support, possibly even assuring control of the driving task if a driver critical state is detected. Driver state monitoring in automated driving is considered as a pre-requisite for achieving adaptive and smooth transitions, as well as for enhancing the safety and comfort of the emerging automated vehicles market.

Organiser

Stella Nikolaou, Center for Research and Technology Hellas (CERTH)/Hellenic Institute of Transport (HIT), Greece

Moderator

Anna Anund, Swedish National Road and Transport Research Institute (VTI), Sweden

Speakers

Stas Krupenia, Scania, Sweden

Steffen Leonhardt, RWTH Aachen, Germany

Kevin Nguyen, Valeo, France

SPECIAL INTEREST SESSIONS



SIS19 – CONNECTED (FREIGHT) TRANSPORT CORRIDORS – REAL LIFE DEPLOYMENT IN A UNIQUE COLLABORATION

Tuesday 4 June 2019

14:30–15:30 (Neptune)

In the slipstream of Talking Traffic and Talking Logistics deployment scheme in the Netherlands, public and private parties have formed a unique collaboration model called Connected Transport Corridors. A collaboration in end between three corridors: 1) Amsterdam port area-Schiphol Airport-Greenport Aalsmeer, 2) Rotterdam-Moerdijk, 3) Tilburg-Venlo. In all three corridors various ITS components will be deployed. Not as a pilot but for real, to stay! These components are e.g.: priority at smart traffic lights, traffic information and guidance based on actual position and destination, TruckBreak parkings, Open Trip Model and iSHARE, Control Towers, Open source SaaS TMS. The basic idea is to reward logistics service providers, when they share operational data, with measurable benefits. In order to harmonize this along the three (and growing number of corridors) we have developed a so called LogisStar system.

Organiser

Paul Swaak, Ministry of Infrastructure and Water Management, The Netherlands

Moderator

Paul Swaak, Ministry of Infrastructure and Water Management, The Netherlands

Speakers

Dirk-Jan de Bruijn, Ministry of Infrastructure and Water Management, The Netherlands
Theo Stevens, Province of Brabant, Province of Limburg, The Netherlands
Frans van der Beek, SADC N.V., The Netherlands



SIS20 – TALKING TRAFFIC; USE CASES AND CONDITIONS FOR SUCCESSFUL (INTERNATIONAL) DEPLOYMENT

Tuesday 4 June 2019

14:30–15:30 (Foyer)

Talking Traffic is about national deployment of connected ITS in the Netherlands: bidirectional communication with intelligent traffic lights and made-to-measure information provisioning to private and professional motorists and cyclists, benefitting from the ultra low latency, nationwide coverage and phenomenal installed base of suited equipment associated with the use of regular 3G and 4G/LTE telecommunication. Each of the three speakers will provide insight in a specific part of the nationwide implemented use cases, implementation processes and organization conditions, in order to share lessons learned and support decision making on (international) implementation of smart mobility solutions that really work. In an interactive discussion, the speakers will then gather in a panel and will be asked questions by the moderator, encouraging the audience to actively participate.

Organiser

Vincent Habers, Ministry of Infrastructure and Water Management, The Netherlands

Moderator

Wim Vandenbergh, Ministry of Infrastructure and Water Management, The Netherlands

Speakers

Vincent Habers, Ministry of Infrastructure and Water Management, The Netherlands
Ineke Meijer, Ministry of Infrastructure and Water Management, The Netherlands
Joëlle Van den Broek, TNO Traffic & Transport, The Netherlands



SIS21 – 5G WITH SATELLITE – DELIVERING RESILIENCE AND REACH

Tuesday 4 June 2019

14:30–15:30 (Sun)

Deploying robust ITS services that work seamlessly irrespective of the users location – whether rural or urban – poses an interesting challenge for ITS connectivity. With 5G and new satellite constellations in the near future, along with the convergence of terrestrial and satellite technology, the provisioning of seamless connectivity on the move – in urban, rural and wilderness – will become a reality and pave the way for richer ITS services. 5G has the ambition to enable harmonious integration of heterogeneous networks whether terrestrial and satellite. It is forecasted that by 2025 around 27.2% of automotive use cases will use satellite connectivity. Through its global reach, satellite communication plays a key role in creating a seamless and affordable connectivity fabric for both infrastructure and vehicles. Such connectivity is sufficient for the deployment of essential ITS services such as emergency calls, fleet management, remote diagnostics and road tolling.

Organiser

Ashweeni Beeharee, SA Catapult, United Kingdom

Moderator

Ashweeni Beeharee, SA Catapult, United Kingdom

Speakers

Tim Last, Iridium, USA
Stefan Covaci, Berlin Institute of Technology, Germany
Ian Goetz, Juniper Networks, United Kingdom
Andrew Faiola, Newtec, Belgium



SIS22 – A NEW EUROPEAN FRAMEWORK FOR C-ITS DEPLOYMENT

Tuesday 4 June 2019

16:00–17:00 (Jupiter)

Today connected and cooperative transport and mobility are entering a new phase and 2019 is a crucial year for European citizens: the entering of C-ITS devices and services in the mass market will accelerate, and a new European regulation will enter into force in all Member States. To tackle common challenges and opportunities deriving from that, it is essential to bring together the entire ecosystem of public and private stakeholders in the value chain to develop and validate a new C-ITS Framework for proposing robust and sustainable solutions. This C-ITS deployment framework shall cover technical aspects, operational models, organisational concepts, business cases, regulatory matters, multi-source datasets and data ownership, end-user acceptability, social and transitional aspects. This session will unfold the main aspects of such new C-ITS Framework from regulatory and policy aspects to emerging organisational and business elements based on experience from real-world applications and interoperability harmonisation.

Organiser

Giacomo Somma, ERTICO – ITS Europe, Belgium

Moderator

Erwin Vermassen, ERTICO – ITS Europe, Belgium

Speakers

Guus van de Schouw, European Commission, DG MOVE, Belgium

Giacomo Somma, ERTICO – ITS Europe, Belgium

Marek Ščerba, RODOS Transport Systems Development Centre, Czech Republic

Torsten Geissler, Amsterdam Group, Germany

Darren Capes, Department for Transport, United Kingdom



SIS23 – SAFER CITIES: VISION ZERO – A MULTIDISCIPLINARY CHALLENGE

Tuesday 4 June 2019

16:00–17:00 (Castor)

This session will debate how we can achieve Vision Zero in our cities through multidisciplinary planning and design across all disciplines from technology and systems to traffic engineering, behaviour and policies. While technology, such as ISA, has an important role to play, it alone is not enough. Public information and communication, as well as changes in design of the urban infrastructure and public realm, are also needed with a special emphasis on protecting vulnerable road users. The session will debate a range of issues including urban space design & supporting ITS measures, digital road infrastructure for technologies such as ISA, the role of public information and education, the use of data and intelligence to improve user behaviour, among others. This event brings together some of the most advanced and committed networks, cities and industries.

Organiser

Suzanne Hoadley, Polis, Belgium

Moderator

Rana Ilgaz, Transport for London, United Kingdom

Speakers

Mikael Ivari, Urban Transport Administration, City of Gothenburg, Sweden

Nikolaos Tsampieris, ERTICO – ITS Europe, Belgium

Sophie van Velzen, City of Helmond, The Netherlands



SIS24 – WHO NEEDS TO DRIVE MAAS – POLITICS OR BUSINESS?

Tuesday 4 June 2019

16:00–17:00 (Neptune)

In recent times it became more and more evident, that tackling the challenges in urban mobility is not only a question of technology. The concept of MaaS, for example, shows clearly that technical expertise, trust and cooperation have to go hand in hand, if a substantial change within urban mobility should be successful. The quickly evolving topic of MaaS challenges the capabilities of cities to the same extent like it challenges the conception of viable business cases of the private industries. Still the single stakeholders are struggling to find their position within this special jigsaw puzzle called MaaS. Under these circumstances, a discussion about how public and private spheres should ideally interlace is more important than ever. The panellists of this session, representing various stakeholders involved, will shed light on this highly relevant and emotional topic.

Organiser

Susanna Hauptmann, Kapsch TrafficCom, Austria

Moderator

Philippe Crist, ITF-OECD, France

Speakers

Volker Amann, AVIMO, Austria

Anders Wall, GreenMobility, Denmark

Michael Kieslinger, Fluid, Austria

Vasco Mora, City of Lisbon, Portugal

SPECIAL INTEREST SESSIONS



SIS25 – EXCHANGING VEHICLE-GENERATED DATA FOR THE PURPOSE OF SAFETY-RELATED TRAFFIC INFORMATION

Tuesday 4 June 2019

16:00–17:00 (Foyer)

With the rising volume of connected cars, use of vehicle generated data becomes reality. This data offers insights into vehicle behaviour and their surroundings, for example the use of fog lights and traction control. Road authorities and service providers are interested in using this data for various safety use cases, e.g. improving road safety by hyper-localized slippery road warning alerts. To explore how vehicle data can be shared between public and private parties, a European Data Task Force has been set up with the initial focus on Safety Related Traffic Information. Several EU member states joined the Proof of Concept in which multiple OEM's are participating. In the Netherlands, national and international partners cooperate in the Talking Cars project. The Proofs of Concept, including Talking Cars, are on the brink of getting the data flow started from connected cars to improve road safety information and services on European roads.

Organiser

Ilse Miltenburg, Ministry of Infrastructure and Water Management, The Netherlands

Moderator

Caspar de Jonge, Directorate-General for Mobility and Transport, Ministry of Infrastructure and Water Management, The Netherlands

Speakers

Marcel Sluis, Kia Motors Nederland, The Netherlands

David van Baarle, Ministry of Infrastructure and Water Management, The Netherlands

Steven Logghe, Be-Mobile, Belgium
Edoardo Felici, Ministry of Infrastructure and Water Management, The Netherlands



SIS26 – 5G AND GNSS HIGH-ACCURACY POSITIONING FOR CONNECTED AND AUTOMATED DRIVING

Tuesday 4 June 2019

16:00–17:00 (Sun)

Satellite positioning (GNSS) plays a significant role in Connected and Automated Driving, but complimentary with integrated sensor data and connectivity-based information will help to reduce costs. With the advent and rapid spread of connectivity in cars, in particular 5G, powerful GNSS signals, advanced techniques and other innovations it will be possible to provide centimetre-level absolute positioning solution, functioning seamless in challenging environment such as deep urban areas. The session will showcase automotive oriented solutions and European pilots from automotive companies and organizations providing precise localization solutions combining GNSS and 5G inside the cities in order to overcome the satellite visibility limitations and guaranteeing a seamless accuracy and reliability during autonomous driving.

Organiser

Alberto Fernandez Wyttenbach, European GNSS Agency, Czech Republic

Moderator

Alberto Fernandez Wyttenbach, European GNSS Agency, Czech Republic

Speakers

Johannes Springer, 5G Automotive Association, Germany

Alessandro Neri, University of Roma, Italy

Gustavo López, Septentrio, Belgium
Mikael Fallgren, Ericsson, Sweden



SIS27 – NETWORK OF NAPS – BUILDING UP A HARMONISED EUROPEAN ITS DIGITAL INFRASTRUCTURE

Tuesday 4 June 2019

17:15–18:15 (Sun)

Moving towards a Single European Transport Area requires a digital layer interlinking all of the elements of transport. This is why Member States are setting up their National Access Points (NAP); to facilitate access, easy exchange and reuse of transport related data, in order to help support the provision of EU-wide interoperable travel and traffic services to end users. Building up this Digital Architecture involves open and common standards and interfaces as well as an efficient, but secure data ecosystem. It also requires an unprecedented level of cooperation and harmonization efforts across local, regional and National administrations, to ensure a level playing field with clear roles and responsibilities for, public and private, transport, mobility and service providers, or operators, in order to prevent possible rebound effects, such as a net increase in traffic and emissions. This Session is dedicated to better understand how the European Network of NAP's could facilitate and promote, establishing the links between those, when aiming to build up an Harmonised European ITS Digital (or Data) Infrastructure, that is required for the provision of such services.

Organiser

Gilles Carabin, European Commission, DG MOVE, Belgium

Moderator

Pedro Barradas, European Commission, DG MOVE, Belgium

Speakers

Timo Hoffmann, Federal Highway Research Institute (BAST), Germany

Bettina Neuhaeuser, AustriaTech, Austria

Juan José Arriola Ballesteros, DGT, Spain



SIS47 TRAFFIC MANAGEMENT IN A CHANGING WORLD – FULFILLING ITS PROMISES

Tuesday 4 June 2019

17:15–18:15 (Commercial Theatre)

Traffic management is challenged by a strong evolution from the technological and organizational point of view. The Digitalization of transport, Connected and Automated Driving, the European dimension of services, multimodality (passenger/freight) and the emerging mobility challenges require even more cooperation and coordinated deployment strategies supporting new EC mobility policies. The goal of the session is to give insight into what the various actors (e.g. road operators, policy makers, automotive industry and service providers) need to do to be prepared for ITS deployment in the coming 5 years, based on current and future trends and developments influencing the traffic management domain. We focus on the coming 5 years, to keep the discussion quite concrete and avoid discussions about developments that are to come and they will have an impact on traffic management. For example, developments like automated driving are too far away, too general and not yet useable in day-to-day operations.

Organiser

Roberto Arditi, SINA, Italy

Moderator

Malika Seddi, ASFA, France

Speakers

Suzanne Hoadley, POLIS, Belgium

Claire Depré, European Commission, DG MOVE, Belgium

Roberto Arditi, SINA, Italy

Stephanie Leonard, TomTom, Belgium

Torsten Geißler, Federal Highway Research Institute (BAST), Germany

Paul Wadsworth, Capita, United Kingdom



SIS28 – MAAS – FROM APIS TO KPIS

Wednesday 5 June 2019

10:30–11:30 (Jupiter)

The call for multimodal transport requires well-established cooperation between private and public sectors. A city-business partnership framework has a full potential to deliver sustainability as a profitable service. However, more precise KPIs for societal impacts like the environmental performance as well for the user experience in MaaS ecosystem are still needed. This session will introduce few examples from lighthouse cities focusing on the societal benefits of MaaS and challenges related to evaluating the pros and cons. The panel discussion, including both public authorities and industry representatives will discuss the responsibilities of different actors of the MaaS ecosystem and explore the mechanisms how to ensure win-win-win situations, where users, society and industry all would benefit.

Organiser

Piia Karjalainen, ERTICO – ITS Europe, Belgium

Moderator

Pedro Barradas, European Commission, DG MOVE, Belgium

Speakers

Sandra Witzel, Skedgo Pty Ltd, United Kingdom

Laurent Mezzini, Alstom, France

Eric Mink, Ministry of Infrastructure and Water Management, The Netherlands

James Gleave, Mobility Lab UK, United Kingdom

Chris Lane, Transport for West Midlands, United Kingdom



SIS29 – STATUS OF LARGE SCALE C-ITS DEPLOYMENTS ACROSS EUROPE

Wednesday 5 June 2019

10:30–11:30 (Castor)

The introduction of C-ITS services is based on implementations done by vehicle manufacturers (OEMs) and road operators. While OEMs have announced to equip vehicles with on-board C-ITS equipment from 2019 on, they rely as well on C-ITS services provided by road operators. This session will deal with the status of large scale C-ITS deployments done all across Europe. Herby the C-Roads Platform is established to harmonise the service provision all across Europe. Even in total 16 European Member States are working together on the deployment of harmonised C-ITS services, this session will provide inputs from six Member States. Answers on the current status of deployments and future plans will be given. An additional focus will be made on the stakeholder involvement and collaboration within the single deployment sites.

Organiser

Martin Böhm, ITS Austria, Austria

Moderator

Martin Böhm, ITS Austria, Austria

Speakers

Eric Ollinger, French Ministry of Transport, France

Torsten Geissler, Amsterdam Group, Germany

Erik Olsen, Norwegian Public Roads Administration, Norway

Máté Verdes, Hungarian Public Road Non-profit PLC, Hungary

Manfred Harrer, ASFINAG, Austria

Ricardo Tiago, Institute for Mobility and Transport, Portugal



SPECIAL INTEREST SESSIONS



SIS30 – INTEGRATED NETWORK MANAGEMENT TO MAKE CITIES SAFER AND CLEANER

Wednesday 5 June

10.30–11.30 (Neptune)

In this session we present a general overview of integrated network wide traffic management in which public and private partners cooperate to make cities accessible, safer and cleaner. INM is an automated coordinated concept, which is successfully tested on national, provincial and urban networks. By creating smarter traffic signal systems (TSS) and ramp-metring systems (RMS), we will show that it has laid the foundations for further integration of roadside and in-car systems. INM is being applied in more and more cities. We will present the successful Dutch, Danish and Chinese cases. And probably also the Austrian case and others.

Organiser

Hans Kramer, Amsterdam Practical Trail, Ministry of Infrastructure and Water Management, The Netherlands,

Moderator

Ronald Adams, Ministry of Infrastructure and Water Management, The Netherlands

Speakers

Mads Gaml, City of Copenhagen, Denmark

Jeannet van Arum-Weggemans, Provincie of North Holland, The Netherlands

Fan Zhang, National Center of ITS Engineering & Technology, China

Hans Lint, TU Delft, The Netherlands

Xiaoqing Wang, RIOH/National ITS Center Beijing, China

Jisheng Zhang, RIOH China, China



SIS31 – EU HARMONISATION IN ACCESS TO (STATIC) ROAD DATA

Wednesday 5 June 2019

10:30–11:30 (Sun)

Key European projects and initiatives aim to enhance the quality of the Digital Infrastructure. This session focusses on aspects of the digital data exchange and its value chain. The CEN specification TS17268, describing the data interface, was recently released and the TN-ITS GO CEF project kicked off to set-up road data sharing services across Europe. To harmonize discoverability and access to data, TN-ITS services will be reflected in the National Access Points. Session speakers represent stakeholders' perspectives, activity and realization. They address the actions facing challenges for introducing new services. New initiatives like METR address the EU harmonization of Electronic Traffic Regulations. Services like Intelligent Speed Assistance, subject of a pending decision by the European Parliament on introduction from 2021, benefit from the standardized access to changes of authoritative road data by the leading map/service providers. These service examples will be taken as case studies by the speakers.

Organiser

Tom Jensen, TomTom, Denmark

Moderator

Christian Kleine, HERE Technologies, Germany

Speakers

Gilles Carabin, European Commission, DG MOVE, Belgium

Ola Martin Lykkja, Q-Free Norway AS, Norway

Timo Hoffmann, Federal Highway Research Institute (BAST), Germany

Máté Verdes, Hungarian Public Road Non-profit PLC, Hungary

Tom Jensen, TomTom, Denmark



SIS32 – NOT EVERY MAAS WILL SAVE THE WORLD – BRINGING TOGETHER AUTHORITY AND INDUSTRY PERSPECTIVE

Wednesday 5 June 2019

13:00–14:00 (Jupiter)

This session discusses the different potential roles of MaaS ecosystem players by introducing the MaaS related issues Europe's transport authorities currently see themselves confronted with and their thoughts on how to properly address them. An objective introduction into the decentralized model, as chosen by Finland, will provide experience and additional insight on issues around MaaS market governance. Rounded up with MaaS service providers' differing understanding of MaaS market governance, the pros and cons of different governance ideas shall be debated. The session participants will be invited to engage in the discussion, which should shed light on the question whether rapid MaaS deployment and sustainable development of the mobility system at large go together.

Organiser

Laura Eiro, ITS Finland, Finland

Moderator

Sami Sahala, Forum Virium Helsinki, Finland

Speakers

Krista Huhtala-Jenks, MaaS Global Oy, Finland

Thoma Geier, European Metropolitan Transport Authorities (EMTA), France

Andy Taylor, Cubic, USA



SIS33 – INTERNATIONAL CITIZENS' DEBATE ON AUTOMATED MOBILITY: WHAT DO THE CITIZENS' WANT?

Wednesday 5 June 2019

13:00–14:00 (Castor)

Roadmaps and action plans published by policy makers and national authorities that aim at bringing automated driving to the roads are predominantly focussing on the expected benefits that AD will bring. AD under real life conditions, especially when dealing with mixed traffic however still poses serious challenges. Cities in particular remain cautious due to uncertainties about the overall impact on mobility and their influence on CAV developments and deployment.

The EC-funded CARTRE and ARCADE projects have collected and analysed a large selection of roadmaps, action plans, pilots and test sites to identify areas where strategic alignment across governments and stakeholders could be beneficial. The EC-funded CoEXist and MAVEN projects are respectively building tools to help public authorities plan for and influence the advent of vehicle automation and considering the urban traffic management implications of highly automated vehicles. The findings from these projects will be shared and debated with the audience.

Organiser

Stéphane Dreher, ERTICO – ITS Europe, Belgium

Moderator

Antoine Vergne, Missions Publiques, Germany

Speakers

Martin Russ, AustriaTech, Austria

Clément Aubourg, Keolis Group, France

Kristine Hess-Akens, City of Aachen, Germany

Gregory Telpack, City of Vienna, Eurocities, Austria

Suzanne Hoadley, Polis, Belgium

Stéphane Dreher, ERTICO – ITS Europe, Belgium



SIS34 – KPIS FOR DIGITAL TRANSPORT INFRASTRUCTURE

Wednesday 5 June 2019

13:00–14:00 (Foyer)

A session organised by the Network of National ITS Associations to give a selection of case studies of permanently implemented ITS in Member States. Building on this, the session will facilitate an engaged and informed discussion with the audience around setting and evaluating KPIs for ITS implementations, and invite input into the Network's proposal for a functional framework for ITS implementations.

Organiser

Jennie Martin, ITS United Kingdom, United Kingdom

Moderator

Jennie Martin, ITS United Kingdom, United Kingdom

Speakers

Martin Russ, AustriaTech, Austria

Mihai Niculescu, ITS Romania, Romania

Roman Srp, ITS Czech Republic, Czech Republic

Paul Potters, Monotch, The Netherlands



SIS35 – TRUST AND SECURITY – ENABLERS FOR DIGITAL INFRASTRUCTURE AND COOPERATIVE SYSTEMS IN EUROPE

Wednesday 5 June 2019

13:00–14:00 (Sun)

Connected infrastructure components and vehicles are complex cyber physical systems, composed of numerous components and exposing a variety of communication interfaces, which results in an increased attack surface. Standardized yet generic methods for security assurance (e.g. Common Criteria) are then often costly-to-apply and the fulfilment of security requirements becomes a tricky task. Trust and Security are also fundamental requirements in communication networks and therefore in Cooperative ITS (C-ITS). In order to establish reliable C-ITS services in Europe, authenticity (trustworthy source of information?) and integrity (trustworthy information itself?) of exchanged messages need to be ensured. Efficient methodologies to cope with these challenges are required, thus approaches like partitioning a system into isolated modules that can be certified and a general "privacy by design" concept constitute ways towards the desired security (and safety) assurance levels. This session comprises experts from two H2020 projects (SAFERtec, certMILS) as well as the European Commission's perspective.

Organiser

Sandro Berndt-Tolmann, Federal Highway Research Institute (BAST), Germany

Moderator

Sandro Berndt-Tolmann, Federal Highway Research Institute (BAST), Germany

Speakers

Sandro Berndt-Tolmann, Federal Highway Research Institute (BAST), Germany

Gerhard Menzel, European Commission, DG MOVE, Belgium

Sammy Haddad, Oppida, France

Sergey Tverdyshev, SYSGO AG, Germany

SPECIAL INTEREST SESSIONS



SIS36 – PUBLIC PRIVATE PARTNERSHIP ON CCAM

Wednesday 5 June 2019

14:30–15:30 (Jupiter)

The development and establishment of an innovative connected and automated road transport system poses a multitude of challenges. Based on the work and identified needs of STRIA, the European Single Platform for Open road testing of CCAM, a new joint public/private partnership should tackle technical challenges for vehicle and infrastructure, their harmonisation and standardisation in order to assure a seamless European CCAM transport system. All the endeavours in this regard should be made considering the human factor and the social layer, the competitiveness of the European industry and define a related assessment framework for technologies, procedures, products and services.

Organiser

Marko Jandrisits, European Commission, DG MOVE

Moderator

Claire Depré, European Commission, DG MOVE

Speakers

Manfred Harrer, ASFINAG
Ludger Rogge, European Commission, DG for Research & Innovation
Stephan Neugebauer, BMW
Joost Vantomme, Smart Mobility Director, ACEA



SIS37 – ENABLING INTERACTIVE TRAFFIC MANAGEMENT THROUGH PUBLIC-PRIVATE COOPERATION: EXAMPLES FROM PRACTICAL TRIALS

Wednesday 5 June 2019

14:30–15:30 (Castor)

Mobile or in-car traffic and navigation information services are largely available and in use by road users. Their influence in the individual behaviour of travellers has significant impact to road traffic conditions. Interactive traffic management, based on cooperation between road authorities and private service providers is needed, in order to jointly tackle the challenges of road safety, traffic pollution and delays, while assuring a win-win-win result for users, Service Providers and Road Authorities. Several European and national initiatives are (pre) deploying these new cooperation models and exploring its feasibility and value. This session will present current experiences and results from different pilot implementations currently in development in Europe: Socrates 2.0 in Antwerp and Amsterdam, TMaaS – Traffic Management as a Service in Gent, LENA4ITS in Hessen, starting initiatives in Stockholm and Gothenburg, and ERTICO platform TM2.0.

Organiser

Nuno Rodrigues, MAPtm, The Netherlands

Moderator

Tiffany Vlemmings, Dutch National Data Ware House, The Netherlands

Speakers

Pedro Barradas, European Commission, DG MOVE, Belgium
Giovanni Huisken, MAP traffic management, The Netherlands
Patrick Deknudt, Flemish Department of Mobility and Public Works, Belgium
Per-Olof Svensk, Swedish Transport Administration, Sweden
Susanne Schulz, Hessen Mobil, Germany
Isaak Yperman, Be-Mobile, Belgium



SIS38 – INFRASTRUCTURE-ASSISTED VEHICLES: FROM SECURITY REQUIREMENTS AND SOFTWARE ARCHITECTURES TO IMPLEMENTATION SOLUTIONS

Wednesday 5 June 2019

14:30–15:30 (Neptune)

Sensor technology and advanced data-processing algorithms allow vehicles to increasingly become of higher automation but at the same time pose numerous challenges regarding the way to connect and exploit infrastructure-based data. The V2I paradigm clearly offers many business opportunities. It also introduces technical questions as to how the in-vehicle software exploits the dense connectivity layer (e.g., ITS G5 or cellular 3G/4G) to interact with all (physical & digital) road elements in an efficient and secure way. Involved players need to adjust their systems design and operational management processes while, at the same time, identify and counter threats to safe operation considering 'new' requirements for privacy and personal-data protection. This session will shed some light on the so-far V2I advances, the expected research results and future impact highlighting the involved security and safety challenges. The discussion will benefit from contributions by experts working in the H2020 projects SAFERtec and INFRAMIX.

Organiser

Ioannis Karaseitanidis, Institute of Communication and Computer Systems (ICCS), Greece

Moderator

Ioannis Karaseitanidis, Institute of Communication and Computer Systems (ICCS), Greece

Speakers

Martin Russ, AustriaTech, Austria
Silvia Capato, Swarco Mizar S.r.l., Italy
Michele Rondinone, Hyundai Motor Group, Germany
Máté Lipcsei, Commsignia Ltd., Hungary
Anton Wijbenga, MAP traffic management, The Netherlands



SIS39 – SAFETY ASSURANCE OF CONNECTED AND AUTOMATED VEHICLES: CHALLENGES AND SOLUTIONS

Wednesday 5 June 2019

14:30–15:30 (Sun)

The safety assurance of connected and automated driving vehicles involve the definition of a comprehensive set of methodologies and tools aiming to verify/validate whether vehicles comply with regulatory and technical requirements. This verification/validation process is one of the building blocks for the safe deployment of automated road transport on public roads. These methodologies and tools must take into account both regulatory and technological requirements and should address the whole vehicle lifecycle. From a regulatory perspective, a possible solution is to create a driving license for CAD. Analogue to a human driving license where the driver's capability of displaying appropriate behavior in traffic is being assessed. This session will present the audience the challenges that have been identified in the field of CAD testing and how the topic is being addressed by different key regulatory, commercial and research activities.

Key representatives of different international working groups, task forces and projects will share with the audience their expertise and views about CAD safety assurance, provide answers to the uncertainties the technology faces and also engage in discussion about how to solve one of the most challenging enablers of CAD deployment.

Organiser

Álvaro Arrúe, *Applus IDIADA, Spain*

Moderator

Álvaro Arrúe, *Applus IDIADA, Spain*

Speakers

Adrian Zlocki, *Institute for Automotive Engineering (ika) of RWTH Aachen University, Germany*

Annie Bracquemond, *Vedecom, France*

Olaf Op den Camp, *TNO Integrated Vehicle Safety, The Netherlands*

Serge van Dam, *Ministry of Infrastructure and Water Management, The Netherlands*

Eef Jonkers, *CBR, The Netherlands*

Gerben Feddes, *RDW, The Netherlands*



SIS40 – HOW CAN MAAS AND ITS CONTRIBUTE TO SUSTAINABLE URBAN MOBILITY PLANS?

Wednesday 5 June 2019

16:00–17:00 (Jupiter)

Sustainable Urban Mobility Plan (SUMP) is a widely recognised mobility planning process for a more sustainable way of dealing with the complexity of urban mobility. Today, ITS and Mobility-as-a-Service solutions represent a unique opportunity to optimise the mobility system but also to facilitate a behavioural shift resulting in a more sustainable mobility. Their introduction clearly has significant urban planning implications, question being bifurcated: 1) how the advanced ITS and MaaS solutions can contribute to sustainable mobility and how the impacts of these emerging technologies should be anticipated and incorporated in SUMPs, 2) how the new data flows, produced by side-product of new services can be deployed in urban planning? In this session, representatives from the two front-running cities will deliver their experience while experts from the research and innovation arena will provide a wider view on this emerging topic.

Organiser

Lidia Signor, *ERTICO – ITS Europe, Belgium*

Moderator

Siegfried Rupprecht, *Rupprecht Consult – Forschung & Beratung GmbH, Germany*

Speakers

Sami Sahala, *Forum Virium Helsinki, Finland*

Marijke De Roeck, *City of Antwerp, Belgium*

Georgia Aifadopoulou, *Center for Research and Technology Hellas (CERTH)/ Hellenic Institute of Transport (HIT), Greece*

Lidia Signor, *ERTICO – ITS Europe, Belgium*



SIS41 – NEW ERTRAC ROADMAP ON CONNECTED AUTOMATED DRIVING

Wednesday 5 June 2019

16:00–17:00 (Castor)

The ERTRAC Roadmap on Automated Driving is a reference document for Europe. It provides common definitions for automated driving systems, lists all European activities, and presents the key research and development challenges to be tackled. It calls for cooperation among the industry and between the private and public sectors. The new version published in 2019 provides an extension to Connectivity aspects, with the ambition to detail the infrastructure needs to enable automated driving systems to operate efficiently: ODD (Operational Design Domains) and ISAD (Infrastructure Support levels for Automated Driving) concepts are presented. Progressive automation paths are then described for three different use cases: passenger cars, freight vehicles, and urban mobility vehicles, with descriptions of the automated driving systems that shall be developed in the coming decade. ERTRAC gathers the industry and research community, and cooperates with CEDR to include the perspective of road operators. This new roadmap was developed with the support of the European projects CARTRE, ARCADE, INFRAMIX and FUTURE-RADAR.

Organiser

Xavier Aertsens, *ERTRAC, Belgium*

Moderator

Ludger Rogge, *European Commission, DG Research and Innovation, Belgium*

Speakers

Stéphane Dreher, *ERTICO – ITS Europe, Belgium*

Manfred Harrer, *ASFINAG, Austria*

Armin Graeter, *BMW, Germany*

Mats Rosenquist, *Volvo, Sweden*

Eckard Steiger, *Robert Bosch, Germany*

SPECIAL INTEREST SESSIONS



SIS42 – WORKING TOWARDS THE FUTURE OF SAFE AND SMART INFRASTRUCTURE

Wednesday 5 June 2019

16:00–17:00 (Neptune)

Despite the recent advances in technology, the number of casualties and infrastructure failures still remains too high. Three related research initiatives are currently working towards a common goal of increased safety and optimized management on road, rail and inland waterway networks. Topics include the use of smart nano- and micro sensors, communication and harvesting modules mounted into easy-to-install and –remove low cost on road units, new approaches to make railway level crossings safer and a safety framework to support optimised decision-making with regard to the management of transport infrastructure assets.

Organiser

Erwin Vermassen, ERTICO – ITS Europe, Belgium

Moderator

Maria Gkemou, Center for Research and Technology Hellas (CERTH) / Hellenic Institute of Transport (HIT), Greece

Speakers

Marieke van der Tuin, Delft University of Technology, The Netherlands

Grigore Havarneanu, International Union of Railways, France

Josep Maria Salanova Grau, Center for Research and Technology Hellas (CERTH) / Hellenic Institute of Transport (HIT), Greece

Francesco Biral, University of Trento, Italy



SIS43 – HUMAN-CENTRED DESIGN OF AUTOMATED VEHICLE FOR A SAFE INTEGRATION INTO MIXED TRAFFIC

Wednesday 5 June 2019

16:00–17:00 (Sun)

Automation in road transport is one of the top ranked topics worldwide and it is expected to strongly impact safety and efficiency in future road networks. Automated Vehicles (AVs) are likely to be deployed in mixed traffic, however their ease-of-use, reliability, and trustworthiness have to be significantly improved not only for the users on board but also for the other road users. In this session, the needs and requirements of the AV users and the other road users are discussed with the scope to improve interaction between AVs and human users. The session will examine the evolution of research, technologies and test results that can help AVs being widely accepted by the general public by increasing their safe integration in mixed traffic environment.

Organiser

Ioannis Karaseitanidis, Institute of Communication and Computer Systems (ICCS), Greece

Moderator

Anna Schieben, German Aerospace Center (DLR), Germany

Speakers

Evangelia Portouli, Institute of Communication and Computer Systems (ICCS), Greece

Daniel Watzenig, Virtual Vehicle Research Center, Austria

Matthias Beggiato, Chemnitz University of Technology, Germany

Stephan Cieler, Continental Automotive GmbH, Germany

Riender Happee, TU Delft, The Netherlands

Anders Lindström, The Swedish National Road and Transport Research Institute (VTI), Sweden



SIS44 – C-ITS HYBRID COMMUNICATION TO SUPPORT INTEROPERABLE SERVICES IN EUROPE

Thursday 6 June 2019

09:00–10:00 (Jupiter)

Vehicles of today are rapidly advancing to new connected and automated technologies and services. For society to achieve enhanced traffic safety and flow as well as environmental benefits utilizing C-ITS, an accelerated scale up of C-ITS V2X connectivity requires existing and new C-ITS services that cover all roads and road users. C-ITS hybrid communication, utilizing long-range cellular communication of 3G and 4G/LTE as well as short-range communication of ITS-G5, with different architectures that enable an increased penetration of C-ITS services. C-ITS hybrid communication connects users, smart devices, service providers, OEMs and road authorities. Hybrid communication not only brings together existing services but also creates new innovative services and business models. The session presents the latest C-ITS hybrid communication live deployments as well as service provider and C-Roads Platform experiences in Europe with results of technical performance, cross-border interoperability and harmonization, socio-economy, user acceptance, security, business models and service ecosystems.

Organiser

Ilkka Kotilainen, Finnish Transport and Communications Agency, Finland

Moderator

Giacomo Somma, ERTICO – ITS Europe, Belgium

Speakers

Eric Ollinger, French Ministry of Transport, France

Arne Lindeberg, Swedish Transport Administration, Sweden

Claire Depré, European Commission, DG MOVE, Belgium

Gary Crockford, Department for Transport, United Kingdom

Maxime Flament, 5G Automotive Association, Germany

Erik Olsen, Norwegian Public Roads Administration, Norway



SIS45 – TOWARDS AN INTEGRATIVE APPROACH FOR SAFE AND SECURE AUTOMATED DRIVING

Thursday 6 June 2019

09:00–10:00 (Castor)

Automated driving technology has matured to a level motivating road tests which can answer key questions before market introduction of the systems. Despite a huge progress made in realization of the century-old vision, activities under way need to address several challenges related to ensuring that the vehicle can be safely and securely operated. Today's session focuses on an integrative approach towards automated driving taking into account how drivers and other traffic participants feel about driving automation. It also discusses the methodological aspects of measuring the performance of a vehicle and 'a driver' such as test design and scenarios that need to be tested. The session also shows how to handle and manage a huge amount of data obtained, all the way from vehicle to the statistical analysis. In addition, the session presents on the integration of legal requirements in different parts of Europe into testing automated driving.

Organiser

Aria Etemad, Volkswagen Group Research, Germany

Moderator

Angelos Amditis, Institute of Communication and Computer Systems (ICCS), Greece

Speakers

Aria Etemad, Volkswagen Group Research, Germany

Satu Innamaa, VTT Technical Research Centre of Finland, Finland

Anna Schieben, German Aerospace Center (DLR), Germany

Martin Russ, AustriaTech, Austria



SIS46 – MAKING BIKE- AND SCOOTER SHARES WORK FOR THE CITIES

Thursday 6 June 2019

09:00–10:00 (Neptune)

Bike sharing and scooter sharing are receiving growing attention. First the growth of Asian bike share systems, then more recently scooter shares in USA and Europe started scaling operations. There are an estimated 50k–100k bikes and scooters shared in Europe as of 2018, which are not tendered by the cities. This figure will likely grow 10x in the next 5 years.

Cities are looking for best practices and also key performance metrics to assess if these new vehicles are contributing significantly to their goals. What kind of data can they gather from these companies or from third parties in order to successfully manage these new mobility services? What kind of data is available from operators? What are some best practices in data collection by the cities?

Organiser

Erdem Ovacik, Donkey Republic, Denmark

Moderator

Karen Vancluysen, Polis, Belgium

Speakers

Antonia Roberts, BikePlus, United Kingdom

Susanne Krawack, Aarhus City, Denmark

Alexander Frederiksen, Donkey Republic, Denmark

Philippe Crist, ITF-OECD, France



TECHNICAL SESSIONS



TS01 – NATIONAL ITS STRATEGIES

Monday 3 June 2019		11:00–12:00 (Pollux)
TP1806	Design, development process and current status of the National Access Point of Greece Evangelos Mitsakis, <i>Center for Research and Technology Hellas (CERTH) / Hellenic Institute of Transport (HIT), Greece</i>	Moderator Julie Castermans , <i>ERTICO – ITS Europe, Belgium</i>
TP1823	TransDigi: overview of Finnish transport research and identifying knowledge gaps and future competence needs Juho Kostainen, <i>VTT Technical Research Centre of Finland, Finland</i>	
TP1914	Traffic Management Road Map 2022 Dick Ottevanger, <i>Ministry of Infrastructure and Water Management (Rijkswaterstaat), The Netherlands</i>	
TP1930	Unified ITS environment in Kazan city Maria Dageva, <i>“Road Safety” state company, Russia</i>	
TP1991	ITS acceptability study: the SCOOP experience Laurette Guyonvarc’h, <i>LAB Laboratory of Accident Analysis, Biomechanics and Driver Behaviour, France</i>	



TS02 – MAAS – GOVERNANCE AND ARCHITECTURE

Monday 3 June 2019		11:00–12:00 (Saturn)
TP1825	The role of government in a world of commercialised connected and autonomous vehicles Michael Vardi, <i>Valerann Ltd, United Kingdom</i>	Moderator Andrew Pearce , <i>Jacobs, United Kingdom</i>
TP1873	Creating effective MaaS systems – using a systems engineering approach to design an open (e)MaaS architecture Steven Haveman, <i>University of Twente, The Netherlands</i>	
TP1931	Under the hood of MaaS: the public authorities’ role on organizing the physical side of shared mobility services Bas Scholten, <i>APPM Management Consultants, The Netherlands</i>	
TP1965	National Access Points – getting closer to MaaS EU-wide Søren Sørensen, <i>SFMCON ApS, Denmark</i>	
TP1981	Business models for new mobility service: demand modelling tools for a successful implementation of MaaS Patrizia Franco, <i>Connected Places Catapult, United Kingdom</i>	



TS03 – IMPROVING LIVEABILITY THROUGH ITS

Monday 3 June 2019		13:30–14:30 (Neptune)
TP1757	B-ITS (Bicycles and ITS) Ronald Jorna, <i>Mobycon, The Netherlands</i>	Moderator Mads Gaml , <i>City of Copenhagen, Denmark</i>
TP1828	How to use smartphone apps to encourage cycling: clues from a Living Lab with SMART in Enschede Bingyuan Huang, <i>University of Twente, The Netherlands</i>	
TP1834	Smart mobility on a local scale: addressing quality of life Stijn Altena, <i>Sweco Nederland, The Netherlands</i>	
TP1961	Meetweken: data enriched urban transportation policies in Breda Paul Van de Coevering, <i>Breda University of Applied Sciences, The Netherlands</i>	



TS04 – ITS AND SAFETY

Monday 3 June 2019		13:30–14:30 (Pollux)
TP1720	Extreme weather: the impact on UK strategic roads Ian Patey, <i>WSP, United Kingdom</i>	Moderator Paul Hutton , <i>ITS United Kingdom, United Kingdom</i>
TP1737	New opportunities in assessing tunnel safety risk Hannah Steele, <i>WSP, United Kingdom</i>	
TP1839	An exploratory study using big data for improved safety and operational efficiency: a New Zealand case study Gareth Robins, <i>EROAD, New Zealand</i>	



TS05 – PARKING

Monday 3 June 2019		13:30–14:30 (Saturn)
TP1811	Automated Valet Parking enabled by Internet of Things: a pilot site realization and validation at Brainport, The Netherlands Louis Calvin Touko Tcheumadjeu, <i>German Aerospace Center (DLR), Institute of Transportation Systems, Germany</i>	Moderator Tobias Brzoskowski , <i>ITS Hamburg 2021, Germany</i>
TP1885	Cooperative parking space management: status-quo and perspectives Peter Lubrich, <i>Federal Highway Research Institute (BAST), Germany</i>	
TP1984	Smart parking in Eindhoven Frans van Dingenen, <i>Technolution, The Netherlands</i>	
TP1987	POI parking for French SCOOP and C-ROADS Aymeric Audigé, <i>Atlantique Interdepartmental Road Directorate (DIRA), France</i>	



TS06 – INNOVATION, CHANGE AND DISRUPTION

Monday 3 June 2019		15:00–16:00 (Castor)
TP1790	ITS for dummies – how to communicate about ITS outside the sector and why it matters Krishna Desai, <i>Cubic Transportation, United Kingdom</i>	Moderator Andrew Pearce , <i>Jacobs, United Kingdom</i>
TP1841	Help my elderman wants a driverless vehicle Arthur Scheltes, <i>Goudappel Coffeng, The Netherlands</i>	
TP1886	Smart incident management by using crowdsourcing and data analytics Road authorities listening and acting on talking traffic (users) Robert Barelds, <i>De Verkeersonderneming, The Netherlands</i>	
TP1988	Traffic Management “outside the box” Ruud van den Dries, <i>MAP traffic management, The Netherlands</i>	



TS07 – IMPROVING AIR QUALITY

Monday 3 June 2019		15:00–16:00 (Pollux)
TP1777	Geofencing for smart urban mobility Ola Martin Lykkja, <i>Q-Free Norway AS, Norway</i>	Moderator Luc Wismans , <i>Goudappel Coffeng, The Netherlands</i>
TP1846	About the combination of advanced logics for dynamic VSL activation: an integrated tool to improve traffic flows, control emissions and reduce air pollution Roberto Cavaliere, <i>NOI Techpark Südtirol / Alto Adige, Italy</i>	
TP1897	Predictive environmental zone management in the urban area Klaus Pollhammer, <i>Swarco Futurit, Austria</i>	

TECHNICAL SESSIONS



TS08 – TRAFFIC CONTROL AND MANAGEMENT

Monday 3 June 2019		15:00–16:00 (Saturn)
TP1760	C-ITS deployment in the City of Kassel, Germany Volker Schmitt, <i>City of Kassel – Traffic and Roads Authority, Germany</i>	Moderator Ian Patey , <i>WSP, United Kingdom</i>
TP1789	Accessibility control traffic model: optimising road works as-a-service Stefan de Graaf, <i>DAT.Mobility, The Netherlands</i>	
TP1853	Smart mobility services as a tool for road operators Patrick Hofman, <i>MAP traffic management, The Netherlands</i>	
TP1877	The road to networkwide traffic management in Utrecht Erik-Sander Smits, <i>Arane Adviseurs, The Netherlands</i>	



TS09 – URBAN INITIATIVES

Tuesday 4 June 2019		10:30–11:30 (Pollux)
TP1717	Predictive eco-cruise for hybrid electric vehicles crossing traffic lights using artificial neural network Thinh Pham, <i>TNO, The Netherlands</i>	Moderator Paul Kompfner , <i>ITS4Climate Congress, Belgium</i>
TP1935	Answering to cities' mobility needs – public-private-partnerships fostering innovative AV development Ulla Tikkanen, <i>Forum Virium Helsinki, Finland</i>	
TP1970	Connected and Autonomous Vehicles: the opportunity in Greater Manchester John Bradburn, <i>Atkins, United Kingdom</i>	
TP1973	Connecting airports and airport cities – a case for driverless shuttle services Tine Haas, <i>Dornier Consulting International GmbH, Germany</i>	



TS10 – STRATEGY AND FRAMEWORK FOR DATA EXPLOITATION

Tuesday 4 June 2019		10:30–11:30 (Saturn)
TP1864	Using a digital twin to drive CAV Ian Patey, <i>WSP, United Kingdom</i>	Moderator Jennie Martin , <i>ITS United Kingdom, United Kingdom</i>
TP1887	FRAME NEXT – current status and future plans for the extension and enhancement of the European ITS Framework Architecture Alexander Frötscher, <i>AustriaTech, Austria</i>	
TP1913	Making better use of mobility data Niels Wiersma, <i>Municipality of Eindhoven, The Netherlands</i>	
TP1939	Insights into big data-based business innovation in the transport sector Ivo Hindriks, <i>Panteia, The Netherlands</i>	



TS11 – STANDARDS AND SPECIFICATIONS FOR CCAM

Tuesday 4 June 2019		13:00–14:00 (Neptune)
TP1708	Interoperability specifications for C-ITS services using hybrid communication Igor Passchier, <i>Siemens PLM Software, The Netherlands</i>	Moderator Risto Kulmala , <i>Traficon Ltd, Finland</i>
TP1779	Application of Vehicle-to-X communication for railway solutions on the example of a concept for a request stop solution Stefanie Schöne, <i>German Aerospace Center (DLR), Germany</i>	
TP1918	Time standards and implementations for C-ITS Igor Passchier, <i>Siemens PLM Software, The Netherlands</i>	
TP1975	Open specification of log data for Cooperative and Automated Driving Bart Netten, <i>TNO, The Netherlands</i>	



TS12 – PRIVACY, LIABILITY AND OTHER ASPECTS OF CCAM

Tuesday 4 June 2019		13:00–14:00 (Pollux)
TP1710	Careless automated driving? Nynke Vellinga, <i>University of Groningen, The Netherlands</i>	Moderator Darren Capes , <i>Department for Transport, United Kingdom</i>
TP1755	Handing over the wheel, giving up your privacy? Trix Mulder, <i>Faculty of Law and University Medical Centre Groningen, University of Groningen, The Netherlands</i>	
TP1762	Driver training and testing in the era of automated driving: status quo and future directions Cornelie van Driel, <i>Rapp Trans (DE) AG, Germany</i>	



TS13 – ELECTROMOBILITY

Tuesday 4 June 2019		13:00–14:00 (Saturn)
TP1805	Software services and data analytics for the ultimate EV Driver experience Stefano Persi, <i>Mosaic Fact, Spain</i>	Moderator Tim Gammons , <i>Arup, United Kingdom</i>
TP1871	MEISTER: fostering smart e-mobility large scale adoption in European cities Antonio Marqués, <i>ETRA Investigación y Desarrollo, Spain</i>	
TP1917	Lessons learned from establishing an interoperability system for EVs – how a LEV ecosystem can be created based on the experiences of the EV ecosystem. Ricarda Mendy, <i>Hubject GmbH, Germany</i>	



TS14 – PLATOONING

Tuesday 4 June 2019		14:30–15:30 (Pollux)
TP1742	Multi agent system for intelligent autonomous truck applications in logistics – INTRALOG Lejo Buning, <i>HAN University of Applied Sciences, The Netherlands</i>	Moderator Jean-Michel Henchoz , <i>Denso International Europe, Belgium</i>
TP1835	Specifications for multi-brand truck platooning Lina Konstantinopoulou, <i>Clepa, Belgium</i>	
TP1863	Connecting Austria – first results of C-ITS-focused level 1 truck platooning deployment Wolfgang Schildorfer, <i>University of Applied Sciences Upper Austria, Austria</i>	
TP1876	Priority for connected freight traffic by using the new smart traffic lights (iTLC's) at the N279 Pieter Prins, <i>SmartwayZ.NL/Province of Noord-Brabant, The Netherlands</i>	



TS15 – EVALUATION AND TESTING

Tuesday 4 June 2019,		14:30–15:30 (Saturn)
TP1778	Catalonia Living Lab: a public-private framework for development and testing of connected and automated vehicle technologies Stefan de Vries, <i>Applus IDIADA, Spain</i>	Moderator Anthony Ferguson , <i>Department for Transport, United Kingdom</i>
TP1829	A flexible, user-friendly approach to evaluation of C-ITS Graeme Hill, <i>Newcastle University, United Kingdom</i>	
TP1865	C-ITS framework development and European test cases scenarios Lara Moura, <i>A-to-Be, powered by Brisa, Portugal</i>	
TP1923	SISCOGA extended pilot at C-Roads Spain: testing European C-ITS services Francisco Sanchez, <i>CTAG, Spain</i>	

TECHNICAL SESSIONS



TS16 – CCAM FOR RAIL

Tuesday 4 June 2019		16:00–17:00 (Pollux)
TP1725	A video-based smart detection system for improving safety at level crossings Louahdi Khoudour, <i>Cerema, France</i>	Moderator Hannah Steele , <i>WSP, United Kingdom</i>
TP1739	Automatic train operation – driving the future of rail transport Alfons Schaafsma, <i>ProRail, The Netherlands</i>	
TP1869	Railroad level crossings and an autonomous vehicle Ari Virtanen, <i>VTT Technical Research Centre of Finland Ltd., Finland</i>	
TP1992	Smart level crossing Virginie Taillandier, <i>SNCF, France</i>	



TS17 – COMMUNICATIONS FOR CONNECTED AND AUTOMATED DRIVING

Tuesday 4 June 2019		16:00–17:00 (Saturn)
TP1867	Connected corridor for driving automation. CONCORDA use cases Eusebiu Catana, <i>ERTICO – ITS Europe, Belgium</i>	Moderator Eric Sampson , <i>ERTICO – ITS Europe, Belgium</i>
TP1881	Creating a new model for C-ITS message provision Anna Schirokoff, <i>Finnish Transport and Communications Agency Traficom, Finland</i>	
TP1927	Hybrid communication in C-ITS: initiatives and concepts supporting CAD Boris Kock, <i>Province of Noord-Holland, The Netherlands</i>	
TP1938	CONCORDA Spanish pilot site Diego Bernárdez, <i>CTAG, Spain</i>	



TS18 – BIG DATA AND DATA ANALYTICS

Tuesday 4 June 2019		17:15–18:15 (Jupiter)
TP1775	From ITS to mobile systems: capabilities of smartphone app analytics for public transportation demand analysis Proto Tilocca, <i>CTM SpA, Italy</i>	Moderator Efi Tzoura , <i>Highways England, United Kingdom</i>
TP1787	Traffic data analysis using mobile phone data Stefan de Graaf, <i>DAT.Mobility, The Netherlands</i>	
TP1799	Lessons learned from Mijn040Routes GPS tracking project Erik van Hal, <i>Municipality of Eindhoven, The Netherlands</i>	
TP1831	A web application for analysing real-time traffic data Florian Noack, <i>Technical University of Munich, Germany</i>	
TP1851	Cycling data as way to enhance sustainability in smart cities Rick Lindeman, <i>Ministry of Infrastructure and Water Management (Rijkswaterstaat), The Netherlands</i>	



TS19 – OBJECT AND ANOMALY DETECTION

Tuesday 4 June 2019		17:15–18:15 (Castor)
TP1746	Object detection and tracking in urban street video in Kazan city Alisa Makhmutova, <i>Kazan National Research Technical University named after A. N. Tupolev – KAI, Russia</i>	Moderator Jan-Willem van der Pas , <i>Municipality of Eindhoven, The Netherlands</i>
TP1830	Is AEBS able to detect more than only passenger cars? Mark Gorter, <i>Royal HaskoningDHV, The Netherlands</i>	
TP1916	Detection of anomalies in urban traffic from open data Johan Scholliers, <i>VTT Technical Research Centre of Finland, Finland</i>	
TP1985	Evaluation of construction sites on German highways based on user feedback and floating car data Gerhard Hermanns, <i>TraffGo Road GmbH, Germany</i>	



TS20 – DEVELOPMENTS WITH ARTIFICIAL INTELLIGENCE

Tuesday 4 June 2019		17:15–18:15 (Neptune)
TP1770	Big Data and Artificial Intelligence for optimising transport operations in railway, airport and highways Rodrigo Castiñeira, <i>INDRA, Spain</i>	Moderator David Hytch , <i>Parkgate Consultants, United Kingdom</i>
TP1814	Human detection using RetinaNet applied on visual and thermal single-sensor images Qiao Ren, <i>University of Twente, The Netherlands</i>	
TP1847	Second-Generation Ramp Metering (2GRM) – from pilot to full-scale deployment Gareth Tilley, <i>SNC-L, United Kingdom</i>	
TP1874	Optimize shared mobilities using data and Artificial Intelligence Aurélien Belhocine, <i>Qucit, France</i>	
TP1979	An AI-powered vehicle classification for tolling tariffication Emmanuel Léger, <i>Cyclope.ai, France</i>	



TS21 – TRAFFIC MANAGEMENT AND CCAM

Tuesday 4 June 2019		17:15–18:15 (Pollux)
TP1741	Achieving a bidirectional data exchange between central ITS station and traffic management centre: activities within the framework of C-Roads Lower Saxony pilot project Fatih Ozel, <i>OECN Products and Services GmbH, Germany</i>	Moderator Anthony Ferguson , <i>Department for Transport, United Kingdom</i>
TP1802	The connection between (traffic-) management centers and self-driving vehicles Jeroen van der Werf, <i>Altran, The Netherlands</i>	
TP1850	C-ITS intersection services for Automated Driving Jacco van de Sluis, <i>TNO, The Netherlands</i>	
TP1952	A practical approach toward implementing automated intersection management Coen Bresser, <i>Sweco, The Netherlands</i>	
TP1971	Enhanced traffic management procedures in transition areas Sven Maerivoet, <i>Transport & Mobility Leuven, Belgium</i>	

TECHNICAL SESSIONS



TS22 – IMPLICATIONS FOR INFRASTRUCTURE OF CCAM

Tuesday 4 June 2019

17:15–18:15 (Saturn)

TP1728	Building trust in Automated Vehicles – the role of fenced test sites Garry Staunton, UKAEA/RACE, United Kingdom	Moderator Jill Hayden , Atkins, United Kingdom
TP1763	Lessons learned from Arctic challenge hybrid C-ITS field tests Juho Kostiaainen, VTT Technical Research Centre of Finland, Finland	
TP1807	Automated vehicles and infrastructure Design: an insight into the implications of a dedicated lane for Automated Vehicles on the highway in the Netherlands Mathijs Schoenmakers, Royal HaskoningDHV, The Netherlands	
TP1960	The changing role of road operators in Hungary Máté Verdes, Hungarian Public Road Non-profit PLC, Hungary	



TS23 – EVALUATING THE IMPACT OF CCAM

Tuesday 4 June 2019

17:15–18:15 (Foyer)

TP1730	Financial consequences of value Web model choices for national road authorities in deployment of connected and cooperative Intelligent Transport System Isabel Wilmink, TNO, The Netherlands	Moderator Jean-Michel Henchoz , Denso International Europe, Belgium
TP1743	Vehicle fleet penetration of highly automated driving up to 2040 Risto Kulmala, Traficon Ltd, Finland	
TP1832	Road usage and capacity effects of truck platoons in mixed traffic – a simulation study Paco Hamers, TNO, The Netherlands	
TP1908	Assessing societal impacts in future automated driving scenarios – tentative expert estimates Pirkko Rämö, VTT Technical Research Centre of Finland Ltd, Finland	



TS24 – ROUTE OPTIMISATION

Wednesday 5 June 2019

10:30–11:30 (Pollux)

TP1780	Port multimodal inland mode of transportation predictor & prescriptor Stefano Persi, Mosaic Fact, Spain	Moderator Frank Daems , ERTICO – ITS Europe, Belgium
TP1822	Connecting ITS/traffic management and freight transport for sustainable logistics and supply chains: the case of ITSLOG and Sailor projects in Amsterdam Walther Ploos van Amstel, Amsterdam University of Applied Sciences, The Netherlands	
TP1915	SAFE-10-T: developing smart infrastructure solutions to support safe and reliable transport across the European TEN-T network Marieke van der Tuin, Delft University of Technology, The Netherlands	
TP1932	A cloud-based optimizer for eco route planning of heavy duty vehicles Maria Pia Fanti, Polytechnic University of Bari, Italy	



TS25 – TOWARDS FULL AUTONOMY

Wednesday 5 June 2019		10:30–11:30 (Saturn)
TP1783	AV-ready traffic flow simulation models and assignments Peter Sukennik, <i>PTV Group, Germany</i>	Moderator Gijs Dubbelman , <i>Eindhoven University of Technology, The Netherlands</i>
TP1800	EU AUTOPILOT project: platooning use case in Brainport Antoine Schmeitz, <i>TNO, The Netherlands</i>	
TP1902	“Smart Roads” for AD cars: the AUTOPILOT Project in Livorno Daniele Brevi, <i>LINKS Foundation, Italy</i>	



TS26 – SATELLITE AND 5G ENABLED ITS SOLUTIONS

Wednesday 5 June 2019		10:30–11:30 (Foyer)
TP1701	Delivery ITS with the secure mobile edge cloud Ian Goetz, <i>Juniper Networks, United Kingdom</i>	Moderator Ashweeni Beeharee , <i>Satellite Applications Catapult, United Kingdom</i>
TP1712	“GLONASS+112” system as one of the elements of situational center of the Republic of Tatarstan Bulat Ismagilov, <i>Ministry of information and communication of the Republic of Tatarstan, Russia</i>	
TP1734	A PLUS geospatial journey in ITS Shahdaryani Abd Talib, <i>PLUS Malaysia Berhad, Malaysia</i>	
TP1933	5G-enabled applications for a fully collaborative traffic management Laura Cocone, <i>Swarco, Italy</i>	
TP1947	Using European Satellite Navigation System GALILEO for geolocation in the framework of Mobility as a Service: the GALILEO 4 Mobility project Josep Maria Salanova Grau, <i>Center for Research and Technology Hellas (CERTH)/Hellenic Institute of Transport (HIT), Greece</i>	



TS27 – SENSORS AND CONTROLS FOR CCAM

Wednesday 5 June 2019		13:00–14:00 (Neptune)
TP1726	Traffic state prediction: a value added service for automated driving operations Henri Palm, <i>DAT.Mobility, The Netherlands</i>	Moderator Ian Patey , <i>WSP, United Kingdom</i>
TP1875	Assessment of automated mini-bus operation in the Oku-Eigenji area in Japan Frank Rieck, <i>University of Applied Sciences Rotterdam, The Netherlands</i>	
TP1941	oneM2M-based, open, and interoperability IoT platform for Connected Automated Driving Yassine Lassoued, <i>IBM Research, Ireland</i>	
TP1950	Longitudinal control alternatives for the automated vehicle/highway operation Sang Hyup Lee, <i>Korea Institute of Civil Engineering and Building Technology (KICT), Republic of Korea</i>	



TS28 – CCAM IMPACTS ON SAFETY

Wednesday 5 June 2019		13:00–14:00 (Pollux)
TP1756	Automated driving – how safe is safe enough Merja Penttinen, <i>VTT Technical Research Centre of Finland Ltd., Finland</i>	Moderator Jill Hayden , <i>Atkins, United Kingdom</i>
TP1786	Connected motorcycle consortium is paving the way to connectivity for motorcycles Hennes Fischer, <i>Yamaha Motor Europe N.V., Germany</i>	
TP1890	Crossing at intersections in a world of increased autonomy and awareness Ronald van Katwijk, <i>Vialis, The Netherlands</i>	

TECHNICAL SESSIONS



TS29 – TRIALS OF NEW CONNECTED AND AUTOMATED SERVICES

Wednesday 5 June 2019		13:00–14:00 (Saturn)
TP1754	A field test and simulation study with CACC and smart intersections in the Province of Noord-Holland, The Netherlands Hettie Boonman, <i>TNO, The Netherlands</i>	Moderator Darren Capes , <i>Department for Transport, United Kingdom</i>
TP1857	C-ITS initiatives in Wallonia: evaluation methodology of the Walloon C-Roads Project Sven Vlassenroot, <i>Tractebel – Engie, Belgium</i>	
TP1880	C The Difference: an experimentation to deploy innovative driver assistance services at the scale of a major city (Bordeaux) Lionel Prevors, <i>Cerema Sud-Ouest, France</i>	
TP1895	C-MOBILE – deploying GLOSA for cyclists in Copenhagen Jos van Vlerken, <i>Technical and Environmental Administration, City of Copenhagen, Denmark</i>	



TS30 – USER-CENTRIC MOBILITY SERVICES

Wednesday 5 June 2019		14:30–15:30 (Pollux)
TP1707	MaaS: searching for user demand Susanna Hauptmann, <i>Kapsch TrafficCom, Austria</i>	Moderator Sascha Westermann , <i>Hamburger Hochbahn AG, Germany</i>
TP1838	Seven mobility principles Merwedekanaalzone Christiaan Kwantes, <i>Goudappel Coffeng, The Netherlands</i>	
TP1905	DORA: an interoperable platform for mobility managers in cities Antonio Marqués, <i>ETRA Investigación y Desarrollo, Spain</i>	
TP1993	The impact of ICT development on the urban mobility in Poland Jakub Zawieska, <i>Warsaw School of Economics, Poland</i>	



TS31 – INFORMATION CHAIN PROTOCOLS AND STANDARDS

Wednesday 5 June 2019		14:30–15:30 (Saturn)
TP1733	Moving millions a day: IoT and cloud driving ITS Shamsul Izhan Abdul Majid, <i>PLUS Malaysia Berhad; TERAS Teknologi Sdn Bhd, Malaysia</i>	Moderator Walther Ploos van Amstel , <i>Amsterdam University of Applied Sciences, The Netherlands</i>
TP1844	SOCRATES2.0 TMex – tactical information exchange Edwin Mein, <i>Technolution, The Netherlands</i>	
TP1891	DATEX II in the transition from information value chain to value pie Bard De Vries, <i>U-trex, The Netherlands</i>	
TP1904	Analysing scalability of communication protocols for a C-ITS service Robbin Blokpoel, <i>DynniqThe Netherlands</i>	



TS32 – PUBLIC-PRIVATE PARTNERSHIP

Wednesday 5 June 2019		14:30–15:30 (Foyer)
TP1745	Maximum trigger based network wide traffic management Henri Palm, <i>DAT.Mobility, the Netherlands</i>	Moderator David Hytch , <i>Parkgate Consultants, United Kingdom</i>
TP1856	Traffic management: a public-private collaboration Patrick Hofman, <i>MAP traffic management, Nederland</i>	
TP1888	Cooperation models for Public-Private Partnerships in traffic management Giovanni Huiskens, <i>MAP traffic management, The Netherlands</i>	
TP1937	Cooperative road weather information system – analysis of business ecosystem Toni Lusikka, <i>VTT Technical Research Centre of Finland Ltd, Finland</i>	



TS33 – INTEGRATION OF NEW MOBILITY SERVICES

Wednesday 5 June 2019		16:00–17:00 (Pollux)
TP1716	The Dutch Mobility Panel (DMP): countrywide, large-scale, longitudinal database on human mobility Peter van der Mede, <i>DAT.Mobility, The Netherlands</i>	Moderator Johannes Lauer , <i>Hamburger Hochbahn AG, Germany</i>
TP1784	From demonstration to deployment: identifying your business case for autonomous mobility Giel Mertens, <i>Bax & Company, Spain</i>	
TP1824	Netherlands launches MaaS pilot projects: Eindhoven adopts a green strategy. Mariska Slots, <i>Municipality of Eindhoven, The Netherlands</i>	
TP1912	Behaviour and smart mobility – what do we know? Bert van Velzen, <i>Sweco, The Netherlands</i>	
TP1924	Progress of trials in MobilitymoveZ.NL and SmartwayZ.NL Etienne Wieme, <i>Provincie Noord-Brabant, The Netherlands</i>	



TS34 – NEW PATHS TO SUSTAINABLE MOBILITY

Wednesday 5 June 2019		16:00–17:00 (Saturn)
TP1808	Innovation process case: smart infotainment system for public transport Juho Kostainen, <i>VTT Technical Research Centre of Finland, Finland</i>	Moderator Stephanie Leonard , <i>TomTom, The Netherlands</i>
TP1840	BE-GOOD: Ex ante evaluation of the project Leon Suijs, <i>Goudappel Coffeng, The Netherlands</i>	
TP1859	How ITS contribute to a policy strategy for sustainable mobility David Schoenmaekers, <i>Belgian Ministry Mobility and Transport, Belgium</i>	
TP1928	Nudging towards sustainable mobility behaviour in nature destinations: Parkkihaukka mobile information service Olli Pihlajamaa, <i>VTT Technical Research Centre of Finland Ltd, Finland</i>	

TECHNICAL SESSIONS



TS35 – MODELLING AND PREDICTION ALGORITHMS

Wednesday 5 June 2019

16:00–17:00 (Foyer)

TP1803	Traffic light optimization through smart algorithms Lieuwe Krol, <i>Goudappel Coffeng, The Netherlands</i>	Moderator Albert Serra , <i>Bax&Company, Spain</i>
TP1911	Predictive analytics and predictive maintenance innovation via big data: The case of transforming transport Adrian Irala, <i>INDRA, Spain</i>	
TP1926	Simulation of queue protection algorithms for inter-urban highways Jill Hayden, <i>Atkins, United Kingdom</i>	
TP1972	M4 variable speed limit scheme: optimisation with unique characteristics Jill Hayden, <i>Atkins, United Kingdom</i>	



TS36 – HMI – HUMAN FACTORS

Thursday 6 June 2019

09:00–10:00 (Pollux)

TP1705	Using agreement pattern negotiations for autonomous driving in cities Lavinia Burski, <i>AECOM, United Kingdom</i>	Moderator Jennie Martin , <i>ITS United Kingdom, United Kingdom</i>
TP1788	Nudging drivers towards higher safety margins– applications of the H2020–project MeBeSafe Anna-Lena Köhler, <i>Institute for Automotive Engineering (ika) of RWTH Aachen University, Germany</i>	
TP1798	Automated driving and HMI design for city bus and truck with professional drivers Mikko Tarkkainen, <i>VTT Technical Research Centre of Finland Ltd., Finland</i>	
TP1898	Measuring the emotional impact of driving an autonomous vehicle Ondrej Mitas, <i>Breda University of Applied Sciences, The Netherlands</i>	



TS37 – ADDED VALUE FROM NEW SERVICES

Thursday 6 June 2019

09:00–10:00 (Saturn)

TP1782	Mobility as a Service in Madrid Region and its approach within ECCENTRIC project Nuria Blanco Caballero, <i>Consorcio Regional de Transportes de Madrid, Spain</i>	Moderator Andrew Winder , <i>ERTICO – ITS Europe, Belgium</i>
TP1819	Insights on traffic management in the MaaS value chain Laura Cocone, <i>Swarco, Italy</i>	
TP1826	Deployment and testing the Helsinki Region MaaS platform in Finland Laura Riihentupa, <i>SITOWISE Oy, Finland</i>	
TP1868	Beyond AEOLIX – A European Federated Network of Information exchange in Future Logistics Eusebiu Catana, <i>ERTICO – ITS Europe, Belgium</i>	
TP1942	Easy2Go's intelligent trip recommendation system Linglong Meng, <i>DFKI GmbH, Germany</i>	



TS38 – NEW MOBILITY SERVICES: MODELS AND BUSINESS CASES

Thursday 6 June 2019

09:00–10:00 (Foyer)

- | | | |
|---------------|---|---|
| TP1759 | Public authorities as regulatory service providers in the MaaS ecosystem
Michael Kieslinger, <i>Fluid, Austria</i> | Moderator
Paul Potters , <i>Monotch, The Netherlands</i> |
| TP1849 | Accelerate and unlock the scalability of Mobility as a Service
Evangelia Portouli, <i>Institute of Communication and Computer Systems (ICCS), Greece</i> | |
| TP1929 | Estimating impacts of innovative mobility concepts with the New Mobility Modeller
Fieke Beemster, <i>TNO, The Netherlands</i> | |
| TP1962 | Modelling the impact of MaaS in the mobility industry using a hybrid model approach
Albert Serra, <i>Bax&Company, Spain</i> | |



TS39 – CROSS BORDER SOLUTIONS

Thursday 6 June 2019

09:00–10:00 (Sun)

- | | | |
|---------------|--|---|
| TP1820 | The CROCODILE corridor: successful DATEX II deployment in a cross-border setting
Wolfgang Kernstock, <i>AustriaTech, Austria</i> | Moderator
Mads Gaml , <i>City of Copenhagen, Denmark</i> |
| TP1858 | Collaborative Traffic Management (CTM) – delivering digital roads to provide cross boundary solutions for transport network operations
Jessica Darvill, <i>Atkins, United Kingdom</i> | |
| TP1892 | Cross border cooperation in the framework of crocodile
Tamás Tomaschek, <i>Hungarian Public Road Non-profit PLC, Hungary</i> | |
| TP1951 | Interoperability Evaluation using the RTTI App in InterCor TESTFESTs
Bart Netten, <i>TNO, The Netherlands</i> | |

SCIENTIFIC SESSIONS



SP01 – ENERGY EFFICIENCY

Tuesday 4 June 2019		10:30–11:30 (VoF)
SP1758	Adaptive green wave with speed advice for automated vehicles Meng Lu, <i>Dynniq Nederland B.V., The Netherlands</i>	Moderator Jean-Charles Pandazis , <i>ERTICO – ITS Europe, Belgium</i>
SP1765	Review of rolling resistance influence on fuel consumption of trucks Haibo Chen, <i>University of Leeds, United Kingdom</i>	
SP1810	Impact of elevation data quality on power request modelling accuracy for electric vehicles Yuzhe Ma, <i>Eindhoven University of Technology, The Netherlands</i>	
SP1813	Energy consumption prediction for electric city buses Camiel Beckers, <i>Eindhoven University of Technology, The Netherlands</i>	



SP02 – CONNECTED, COOPERATIVE AND AUTOMATED MOBILITY/ CHANGING ROLE OF INFRASTRUCTURE

Tuesday 4 June 2019		14:30–15:30 (VoF)
SP1718	Motorway merging assistant for automated vehicles Robbin Blokpoel, <i>Dynniq, The Netherlands</i>	Moderator Jennie Martin , <i>ITS United Kingdom, United Kingdom</i>
SP1833	Balancing road-safety and data protection in C-ITS Wouter van Haaften, <i>Leibniz Institute, University of Amsterdam, The Netherlands</i>	
SP1936	A cooperative intersection support application enabled by SAFE STRIP technology both for C-ITS equipped, non-equipped and autonomous vehicles Giammarco Valenti, <i>University of Trento, Italy</i>	
SP1953	Cooperative adaptive traffic control: predictability versus traffic efficiency Meng Lu, <i>Dynniq, The Netherlands</i>	



SP03 – CONNECTED, COOPERATIVE AND AUTOMATED MOBILITY / TRANSITION PHASE AND USER ACCEPTANCE

Wednesday 5 June 2019		10:30–11:30 (VoF)
SP1769	Analysis of a consumer survey on highly automated vehicles Ilias Panagiotopoulos, <i>Harokopio University of Athens (HUA), Greece</i>	Moderator Frank Rieck , <i>Rotterdam University of Applied Science, The Netherlands</i>
SP1792	Less urban private transport through intelligent, micro-mobile transport solutions? A user-centered investigation of relevant use cases and requirements Pia Dautzenberg, <i>Institute for Automotive Engineering (ika) of RWTH Aachen University, Germany</i>	
SP1795	Does the learner driver remain in control of assistance systems? Arie Paul van den Beukel, <i>University of Twente, The Netherlands</i>	
SP1944	Estimating the potential for Mobility-as-a-Service in the Netherlands using mobile phone data Nico Dogterom, <i>Goudappel Coffeng, The Netherlands</i>	
SP1977	Compliance with monitoring requests, biomechanical readiness, and take-over performance: video analysis from a simulator study Bo Zhang, <i>University of Twente, The Netherlands</i>	



SP04 – TRANSPORT NETWORK OPERATIONS / DATA ANALYTICS AND HANDLING BIG DATA

Wednesday 5 June 2019

13:00–14:00 (VoF)

- SP1711** Big spatio-temporal data mining for emergency management information systems
Igor Anikin, *Kazan National Research Technical University named after A. N. Tupolev – KAI, Russia*
- SP1722** Anonymised floating car data – the long path to data sharing
Niels Agerholm, *Department of Civil Engineering, Aalborg University, Denmark*
- SP1772** Estimating train arrival time with supervised machine learning algorithms
Josep Maria Salanova Grau, *Center for Research and Technology Hellas (CERTH)/Hellenic Institute of Transport (HIT), Greece*
- SP1842** Construction and analysis of a weighted city road graph using OpenStreetMap and statistical GPS data
Tatiana Babicheva, *Vedecom, France*

Giovanni Huisken, *MAP traffic management, The Netherlands*



SP05 – SIMULATION, MODELLING AND AI

Wednesday 5 June 2019

14:30–15:30 (VoF)

- SP1753** Evaluation of performance of selected ad hoc routing protocols in an emergency vehicle warning application for vehicular ad hoc networks
Tibor Petrov, *University of Zilina, Slovakia*
- SP1761** Modelling of substitutional signal controls for microscopic traffic flow models using process data of traffic signal systems
Tanja Weidemann, *University of Kassel, Germany*
- SP1943** Lane change behaviour inference through deep-learning-based environment analysis
Alberto Díaz Álvarez, *Universidad Politécnica de Madrid, Spain*
- SP1974** Predicting traffic phases from car sensor data
Chris Huijboom, *HAN University of Applied Sciences, The Netherlands*

Moderator
Gijs Dubbelman, *Eindhoven University of Technology, The Netherlands*

COMMERCIAL PAPER SESSIONS



CP01 – TECHNOLOGY FOR MORE LIVEABLE CITIES

Tuesday 4 June 2019

10:30–11:30 (Commercial Theatre)

CP1731	Supporting the electric mobility revolution: technologies to address range anxiety Louis Debatte-Monroy, <i>TomTom Enterprise, The Netherlands</i>	Moderator Jan van Dijke , <i>Municipality of Helmond, The Netherlands</i>
CP1837	How will autonomous mobility bring Mobility Equity? Pierre Chehwan, <i>Navya, France</i>	
CP1872	Case study & field test “Intelligent Traffic Management” in the City of Darmstadt Bernhard Minge, <i>VITRONIC Dr.-Ing. Stein Bildverarbeitungssysteme GmbH, Germany</i>	
CP1893	TripleSign Solar VMS, ITS tool for sustainable traffic management of smart cities. Hans-Ivar Olsson, <i>Triple Sign System AB, Sweden</i>	
CP1980	The “Eye” of IoT Attiyah Fagbemi, <i>Intel, USA</i>	



CP02 – NEW TECHNIQUES AND SERVICES 1

Tuesday 4 June 2019

13:00–14:00 (Commercial Theatre)

CP1713	The power of prediction – From collecting data to predictive traffic management services Hans Dombeek, <i>Sweco, The Netherlands</i>	Moderator Paul Kompfner , <i>ITS4Climate Congress, Belgium</i>
CP1804	Shaping the future of mobility – risk profiling and assessment for smart mobility Guido von Scheffer, <i>Motion-S S.A., Luxembourg</i>	
CP1843	Multi-sensor fusion localization framework: map-based vehicle localization Siavash Shakeri, <i>TomTom, The Netherlands</i>	
CP1920	A take on concepts to deploy effective autonomous urban mobility Rodrigo Caetano, <i>Scania CV AB, Sweden</i>	



CP03 – NEW TECHNIQUES AND SERVICES 2

Tuesday 4 June 2019

14:30–15:30 (Commercial Theatre)

CP1709	Why mobility providers need a control tower to orchestrate their vehicle fleets Luc Texier, <i>Bestmile, Switzerland</i>	Moderator Nick Juffermans , <i>Goudappel Coffeng, The Netherlands</i>
CP1751	New generation of traffic light controllers: application of smart traffic Mahtab Joueiai, <i>Sweco Mobility Solutions, The Netherlands</i>	
CP1901	Situational awareness in tunnels with C-ITS during emergency Ola Martin Lykkja, <i>Q-Free Norway AS, Norway</i>	
CP1956	Smart C-ITS solutions for a safe, sustainable and efficient traffic system Rob Oldeheuvelt, <i>Dynniq, The Netherlands</i>	



CP04 – NETWORK OPERATION SERVICES

Wednesday 5 June 2019

10:30–11:30 (Commercial Theatre)

- | | | |
|---------------|---|--|
| CP1723 | Big data and machine learning for traffic and accident predictions on highways
Miguel Carpio, <i>Cintra Servicios de Infraestructuras, Spain</i> | Moderator
Jennie Martin , <i>ITS United Kingdom, United Kingdom</i> |
| CP1749 | Could Connected and Autonomous Vehicles transform asset inspection?
Garry Staunton, <i>UKAEA/RACE, United Kingdom</i> | |
| CP1781 | Innovation in extrapolation of data to optimize the construction of an active transportation observatory
Laurent Guennoc, <i>Eco-Counter, France</i> | |
| CP1836 | Automated pavement defect mapping and road lane marking condition analysis
Markus Melander, <i>Vaisala Oy, Finland</i> | |



CP05 – MAAS IN CITIES

Wednesday 5 June 2019

14:30–15:30 (Commercial Theatre)

- | | | |
|---------------|--|--|
| CP1774 | m2i – integrated mobility for Île-de-France: towards a multimodal mobility information system of excellence in Île-de-France
Werner Kutil, <i>Cityway, France</i> | Moderator
Nick Juffermans , <i>Goudappel Coffeng, The Netherlands</i> |
| CP1791 | CITIX 3D, next generation, user-friendly and non-intrusive 3D sensor to count and classify pedestrians, cyclists and motorized vehicles with unmatched accuracy
Laurent Guennoc, <i>Eco-Counter, France</i> | |
| CP1940 | Maximising the utilisation of localised transport supply
Anna Rothnie, <i>Shyft Mobility, United Kingdom</i> | |
| CP1946 | Automated shuttles as a solution for urbanisation and the increasing demand for mobility
Ferdinand Hoorweg, <i>The Future Mobility Network, The Netherlands</i> | |
| CP1958 | End to the rush hour crush? How MaaS and data are liberating road and rail
Alon Shantzer, <i>Moovit, Israel</i> | |



CP06 – MAAS PLATFORMS

Thursday 6 June 2019

09:00–10:00 (Commercial Theatre)

- | | | |
|---------------|--|---|
| CP1738 | How demand-responsive transit bridges the gap between public mass transit and individual mobility in a Mobility-as-a-Service ecosystem
Mark-Philipp Wilhelms, <i>moovel Group GmbH, Germany</i> | Moderator
François Fischer , <i>ERTICO – ITS Europe, Belgium</i> |
| CP1776 | Moovizy 2 – an innovative full MaaS application with over 25.000 frequent users in a French Metropolitan Area
Laurent Glorieux, <i>Cityway, France</i> | |
| CP1809 | How a modular approach to Mobility-as-a-Service platforms enhances user experience, mobility services, and policy making
Oliver Wohak, <i>d-fine GmbH, Germany</i> | |

A series of innovative workshops

ERTICO ROOM – Ground floor, marquee 2, EVOLUON

DIGITAL MARKETPLACE CONSTRUCTS IN SMART MOBILITY AND SMART CITIES

Tuesday 4 June

9.00–12.30

As a place where goods are traded and social contacts built and reinforced, a marketplace forms the hub of daily life, but it is also defined by the size and value of the community behind it.

Smart Cities, where a number of technological factors play an important role in addressing mobility, environmental protection and quality of life, are an integral part of digital marketplaces. The internet of things has allowed modern cities, which are equipped with numerous sensors, to collect vast quantities of data potentially creating a Smart City that is an internet of everything, including services. But the true value of the data generated and collected can only be realised by pooling and sharing it with the diverse digital communities that exist in the Smart City and that provide services across sectors such as energy, mobility, health, etc.

Discussions in this workshop will centre on monetisation strategies based on unlocking the potential of different data sources in the Smart Cities context. These will be anchored on three types of challenges: creating new shared services in urban areas, supporting cross-sector services, and the socio-economic impacts of building communities around the marketplace. Please note there will be two sessions with a coffee break.

ALL YOU NEED TO KNOW ABOUT BLOCKCHAIN AND DLT USE IN SMART MOBILITY

Tuesday 4 June

13.00–15.00

Blockchain and Distributed Ledger Technologies (DLT) have the potential to address many challenges from the Mobility sector by enabling more decentralised, trusted, secured, traceable and user-centric digital services. They can improve inter-company processes and stimulate new business models. While Blockchain and DLT are well known for financial use cases, the concept is still abstract when in use for smart mobility. Many applications based on DLTs have been developed by industry and start-ups for supply chain and transport. Other actors of the sector, like public authorities are considering more and more the possibilities to apply DLTs to improve processes or enable more efficient mobility services.

The first workshop on Blockchain and DLT for Mobility organised by ERTICO in September 2018 at the ITS World Congress in Copenhagen explored potential areas of deployment for MaaS and digital supply chains. This second ERTICO workshop will introduce existing use cases with a focus on benefits, applicability criteria and implementation challenges and explore potential areas where the technology might be of value. It will bring together specialists from industry and research with mobility stakeholders interested in exploring the potential of DLTs in an interactive discussion, rich in idea exchange. The role of policy-makers and the needs for stakeholder collaboration, standardisation and harmonisation will also be addressed.

A VISION FOR TRANSPORT & MOBILITY – MOVING FORWARD

Tuesday 4 June

15.30–17.00

This is a brainstorming workshop co-organised by ERTICO and the European Commission, DG MOVE for the second year. This workshop will focus on how thanks to innovative concepts, schemes and technologies mobility might evolve in the future. It will also consider what our options for transport and mobility will look like in 10 years from now with regards to freight, traffic management, clean or urban mobility, digital infrastructure and other aspects of mobility. The 3-minute visionary presentations of the invited speakers will be followed by an interactive discussion with the audience which will look at how we as users and citizens will move from A to B in the future and the ways in which we can make our society a better, safer, more environmentally friendly place to live in. This workshop hopes to provoke an 'out of the box' discussion so an open mind is very welcome. Come armed with ideas!

OPEN DATA ACCESS TO MOBILITY DATA

Wednesday 5 June

9.00 –12.30

The integration of Big Data and IoT platforms is creating new data-driven business models that will undoubtedly transform Europe's industry. The use of Open Data for deploying IoT platforms for Smart Mobility, however, presents a number of challenges. The main barriers that must be overcome fall into three categories: 1) technical issues such as interoperability and scalability of data and platform technologies; 2) policy surrounding access to data, particularly in-vehicle data; and 3) awareness across the industry about the benefits of data-driven models.

This workshop is an opportunity to examine the benefits of data-driven services from use cases in data marketplaces, analyse ICT architectures and data-sharing platforms, and to discuss policy requirements for Smart Cities and Connected and Automated Mobility. A concrete expected outcome of this workshop is a taskforce that will work on establishing an Open Data Forum for mobility data. The Forum will allow stakeholders to have a dialogue on the economic potential of vehicle data, addressing the benefits, risks and architectures for data-driven services, and to establish a structured topology of Open Data access and the economics of data sharing.

Please note there will be two sessions with a coffee break.

5G MOBIX: DEPLOYMENT FOR AUTOMATED MOBILITY**Wednesday 5 June****13.30–17.00**

5G is expected to contribute to the digital transformation of the transport sector towards a global Digital Smart Mobility paradigm, providing breakthrough mobility concepts and new innovative applications and services matching user needs and societal challenges. EU funded actions, aiming at deploying and trialing 5G technologies for Cooperative, Connected and Automated Mobility (CCAM) started at the end of 2018 in collaboration with 5G-PPP. The European Commission is also preparing a framework for launching the Connecting Europe Facility (CEF) digital projects to co-finance 5G infrastructure with the intent to accelerate the deployment of 5G CAM corridors.

The purpose of this workshop is to bring about an exchange of views on the vehicle and roadside infrastructure needs and cellular network requirements for deploying 5G technologies and architectures to run trials on national and the cross-border corridors. Interactive panel discussions will provide insights into the 5G technologies for CCAM, the envisioned business models as well as state-of-the-art results from the 5G-PPP projects, in particular the three 5G for CCAM Innovation Actions (5G-MOBIX, 5G-CROCO, 5G-CARMEN) in the context of cross-border testing. Please note there will be two sessions with a coffee break.

AN ARCHITECTURE FOR EUROPEAN LOGISTICS INFORMATION EXCHANGE: THE AEOLIX PLATFORM**Thursday 6 June****09.00–10.00**

Supply chain visibility and use of large logistics related information is an important issue for the deployment of pan-European logistics solutions. This workshop focuses on a new ICT platform, able to achieve a cloud based cooperative logistics ecosystem. More in detail, the platform is proposed as a user-configurable and secure intelligent dashboard, where information flows, provided by multiple sources, can be collected, organized, connected, manipulated and used depending on the role of the logistics and supply chain actors. The proposed platform aims to simplify the complexity of capturing fragmented data, aggregating and creating actionable information from multiple sources and actors in the logistics sector.

Stand Presentations

Find out more about us, our 120 Partners, and our cutting-edge innovation at the ERTICO stand (2.1, ring2).

Tuesday 4 June

10:30–10:50 – InterCor, with Gary Crockford & Gerard van Dijk

10:50–11:10 – C-MOBILE – Evangelos Mitaskis (CERTH-HIT)

11:10–11:30 – HEADSTART, with Stephane Dreher (ERTICO) & Partners

13:20–13:40 – optiTruck, with Jean-Charles Pandazis (ERTICO)

13:40–14:00 – TN-ITS, with Frank Dames and Carmela Canonico (ERTICO)

15:10–15:30 – NeMo Hypernetwork & Neutral Server, with Thomas Walz (IBM)

16:00–16:20 – AUTOPILOT with Sven Jansen, TNO

16:20–16:40 – 5G-MOBIX with Joao Moutinho (CCG)

Wednesday, 5 June

10:30–10:50 – Safestrip, with Erwin Vermassen (ERTICO)

10:50–11:10 – C-MOBILE – Evangelos Mitaskis (CERTH-HIT)

Wednesday, 5 June

11:30–11:50 – TISA – TPEG for Emergency Alerts and Warnings, with Stephanie Chaufton (ERTICO)

13:00–13:20 – AEOLIX, with Maria Pia Fanti (Politecnico di Bari)

13:20–13:40 – EIT Urban Mobility

13:40–14:00 – TM 2.0 and MaaS, with Johanna Tzanidaki and Piia Karjalainen (ERTICO)

14:30–14:50 – TM2.0, with Matthias Mann (HERE)

14:50–15:00 – ARCADE knowledge base

15:30–16:00 – MaaS challenges & user centric, with Piia Karjalainen (ERTICO)

16:00–16:20 – NeMo, the Hyper-Network for electromobility, with Maria Pia Fanti (Politecnico di Bari)

Thursday, 6 June

11:00–11:30 – ICT4CART, with Vasilis Sourlas (ICCS)

DEMONSTRATIONS

This year's demonstrations will push the boundaries of modern mobility, so be sure to visit the innovative solutions that will be showcased between the Evoluon and Automotive Campus. Demonstrations will run between the Evoluon and the Helmond Automotive Campus – a living lab for smart mobility solutions! Your experience starts when you step into the shuttle bus at the Evoluon. On your way over to the Automotive Campus you will get an impression of implemented smart mobility solutions.

Shuttle buses will leave every 15–30 minutes from the Evoluon to the Automotive Campus and vice versa. Demonstration rides have to be booked beforehand via the ITS European Congress 2019 App.

2getthere

High-speed Autonomous Vehicle Demo

2getthere is excited to showcase a high-speed demonstration with our 3rd generation GRT vehicle on the Automotive Campus during the ITS 2019.

2getthere's GRT vehicles are autonomous minibuses accommodating up to 24 passengers (8 seated, 16 standing). The maximum speed is 60km/hr. The vehicle is the only autonomous vehicles that is bi-directional and features doors on both sides. The GRT vehicle allows for easy access through accurate docking at stations, enabled by the 'crabbing' capability of the front and rear wheel steering.



We are proud to present our projects in collaboration with our clients and our partner Altran. Giving the visitor an inside at the type of applications 2getthere delivers and what is needed to go from vision to delivery.

ADAS Alliance

Creating awareness and stimulating the use of Advanced Driver Assistance Systems

Car manufacturers are increasingly developing smart systems that help the driver to drive more safely, such as Lane Keep Assist, Forward Collision Warning, Adaptive Cruise Control, Automatic Parking, Drowsiness Detection, Blind Spot Detection and Emergency Brake Assistance. We call these systems ADAS, an abbreviation of Advanced Driver Assistance Systems. These ingenious systems can make an important contribution to the road safety of drivers, passengers and fellow road users, but also to traffic flow and the environment. However, recent studies have shown that many drivers are insufficiently informed that their cars are equipped with such systems and do not use them sufficiently or even incorrectly. ADAS systems use smart software and advanced camera and radar functions. Current systems can therefore do a great deal: ensure that a vehicle stays on the right lane, help to keep a distance from vehicles in front or intervene if an object suddenly appears in front of the vehicle, but this does not mean that the car is able to drive autonomously in traffic. The driver must remain on his guard and is still responsible for steering the vehicle.



With this ADAS demonstration we want to draw special attention to the function and usefulness of ADAS and thereby strengthen our European lobby. The purpose of the demo is firstly about creating awareness for the systems, to demonstrate to drivers and to let them experience what ADAS systems are already capable of and to inform them about the limitations. And secondly the demo is all about encouraging the use of driver assistance systems. The demo will be held together with 10 car manufacturers and Carglass on and around the Automotive Campus from 2–6 June 2019.

ATeam

'See through the eyes of our car'

The ATeam will navigate an urban intersection with a smart traffic light and perform an autonomous parking manoeuvre. Ride in the car and see how an autonomous and cooperative driving car senses its surroundings, and plans its path on the road!

How does an autonomous car navigate an intersection? When should the car slow down, come to a stop, and/or turn? How does a car park itself? We answer these questions at ATeam Eindhoven. We are developing algorithms for an autonomous and cooperative vehicle that can make these decisions on the road, and perform manoeuvres to make driving safer, and more efficient.

The ATeam car will demonstrate the car approaching an intersection with a smart traffic light that communicates with the car via Direct Short-Range Communication (DSRC), also known as WiFi-p. Using the information from the traffic light, the car determines an optimal trajectory to slow down and stop, if the light is red, and resume driving when the light is green. After the intersection, the vehicle performs a right turn into a parking area. Once within the parking area, the car will search for a parking spot and perform a parallel parking manoeuvre when it has found one.

Guests will be given a chance to ride in the car and experience the benefits of the combination of autonomous and cooperative technologies to make our roads safer. For safety reasons, a safety driver will be present in the car at all times of the demo.



AUTOPILOT

The use of Internet of Things to enhance Automated Driving

The demonstration shows various technologies developed in the EU AUTOPILOT project for supporting automated driving with IoT enabled information and services. Through a combination of car platooning and automated valet parking the developments of several partners in the consortium will be addressed. Car platooning is demonstrated with two automated cars in real traffic through a live link, showing the formation process on-route from Helmond's city centre towards Eindhoven. One of the cars joins the platoon from the Automotive Campus, where it is collected from the parking using Automated Valet Parking. Once the formation has been achieved, the platoon speed will be adjusted to traffic light status and traffic congestion ahead that is detected, using IoT. The platoon returns to the Automotive Campus, where the demonstration seamlessly continues with Automated Valet parking.

Available parking spots are detected with IoT enabled camera systems (including one drone). The routes towards the parking will temporarily be obstructed, which is reported by vehicles that are driving on the routes report by a roadside camera system. One vehicle is equipped with pedestrian detection, and a second vehicle provides road hazard detection. The roadside camera system indicates the presence of other vehicles on the routes. Automated vehicles from several partners drive via the best route to the parking lot and perform various parking manoeuvres in automated driving mode. The parking is supported by a camera-equipped drone that flies fully automated. All involved systems are IoT connected to the parking service.



DEMONSTRATIONS

C-MobILE

C-MOBILE C-ITS urban services demo

C-MobILE is about large-scale deployment and interoperability. This is what we want to convey during the demonstration. We want to achieve this by running four scenarios on the "Closed Circuit Demo Area 2" where a combination of services will be demonstrated. Furthermore, we want to express that a large part of the C-MobILE services is operational and that these services also work outside the area they were originally developed and tested. Therefore, we want to let the visitors of the congress experience a number of C-MobILE services, which are already operational and can be used in Eindhoven and Helmond.



The four demonstration scenarios are the following:

1. A truck approaches the intersection and gets priority and a GLOSA advice.
2. A fire truck with the emergency lights on approaches the intersection and gets green priority while sends an Emergency Vehicle Warning to the users nearby.
3. A car approaches the intersection, where the traffic light is on red, with any braking intentions. A Red Light Violation Warning is sent to the driver and the other users.
4. A truck approaches the intersection with the intention to make a right turn. Parallel to the road a bicyclist gets a green light simultaneous with the truck. A Blind Spot Detection warning is sent to the truck.



Concorda

UC1: Highway chauffeur/Cooperative Adaptive Cruise Control- over long range cellular



Cooperative Adaptive Cruise Control realises longitudinal automated vehicle control. In addition to the feedback loop used in the ACC, which uses Radar/LIDAR measurements to derive the range to the vehicle in front, the preceding vehicle's acceleration is used in a feed-forward loop. The preceding vehicle's acceleration is obtained from the Cooperative Awareness Messages it transmits using long range cellular technology. These messages are transmitted several times per second. 1 car

UC2: CONCORDA platooning

It will be used modern communication standards and technologies like V2V (Vehicle to Vehicle communication) make it possible that vehicles can make ad hoc networked communication while driving. This communication is used because has very special requirements in terms of safety, low latency, ultra-reliability and availability between the platoon leader and the following trucks in the platoon. On board are installed embedded components required using interface with sensor/actuators. Trucks equipped with these communication facilities can couple on the fly, while driving. They form 'electronically coupled' trains. The truck in front of a platoon –the platoon leader– takes over the driving control of all trucks following closely behind. The following vehicles have automated steering and distance control to the vehicle ahead, and the control is supported by advanced V2V communication. Data is exchanged across all trucks. When e.g. the front truck brakes, all trucks following will brake immediately at the same time. Even drivers can 'look-through' the trucks in front of them, and see what is happening in front of the platoon, due to the distributed video communication. 2 trucks

Drone out of the box / Antea Group

Autonomous drones: opportunities for traffic research

In the near future, drones will operate autonomously. Mapture.ai provides autonomous drone systems. This system enables a drone to take-off from a box, fly a predefined mission to capture the requested data and lands back in the box to get ready for the next request without any human interaction. Once landed, the drone will be charged and do its data transfer if needed. During flight, high-definition camera footage can be streamed to the ground for monitoring purposes.

mapture.ai



Technology and regulations regarding drones are developing in a high pace, providing more opportunities for the application of drones for a variety of purposes. Antea Group has experience with the application of drones for traffic research and data gathering: research with drones has been applied in traffic safety context, for traffic counts and traffic management. Antea Group will share their experiences during the demonstration. There will be a brief discussion with audience regarding their view on the application of drones for traffic-related research.

Dynniq

Use Dynniq's GreenFlow on your transfer to the Automotive Campus

Experience the life of elite and premium-class passengers in our buses or VIP cars! By using Dynniq's GreenFlow for VIPs you will get to your destination faster. During your transfer, you will discover how our C-ITS applications can provide smart support to road users. GreenFlow prevents a stop-start at junctions, which saves fuel and CO2 emissions. The driver will experience a more comfortable and smoother drive. And it gives the road manager full control to tailor their traffic policies to suit different road users, such as cyclists, car and lorry drivers. This creates an effective management of traffic flow, with the ultimate goal of improving user experience.

dynniq



HAN

Scaled ITS application test bed

Within this demonstration a scaled test bed is setup for quick testing of the controls, algorithms and communication related to the ITS applications. The setup consists scaled RC vehicles, which are localized in space with an overhead camera. The demonstration will be on the self-docking of the trucks within the distribution centres and the scaled smart dolly's with independent steering and traction on each wheel.

HAN AUTOMOTIVE
RESEARCH

DEMONSTRATIONS

Heijmans

Traffic jam detection, travel time information and Road Work Warning (RWW) service

Nobody likes being in a traffic jam. That is why more and more road users are using navigation and traffic apps on their smartphone. These apps warn road users, among other things, about traffic jams, speed cameras and stationary vehicles. Every second the app sends a signal with GPS data about the location of a vehicle at a specific time. Heijmans uses this Floating Car Data (FCD) for, among other things, traffic jams and diversions on message sign trailers.

heijmans



Traffic jam detection or travel time information based on FCD is better than traditional systems. Road users are warned faster and more accurate for upcoming traffic jams on their route, including the consequences it has for travel time. These warnings appear on strategically positioned message sign trailers. Travel time information can be displayed in three ways: time display, fastest route or advised route. These systems increase the safety and comfort of road users and improve traffic flow.

In recent years the number of road accidents has increased considerably. Among other things due to dangerous objects on the road, such as message sign trailers and attenuator trucks. By warning road users in time for upcoming dangers or congestions, roads will be safer. Our message sign trailers and attenuator trucks automatically send a message with, among other things, GPS data to warning systems. These systems convert that information into a traffic information message. One kilometre before reaching the location in question, that message is pushed to the navigation systems and traffic apps of approaching road users, so they are warned in time for these objects.

i-CAVE

i-CAVE: a showcase of the benefits of vehicle cooperation

In the i-CAVE project dual mode demonstrator vehicles are being developed, which showcase cooperative and automated driving. In this demo the difference between those two modes will be shown with two Renault Twizys following each other automatically. The vehicle following distance achieved with cooperative driving would be unsafe without V2V communication.

i-CAVE



The i-CAVE project aims to design a safe and robust living lab demonstrator platform for dual mode operation. The dual mode operation on the one hand focuses on cooperative driving with the human in the loop and secondly on automated driving where the user is functionally a passenger. In the demo two Renault Twizys will be used, both equipped with the hardware required for automated driving. Given the small size of the Twizy, it is an excellent vehicle to show the required add-on hardware necessary for automated driving.

The demo shows one Twizy following another Twizy. Two different modes of operation will be shown; automated and automated with vehicle-to-vehicle communication. In the first case, the vehicle following distance will be large, since the following vehicle has no knowledge of the actions of the vehicle it's following. When communication is enabled, the two vehicles will drive significantly closer together with the same level of safety and accelerate as one.

To create a safe demonstration, the follower vehicle is equipped with RADAR, camera and communication hardware. The information of these sensors is fused in the on-board computer, which sends the required control signals back to the Twizy. The drivers in the vehicle are present for safety purposes only.

Maven

Traffic controller supported automated driving

The European Maven project intends to provide vehicle management solutions for urban signalized intersections and corridors based on I2V and V2V interaction. This demo will show the intersection requesting automated vehicle lane or speed change based on traffic demand and vehicle information to the intersection causing it to change behaviour based on vehicle characteristics and trajectory.



Maven consists of 16 use cases of which a number will be visualized during a demo tour, the remainder will be presented at the Maven Booth on the exhibition. During the demonstration delegates will be invited to take a tour in the vehicle where they will witness requests from the traffic controller to change lane or speed and the vehicle responding to it. It is also possible to see that the intersection controller responds to information about the trajectory of the vehicle causing it to change the sequence. After the tour the delegates are invited for the demonstration at the roadside display where the two aspects of the demonstration will be highlighted, response of the vehicle to information from the traffic controller and vice versa. Requests from the traffic controller will be visible on a dashboard and the response of the vehicle can be observed through a live video stream of the traffic on the road, response from the traffic controller to vehicle info like trajectory will be visible on the dashboard.

During the congress the public road will be converted to a closed circuit for a number of days and only during these days a real automated vehicle will be used. During the remaining days automated vehicle emulation will be used.

Monotch

Experience the full connected road side ecosystem in operation

Did you know the Netherlands already has an operational C-ITS ecosystem in place? We will demonstrate that it is up and running, integrated with various types of objects from competitive vendors. The data is visualized in-car by our partner's solutions. Hop in the demo ride and experience the possibilities!

The demonstration takes place on public roads with connected intersections from vendors Swarco and Dynniq. There is also a Swarco variable message sign and a message sign of a road inspection vehicle from the Province of Noord-Holland. Relevant information from these objects will be shown in-car in real-time. The information is shown on the On Board Unit (OBU) by V-tron and the Greenflow app by Dynniq. The Monotch TLEX (Traffic Live Exchange) platform acts as the core of the eco-system by providing access to the real-time, bi-directional data from the road side equipment to the service providers.

The solution offers improved safety and comfort to road users. It also improves traffic flow and safety for road regulators. This demonstration is unique and innovative because the complete ecosystem is involved. It also clearly shows The Netherlands is at the forefront of actual country-wide implementation of C-ITS.



DEMONSTRATIONS

NAVYA

Come aboard NAVYA AUTONOM SHUTTLE, the electric and autonomous mobility service for 15 passengers!

Come aboard the AUTONOM SHUTTLE, 100% autonomous and electric, and discover an autonomous and fluid trip! The AUTONOM SHUTTLE was specifically designed to meet the needs of an autonomous, driverless vehicle while also optimizing navigation and safety features. With neither a steering wheel nor pedals, AUTONOM SHUTTLE uses effective guidance and detection systems that combine various types of advanced technology, which allows it to interact in real time with its environment.

Capable of transporting up to 15 passengers, AUTONOM SHUTTLE fleets improve private sites, ease road congestion in urban centres and guarantee autonomous transport performance as well as a comfortable trip for the first and last mile.

This joint demonstration between NAVYA and the Province of Groningen, will allow attendees to experience autonomous technology through a service that will take care of visitors as soon as they arrive on the campus, dropping them off from one point to another in real condition. This shared mobility service will show how autonomous on-demand shuttles can reinvent mobility by complementing the urban transport system and making it more accessible, efficient and safe.

Come discover through this service an application of our shuttles and enjoy a pleasant trip while making the most of your travel time!



Siemens

Automated driving made safer and more efficient by integrating intelligent roadside infrastructure in mobility solutions

The potential benefits of automated vehicles on safety, comfort and traffic efficiency are widely recognized by the automotive industry and authorities. However, the full potential of this technology can only be achieved with the help of connectivity, both between vehicles and with roadside infrastructure.

The latest developments in cellular and ad-hoc communication technology are rapidly expanding possible mobility solutions, connecting vehicles and infrastructure. Increased bandwidth, improved availability and reduced latency will enable new and more reliable applications. In this demonstration we will showcase that roadside sensors combined with connectivity can actively assist automated vehicles when approaching intersections with limited line of sight for the on-board sensors.

During the demonstration a small platoon of automated vehicles will approach an intersection with intelligent traffic lights and advanced roadside sensors, providing speed advice and situational awareness. The automated vehicles do not have full view of the intersection and will show different behaviour when roadside assistance is active or inactive due to the improved situational awareness. This has clear advantages for traffic efficiency, comfort and safety of all road users.

The development has been based on a high-fidelity automated driving simulation environment. This enables short development cycles and fast and repeatable testing, resulting in more robust and reliable automated driving applications. This simulation environment will also be included in the experiment.

This demonstration is realized by Siemens, KPN, TNO, u-blox, Monotch, and PTV, and is partly based on the results of the European projects Co-Exist and Concordia.



Smart shipping Rijkswaterstaat

SMASH! Smart shipping demonstrations at the Evoluon in Eindhoven

Fully autonomous, remote controlled or assisting the skipper: smart shipping solutions are researched and prototyped in many ways in The Netherlands. With a large economic potential for both inshore and offshore waters and less complex situations compared to roads, autonomous sailing might be easier to implement than autonomous driving. Visit the SMASH demonstration-zone just outside the Evoluon to learn more about Smart Shipping.



At the SMASH demonstration-zone just outside the Evoluon several research and development parties will demonstrate their latest technology in Smart Shipping. Every day during ITS in Europe multiple demonstrations will take place. For instance, remote controlled inspection drones measuring water depths and water quality. But also small autonomous ships capable of navigating and collision avoidance will make their appearance in the water just outside the exhibition center. Inspection and maintenance-drones are likely to be the first autonomous vessels operating in the Dutch waters, but with a challenging labor market and relatively high labor costs, the inland shipping industry acknowledges the potential of a future of sailing with less or even without personnel. Next to economic arguments, safety may be enlarged when for instance tugboats or fire patrol boats can operate unmanned.

Both for smaller aquatic drones but also for larger inland and maritime vessels, there are still many challenges to overcome. Navigation under extreme conditions, situational awareness, collision avoidance, special maneuvers, international jurisdiction and legal certification are just some of these aspects. What are the crossovers with autonomous technology on the roads? In which aspects can we learn from each other and/or collaborate? Visit the SMASH demonstration-zone and meet with the developers of Smart Shipping in The Netherlands.

Talking Traffic

Talking Traffic Experience: enabling road users to look 'far beyond their windscreen'

Get to know Talking Traffic in practice: new services for road users based on real-time data exchange and connectivity, enabling them to look far "beyond their windscreen". Make optimal use of real-time travel information and driving support via a dashboard screen, navigation system or simply via a smartphone: tailor-made and real-time, regardless of location and vehicle brand. Talking Traffic services include information on incidents, roadworks, sudden changes in weather conditions, traffic jams, maximum speeds (static and dynamic), matrix signs, closed lanes, parking options, time to red and green.



Smart mobility.
Dutch reality.

By using modern telecommunications and cloud technologies in combination with information crowdsourcing, Talking Traffic services offer driving task support as well as navigation in the entire country and in cities throughout the Netherlands. Motorists do not even need to purchase a new car for this: a dashboard screen, navigation system or a simple smartphone suffices. The applications provide continuous en-route guidance and tailor-made, individual advice and assistance to road users, and in the near future also to vehicles. Key component is the exchange of information on the current situation on the road: speed advice and warnings of dangerous situations, such as the tail end of traffic jams, sudden braking, slipperiness or a local fog bank, accidents, roadworks, maximum speeds (static/dynamic), matrix signs and parking spaces available. This increases their ability to anticipate traffic situations, which in turn improves traffic flows and safety. Uniformity (safe and useful) throughout the country is key, so that road users receive similar advice wherever they are. Talking Traffic includes the development of new intelligent traffic lights that can communicate continuously with approaching vehicles and cyclists and are able to prioritize certain types of traffic such as emergency services, heavy transport vehicles, cyclists and public transport, optimising traffic flows across intersections and the entire urban network. www.talking-traffic.com



Truck platooning



CACC with trucks on secondary roads with traffic light interaction

During the ITS European Congress Cooperative Adaptive Cruise Control (CACC) will be demonstrated by means of a platoon of trucks which is able to run smoothly across an intersection, with existing C-ITS capabilities, by giving priority to the trucks and extending green time for traffic lights. The dynamic length of the number of platooning trucks is taken into account.

In the logistics world there is a great need for optimizing goods flows, logistics activities and improving accessibility by road. This last point also includes the optimal use of smart mobility solutions to improve the flow and safety of freight traffic. As part of the TKI NL Smart Mobility project, a test is being conducted in Tilburg on the North Tangent (N260 / N261) motorway with Cooperative Adaptive Cruise Control (CACC) with trucks that are able to communicate with traffic lights equipped as Intelligent Traffic Light Controllers (ITLC) in which both ITSG5 (for short distance communication) and 4G / LTE enables the communication with vehicles.

The test is aimed at showing smooth truck platoon driving across an intersection by using V2V and V2I information. With existing C-ITS options, priority is given to the trucks and the green time of the traffic light is extended if necessary, taking into account the dynamic length of the number of trucks that use CACC. This way, sufficient green time / evacuation time can be given.

The test will also be demonstrated in Helmond during the ITS European Congress. The trucks will be driving in platoon on the N270 motorway towards the intersection at the Automotive Campus. A live video feed will show the application responding while approaching the traffic light. When approaching the traffic lights the platoon speed decreases, the traffic light turns green and the green time is extended so that the entire platoon is able to continue its drive smoothly.

VI-DAS

Enabling L3 hand over and hand back by VI-DAS (Vision Inspired Driver Assistance Systems)

The aim of the demonstration is to show take-over and hand back transition strategies for SAE-L3: from manual to automated and from automated to manual. The approach is based on next generation 720° vision inspired driver assistance systems. VI-DAS progresses in the design of next-gen 720° connected ADAS (scene analysis, driver status). Advances in sensors, data fusion, machine learning and user feedback provide the capability to better understand driver, vehicle and scene context, facilitating a significant step along the road towards truly semi-autonomous vehicles. On this path there is a need to design vehicle automation that can gracefully hand-over and back to the driver. VI-DAS advances in computer vision and machine learning will introduce non-invasive, vision-based sensing capabilities to vehicles and enable contextual driver behaviour modelling.



Inside the vehicle, the VI-DAS uses non-invasive technologies to provide information in real-time about the drivers' state and behaviour, including fatigue, drowsiness, and attention levels and focus. Driver state monitoring, together with appropriate feedback to the driver based on the driving situation and interaction with the car, is also a key in ensuring that the driver is in the loop during mode transitions in semi-automated driving

In this sense the demo will show:

- A natural and seamless interaction between various ADAS systems.
- A comprehensive analysis of the driver's situational context.
- Holistic inside/outside situational description. Correlation between driver status, scene and ADAS systems.
- Appropriate feedback to the driver providing better situational awareness and decision making.
- A graceful transfer of control back to the driver when necessary (e.g. when automation fails), and when possible (e.g. when the driver is attentive and informed).

With millions of bikes, cars, trucks and trains on only 41.000 square kilometres, the Dutch do not just think smart mobility. Experience the innovations and advances in the Netherlands, and see what the country has done to improve mobility solutions for industry and citizens. Join the experts on a guided tour to various destinations expressing the character of an innovative, successful economy and a highly complex transport infrastructure.



Visit one of the most advanced car manufacturing companies of Europe – VDL Nedcar

VDL Nedcar, part of VDL Groep, is one of the most advanced car manufacturing companies of Europe. VDL Nedcar is the only independent car manufacturer in the Netherlands and produces various types of MINI and the BMW X1 on behalf of BMW Group. During the visit you will information about VDL Nedcar and you will get the chance to see the factory.



	Date 05-06-2019		Duration 3 hours		Price 10,00 euro (excl. VAT)
	Time bus leaves 09:00		Time of return 13:00		
	Time visit start 09:30		Max participants per visit 60		



Traffic Innovation Centre

The Traffic Innovation Centre is an experimental area where national, regional and local authorities test intelligent mobility solutions. Experiments occur in real life setting, in a real network, in real traffic. That way, impact on traffic management becomes visible immediately. The lab's main purpose is synergy and knowledge sharing between market parties, governments and research institutes. In the Traffic Innovation Centre, R&D is connected to the operation of traffic management. Parties can test and develop their intelligent mobility solutions. By doing so, we increase traffic safety, improve traffic flow and reduce CO2 emission. During the Experience Visits, a guided tour to the Traffic Innovation Centre and the Operational Traffic Management Centre is.

www.innovatiecentrale.nl



	Date 04-06-2019 05-06-2019 06-06-2019		Duration 1.5 hours		Price 20,00 euro (excl. VAT)
	Time bus leaves 15:00		Time of return 17:00		
	Time visit start 15:15		Max participants per visit 40		





Visit smart mobility – Dutch reality: Traffic Innovation Centre

Joint innovation in practice

In a jointly organized implementation visit the Traffic Innovation Centre, TNO and Siemens will show how synergy and knowledge sharing between market parties, government and research institutes results in innovations. The focus of this visit is on traffic level as well as on system to system level.

Operational traffic management and innovations on traffic level

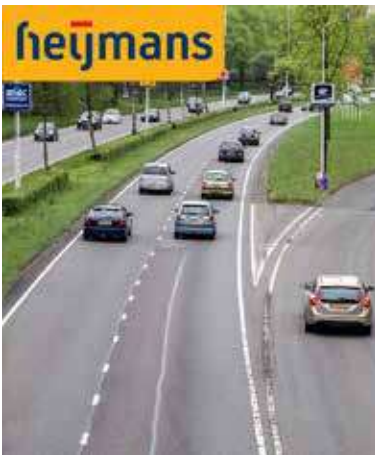
In a guided tour you will visit the Operation Traffic Management Centre and the Traffic Innovation Centre. Here national, regional and local road authorities test intelligent mobility solutions in a real-life setting, in a real network and in live traffic, making its impact visible immediately.

Intelligent mobility solution on intersection level The companies Siemens and PTV will demonstrate by simulations the impact of connected automated driving on the urban environment (Co-Exist H2020 project), show the added value on traffic performance on intersections. See demo16 for a real-life demonstration.

Smart, safe & sustainable mobility on system to system level TNO will demonstrate the impact of intelligent mobility on city level and show how TNO can help you in good decision making on system-to-system level by overseeing the consequences of a mobility innovation. In a city case demonstration, a TNO expert will show you how sophisticated software, expertise and use of real requisite data makes it evident why one solution is better than another.

<https://www.tno.nl/nl/aandachtsgebieden/mobiliteit-logistiek/roadmaps/smart-traffic-and-transport/>

	Date		Time visit start		Time of return
	04-06-2019		04-06-2019:		04-06-2019:
	05-06-2019		10:15		12:00
	06-06-2019		05-06-2019		05-06-2019
	Time bus leaves		06-06-2019:		06-06-2019:
	04-06-2019:		13:15		15:00
	10:00		Duration		Max participants per visit
	05-06-2019		1.5 hours		40
	06-06-2019:				Price
	13:00				10,00 euro (excl. VAT)



An intuitive measure to nudge drivers

In order to change habitual traffic behaviour directly, we take another approach by using nudging principles. For which an intelligent system is developed. We as humans react intuitively to environmental cues, processing the information automatically on a more unconscious level and therefore a nudging approach is particularly suitable for supporting our driving tasks.

Heijmans is one of the partners in the European Horizon 2020 project: MeBeSafe. Heijmans is developing the system and is responsible for the installation in the infrastructure. By providing road users feedback only when needed, we aim to improve their driving behaviour in a supporting way. This way we are helping road users to perform better driving behaviour without restricting their freedom of choice or punishing them. In other words, the intelligent system intuitively nudges the traffic of Eindhoven towards safety. By joining this visit you will be one of the first to witness this new approach in an on street situation.

<https://www.heijmans.nl/en/>



Date
04-06-2019
05-06-2019



Duration
1 hour



Price
10,00 euro (excl. VAT)



Time bus leaves
15 minutes before visit start



Time of return
15 minutes after visit ends



Specific information
Safety measure: A high visibility safety vest will be provided at the location. It's mandatory to wear this at the location



Time visit start
13:30, 15:00 and 16:30



Max participants per visit
12



DAF Innovation trucks

In the course of its 90-year heritage DAF has developed many transport innovations, enabling new standards in efficiency, uptime, emissions, safety and driver comfort. Examples include turbo technology which DAF pioneered in the fifties, turbo-intercooling introduced by DAF as an industry-first in the early seventies and the current PACCAR MX-11 and MX-13 drivelines, operating at low engine rpms for industry-leading fuel efficiency and extremely quiet operation.

In 2015, DAF demonstrated truck platooning. The EcoTwin vehicle system enabled trailing vehicles to automatically follow the lead truck resulting in lower fuel consumption, reduced CO₂-emissions and improved traffic flow. Due to EcoTwin's success, DAF was selected to exclusively participate in English platooning trials in 2017. DAF is engaged with leading European technology development projects to gain comprehensive experience with alternative electric and hybrid power trains.

<https://www.daf.com/en/about-daf/innovation/daf-ecotwin>

	Date 05-06-2019		Duration 3 hours		Price 10,00 euro (excl. VAT)
	Time bus leaves 09:00		Time of return 13:00		
	Time visit start 09:30		Max participants per visit 60		

No talking but doing it, ITS 's-Hertogenbosch

In 's-Hertogenbosch smart use is made of the infrastructure for all modalities. We have policy frameworks that we test and various special applications such as: Schwung app for cyclists, FLIP (dynamic panel for fast driving bicycle) I-VRIs with use case emergency services and acoustic signalling for pedestrians that is standardized. After a presentation we take a bike tour with expert explanations from, among others, Mark Wagenbuur (Bicycle Dutch) & Eric Greweldinger.

	Date 06-06-2019		Duration 3 hours		Price 10,00 euro (excl. VAT)
	Time bus leaves 09:00		Time of return 13:00		
	Time visit start 09:30		Max participants per visit 40		



Living Lab Strijp-S – Smart Mobility

“Nowhere is Eindhoven’s makeover more evident than at Strijp-S, the former Philips complex.”– The New York Times.

Improving the quality of life for residents and visitors is the central goal in Strijp-S. Innovative products and services, contributing to this goal, are here developed. There is commitment to a more sociable, comfortable and sustainable way of living in the city. Strijp-S district is a living lab: a dynamic environment where products and services are developed, refined, demonstrated and replicated. One element is the Smart Mobility program, which presents better and more actual parking management information: reserved (license plate) parking, guided route and parking information. By offering these new technology and related services, we improved the routing in the area, the visitor has a more efficient trip, and therefore less unnecessary CO2 emission.

Every year Strijp-S welcomes more than 1 million international visitors to experience technology, design and user interaction! Please, join us too!

	Date 04-06-2019 05-06-2019		Duration 2 hours		Price 5,00 euro (ex VAT)
	Departure time tour 12:00		Time of return 14:00		Specific information
	Time visit start 12:00		Max participants per visit 20	This visit is on walking distance of Evoluon, the visit will start directly at the Implementation Visit desk at Evoluon.	



Urban Design by bike

As part of its city strategy, Eindhoven uses design to create an 'urban' understream. Design – by artists and by inhabitants – is used to create a city that inhabitants are proud of and feel safe in. Design is in this way used to influence emotions and behaviour on the street, as well as to actually make specific locations safer. To entice inhabitants to travel by bike within the city, specific projects were implemented that use design and technology to create comfort and safety for cyclists.

A tour guide from the Municipality of Eindhoven will guide you along this 20-kilometre bike tour across Eindhoven. You will see multiple design and technology projects, such as a floating cycling roundabout, a 'slow lane' and multiple street art tunnels. Projects that show design-ways to improve safety.

	Date 04-06-2019 05-06-2019		Duration 3 hours		Price 20,00 euro (excl. VAT)
	Departure time cycle tour 09:30		Time of return 12:30		Specific information This visit is a bike tour. A bike will be provided to each participant.
	Time visit start 09:30		Max participants per visit 20		



Innovations by Bike

With its focus on high tech and innovation, Eindhoven is a hotspot for innovative cycling. During a round tour by bike (approximately 24 kilometers), you'll visit multiple innovation projects, amongst others: Hovenring (a floating roundabout for cycling), Synchronicity, C-Mobile, BikeScout, Time To Green and Flow/Smart Traffic. These are innovations aimed to improve efficiency of traffic flow, for example through using data and censoring or aerial space.

	Date 04-06-2019 05-06-2019		Duration 3 hours		Price 20,00 euro (excl. VAT)
	Departure time cycle tour 13:30		Time of return 16:30		Specific information This visit is a bike tour. A bike will be provided to each participant.
	Time visit start 13:30		Max participants per visit 20		

Smart Society Eindhoven

Stratumseind is one of Eindhoven's most prominent nightlife areas, attracting well over 20,000 visitors in weekend nights. In contrast, it is almost deserted during the day. As the area is in decline and the number of (severe) incidents on the rise, the city aims to turn Stratumseind's back into a safe environment. As part of the action plan, innovative solutions involving lighting, social media, gaming technology, and the collection and processing of sensor data are tested and deployed. Stratumseind is a Living Lab where massive amounts of data about people's activities and the environment are used to determine the effects of measures and to study which factors contribute to violence and discomfort.



Date
04-06-2019
05-06-2019



Duration
1.5 hours



Price
5,00 euro (excl. VAT)



Time bus leaves
16:00



Time of return
17:30



Max participants per visit
20



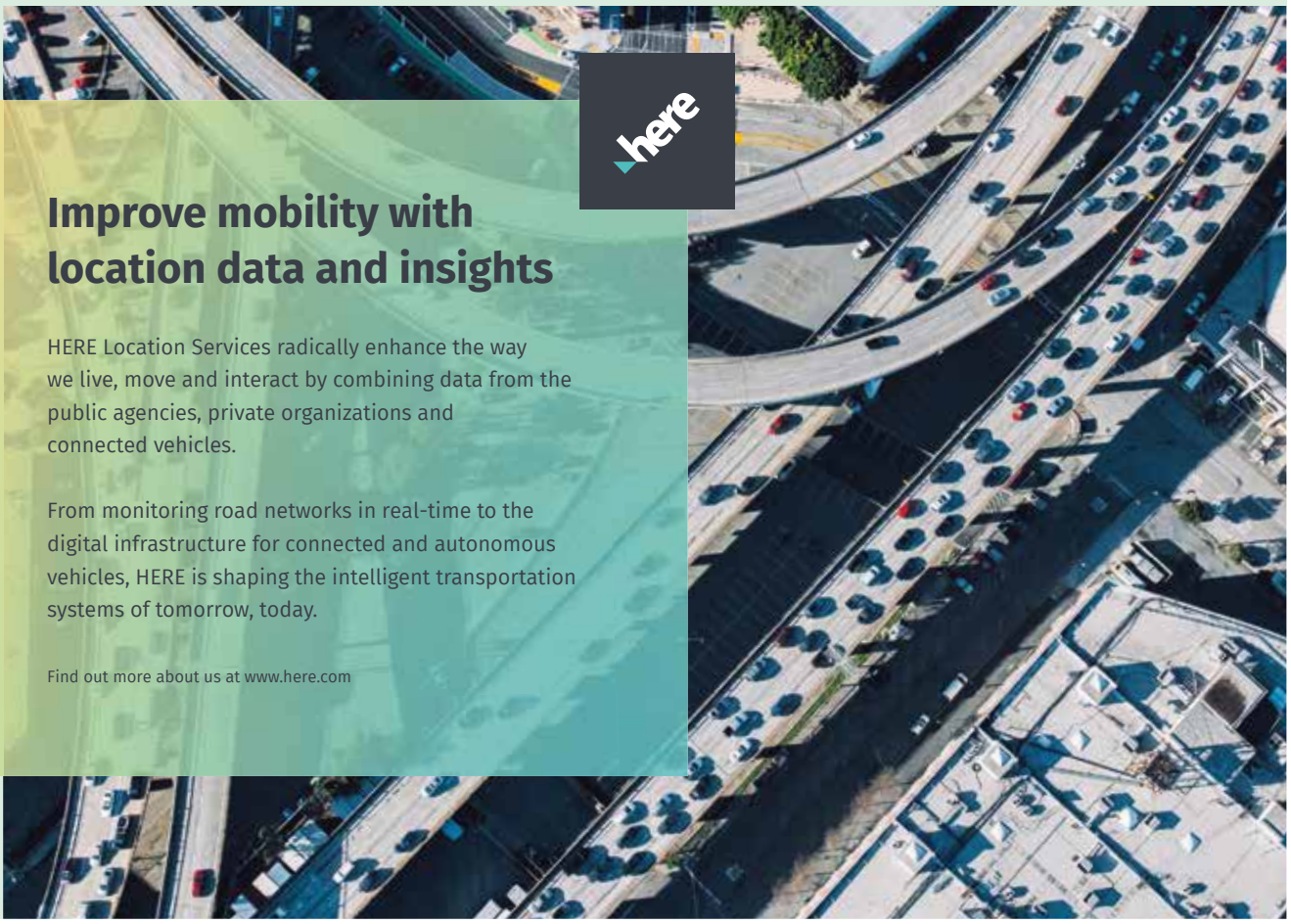
Time visit start
16:00

Improve mobility with location data and insights

HERE Location Services radically enhance the way we live, move and interact by combining data from the public agencies, private organizations and connected vehicles.

From monitoring road networks in real-time to the digital infrastructure for connected and autonomous vehicles, HERE is shaping the intelligent transportation systems of tomorrow, today.

Find out more about us at www.here.com



here



Testing and practice of Autonomous Transport for Last Mile solutions in Metropolitan Region Rotterdam – The Hague

Join the visit to the Metropolitan Region Rotterdam – The Hague, to see Autonomous Transport (AT) in action! Thanks to the presence of leading research institutes, incubators, accelerators and leading companies in the field of AT, the West Holland region offers a unique ecosystem for Autonomous Transport. West Holland has moreover made a head start with implementing the 5G network and has one of the best-developed road networks. During the visit we will share years of practical experience gathered in the region and show you the following aspects of the development and implementation of autonomous transport for the last mile:

- The Researchlab Automated Driving Delft where research and testing with various types of self-driving vehicles takes place. Here you will hear about current research and the region's policy goals. At the same site, the The Researchlab Automated Shipping will be presented.
- A site where self-driving shuttles are operated to give insight into implementation and operation of autonomous transport.

<https://www.raddelft.nl/en/>

	Date 07-06-2019		Duration 3.5 hours		Price 15,00 euro (excl. VAT)
	Time bus leaves 08:30 at Evoluon		Time of return 14:30 at Schiphol		Specific information Participants of this visit will be picked-up at Eindhoven at the Evoluon and at the end of the visit will be dropped off at Schiphol Airport Amsterdam.
	Time visit start 10:00		Max participants per visit 40		



Real life Dutch ITS Experience: ITS Corridor

The innovative international C-ITS Corridor project links developments on I2V communication in Germany, Austria and The Netherlands. The Dutch part of the C-ITS Corridor project develops and delivers major building blocks for the InterCor project, a project co-financed by the European Union. Within InterCor, the Dutch Corridor team cooperates with France, the United Kingdom and Belgium. Participating countries aim to enable and accelerate harmonization of vehicle and related road infrastructure communication through ITS-G5, cellular or a hybrid combination. The project is solving the last issues on technical subjects like cross-border harmonization of specifications and Public Key Infrastructure. Visitors will experience on the A16 motorway near Rotterdam the latest Dutch solutions for complex ITS-services for Smart Mobility, contributing to safe, smart and sustainable traffic and transport, as a major step towards automated driving.

https://itscorridor.mett.nl/home+_eng/default.aspx

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mobility expertise**

**visit us
at the
Dutch Street
booth 3.16**

Welcome reception

Monday 3 June 2019 from 17:30–19:00

You are cordially invited to join the Welcome Reception at the Evoluon in Eindhoven, which will be opened with a not-to-be-missed, spectacular show. The Welcome Reception is an excellent opportunity to meet up with your ITS colleagues and network with our commercial partners and exhibitors. Attending the networking experience is the perfect way to kick start your ITS conference participation and is included in your registration fee. Although free of charge, we kindly ask you to register for it.



ITS Dinner Time at the DAF Museum

Wednesday 5 June 2019 from 19.30–23:30

Are you in for a night full of culinary surprises, live music while enjoying the company of ITS colleagues from around Europe? Then join us for the new and vibrant ITS Dinner at the museum of former car and truck manufacturer DAF. Food flavours from all over the world will charm you and a great live band makes it irresistible to stay seated! We would love to have you as our guest!

Make sure to secure your participation upon your registration, so you do not miss out on this exciting evening amongst this remarkable collection of cars and trucks! The fee of 145 € covers dinner, beverages, entertainment and transport from the main hotels and the Evoluon to the venue and shuttle service back to the main hotels after the event.



SPECIAL FEATURES

Mobifestival on Public Day ITS European Congress 2019

The week's activities will kick off on **Sunday 2 June** with a Mobifestival at the Automotive Campus in Helmond, from 13:00 to 17:00, targeted at the current and future users of ITS technology – the general public. Visitors to the festival will be able to get up to speed on the latest ITS applications, learn more about smart mobility and try out new technologies for themselves. What's more, participants will be able to witness the many innovative demonstrations that will be part of the ITS European Congress week.

There will be a lot to see and experience on the campus premises in Helmond and on the roads surrounding the campus – from, delivery drones and electric racing cars, to trendy e-bikes, snazzy e-scooters and virtual reality games. Visitors will be able to learn more about autonomous driving, shared cars, electric cars, smart traffic lights, Adaptive Cruise Control and other driver assistance systems. There will be live demonstrations, trial circuits, a 'drive smart and sustainably' competition, a mini lecture for kids, and the opportunity to learn everything you have ever wanted to know about the digitalisation of transport.



There will be something for everybody – families, students, seniors and anyone else interested in the rapidly changing mobility of today. The festive atmosphere will be complemented by lots of food and some great music.

C-ITS Training and City Pool Workshop

This full day of training and exchanges on Cooperative Intelligent Transport Systems (C-ITS) lets transport authorities learn about best practices of successful implementations across Europe and share and receive feedback on real-life deployment experiences.

The morning training session, provided by experts and city practitioners, will explore policy aspects and best practices of C-ITS deployment services in small and medium cities.

The C-ITS City Pool Workshop in the afternoon will address the benefits of C-ITS for communities and the challenges to expect during implementation. Participants will also have the opportunity to experience an open-road, live demonstration of the C-ITS services deployed in the city of Helmond.



Date: **5th of June, 09:00–17:00, Automotive Campus, Helmond**

Registration link: <https://www.eventbrite.com/e/c-its-training-and-city-pool-workshop-tickets-60048788543>

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SPECIAL FEATURES

Your Future Festival

For the first time ever, ERTICO – ITS Europe, HERE and Brainport Eindhoven are organising a ‘Your Future Festival’ on the **4th of June** during the ITS European Congress 2019. Students, young professionals and companies will be able to network, share inspiration, research and experience and make valuable connections for the future. The festival will have a laid-back vibe with small stages where students and young professionals looking for a job, thesis or traineeship can promote themselves and showcase their talent in various pitches, workshops and other activities.

For companies, the festival will be an opportunity to



establish direct contact with students and to showcase their brand to top graduates and young professionals from all over Europe. They will be able to do this through various activities, like a speed dating session matching companies with suitable young professionals, or ‘Drive your Future’ sessions, where recruiters and talents will get into special automobiles for one-on-one discussions.

Start-up Zone

Scale-up your start-up

This year the Congress will also feature a Start-up Zone, at which start-ups can network with decision-makers, companies and investors and connect with leading experts in future mobility, logistics and smart cities. The Zone will provide space for around 40 start-ups with ideas that aim to change our mobility systems and make mobility safer, more sustainable and social, to pitch these ideas to companies and experts with the experience needed to scale them up and take them to the next level.

At the Congress, ERTICO – ITS Europe, will also present its new Start-up Initiative – a mentorship programme. The programme will offer start-ups the opportunity to benefit from ERTICO’s network of partners and to work with European leaders in smart mobility, connected and automated driving, clean mobility, transport and logistics, and urban mobility.

All in all, this year’s Congress represents an exciting opportunity for start-ups to plug into the ITS ecosystem, connect with an extensive network of experts in all areas of smart mobility and lay the foundations for their future development.

Monday 3 June	
15.45–16.00	Start-up area official opening
Tuesday 4 June	
09.00–10.00	Introduction Session
10.00–11.30	Startup Pitch Session A
11.30–12.30	European Startup Prize Session
12.30–13.00	ERTICO: new match-making service for start-ups
14.15–15.30	Startup Pitch Session B
16.00–17.00	Startup Pitch Session C
Wednesday, 5 June	
09.00–10.00	Introduction Session
10.00–11.30	Startup Pitch Session D
11.45–12.45	IMPACT Connected Car Session: How the EU is supporting innovative start-ups
13.00–13.30	NeMo Electromobility Hackathon finalists
14.15–15.30	Startup Pitch Session E
16.00–17.00	Startup Pitch Session F
Thursday, 6 June	
11.30–12.30	Closing ceremony at the Philips Hall

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Internet access

Wireless internet connection is available in all the areas of the Evoluon.

Language

English is the official language of the Congress. All spoken presentations, printed material and online information will be available in English only.

Insurance and security

Kindly note that all attendees are requested to wear their badge for admission at all times. Please do not leave your personal items or coats unattended. There will be a cloakroom at your disposal. In addition, regular badge control will take place throughout the Congress.

Transportation

Delegates of the ITS Europe Congress can travel for free on all Bravo Hermes bus lines by using the QR code in the app. Bus lines 401, 402 and 403 stop at the Evoluon in Eindhoven. Delegates can also use shared bikes to travel back and forth to their hotels and free shuttle service to travel from the Evoluon Congress Centre to the demonstration site, the Automotive Campus in Helmond. Delegates, exhibitors and visitors will get the chance to experience exciting implemented and future mobility solutions and learn more about pioneering ventures. During the ride to the Automotive Campus as well as at the Automotive Campus premises itself. Be sure not to miss out on this ITS experience! Shuttle buses will leave every 15-30 minutes from Evoluon to the Automotive Campus and vice versa and will have C-ITS applications on board. VIPs are able to use the BMW VIP cars.

How to get to the Evoluon

Located in the heart of Brabant next to the A2 motorway, the Evoluon is most accessible. Den Bosch, Tilburg and Weert are less than half an hour away and Utrecht, Rotterdam or Maastricht not even one hour! The Evoluon is easily accessible by public transport. For this reason, we encourage all delegates and visitors to use public transport as a means of transportation.

Train passengers can travel from Eindhoven Central Station to the Evoluon within 7 minutes. From Eindhoven Airport a direct bus line takes you to the Evoluon within 7 minutes. Every 15 minutes a train leaves from Schiphol Airport to Eindhoven Central Station. The travel time to Schiphol is about 1,5 hour.

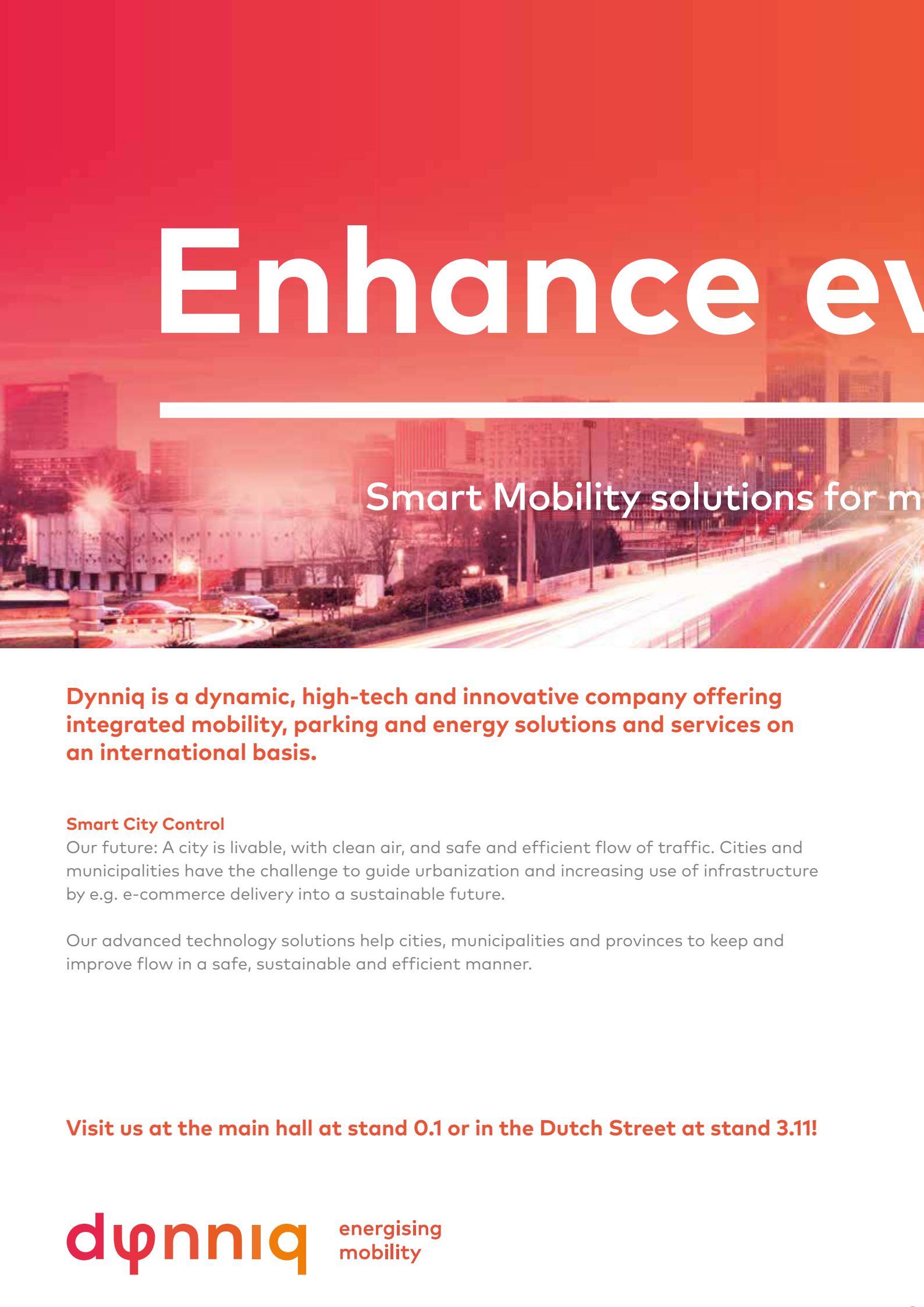
On an average day, buses will depart every 5 minutes from Eindhoven Central Station to the Evoluon.

You can also borrow a bike at the Eindhoven Central Station for the last mile. With the 'OV-fiets' (public transport bike) you will arrive at the Evoluon congress centre within 15 minutes cycling from Eindhoven Central Station.

By car it takes less than an hour driving from Utrecht, Rotterdam and Maastricht to go to the Evoluon. Amsterdam and Schiphol are about 75 minutes driving away. From the motorway you are able to drive directly to our parking lot with over 500 parking spaces, located on the edge of the centre of Eindhoven.

For more info and route description, please visit: <https://evoluon.com/en/contact/address-and-route>.

Enhance ev



Smart Mobility solutions for m

Dynniq is a dynamic, high-tech and innovative company offering integrated mobility, parking and energy solutions and services on an international basis.

Smart City Control

Our future: A city is livable, with clean air, and safe and efficient flow of traffic. Cities and municipalities have the challenge to guide urbanization and increasing use of infrastructure by e.g. e-commerce delivery into a sustainable future.

Our advanced technology solutions help cities, municipalities and provinces to keep and improve flow in a safe, sustainable and efficient manner.

Visit us at the main hall at stand 0.1 or in the Dutch Street at stand 3.11!

everyday life

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Listen to Cees in the plenary session 'How do cities benefit from ITS?' on Tuesday June 4th at 09.00 in the Philips Hall.

"Cities already benefit from smart mobility, but we need to scale up deployment of smart mobility applications. Co-creation with road users - e.g. logistics companies, emergency services and public transport - and smart mobility service providers is an accelerator"



Cees de Wijs
Chief Executive Officer
Dynniq Group

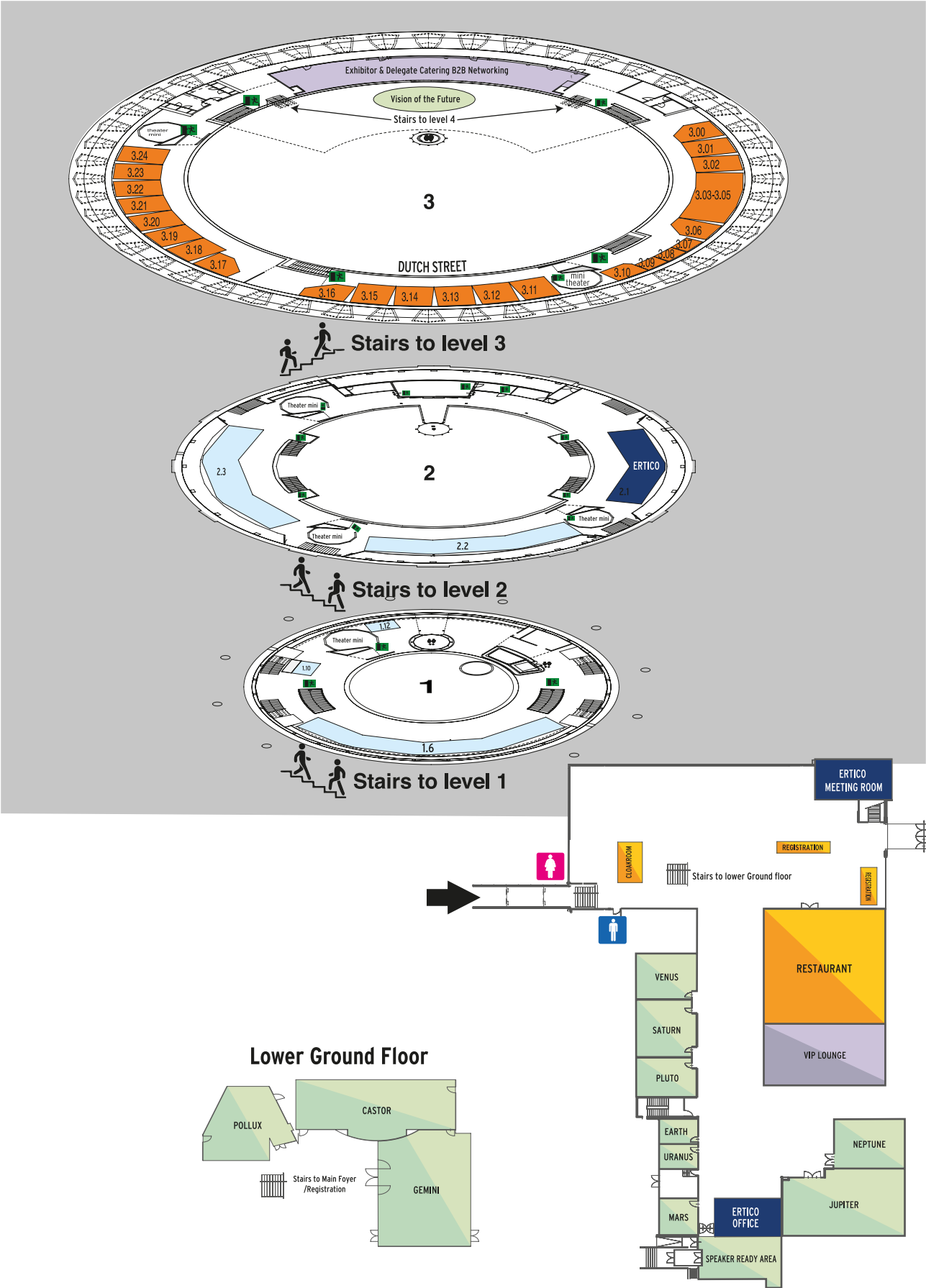
Listen to Peter in the dialogue session 'Smart Mobility: more hype than reality?' on Tuesday June 4th at 10.45 in the Philips Hall.

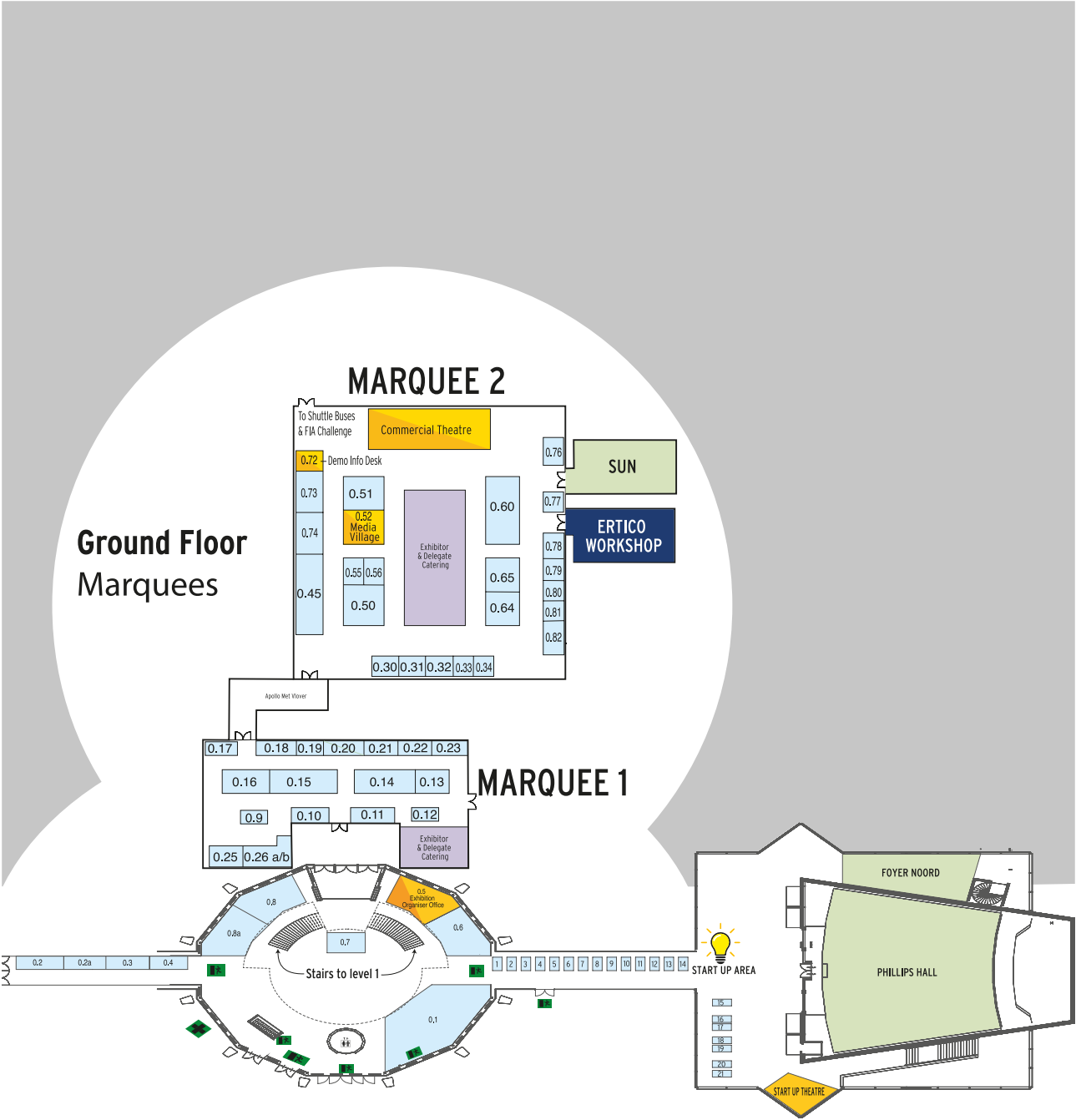
"There are so many successful pilots, a growing number of meaningful use cases and an increased number of initiatives for structural deployment of smart mobility on larger scale, it is clear that we are entering the Slope of Enlightenment."



Peter Broekroelofs
Chief Design Officer
Dynniq Group

EXHIBITION FLOORPLAN





13th ITS EUROPEAN CONGRESS
FULFILLING ITS PROMISES

Brainport Eindhoven, the Netherlands | 3-6 June 2019



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MOBILITY

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As an operator and global integrator of mobility,
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and in the relentless pursuit of the safest and most innovative mobility solutions.
We are a team of people serving people, and mobility is what we do.
We are The mobility company.

WHAT'S NEXT?

AUTONOMOUS TRANSPORT SYSTEMS

Autonomous vehicles have been a reality in the Netherlands since the introduction of the Parkshuttle in 1999. This year, a new version with the latest technology will be launched. Would you like to take a ride? Visit the demonstration of our partner 2getthere, on the Automotive Campus.



MOBILITY AS A SERVICE (MAAS)

Can mobility be sexy? Our Commercial Director Giancarlo Scaramelli will share his thoughts on Mobility as a Service during the Plenary Session on Thursday June 6th, 9.00-10.00. He believes that we cannot solve today's challenges with yesterday's approach.

PAYMENTS IN THE FUTURE

The Dutch PT sector is going through an important transformation process. We are migrating from a traditional, static, mass PT-ticketing system to an open, dynamic and personalized environment. This will result in a new payment scheme between 2020 and 2023.

Would you like to know more about EVM pay-as-you-go, barcode/MaaS and Account based ticketing? Visit our stand 0.8 at ITS.

EXHIBITOR LIST

Company	STAND
5GMOBIX	2.1
1OpenMove	8 Wed/Thurs
AEOLIX	2.1
AGD Systems	0.74
AI In Motion B.V.	0.6
Aimsun SL	0.20
Aitoldyou	0.15
AKKA Netherlands	0.56
Altran Netherlands B.V	0.2a
ARMIS ITS	1.6
ARS Traffic & Transport Technology	3.10
A-to-Be, powered by Brisa	1.6
XYZ Automotive	6 Mon/Tues
Autonomous Transport North	3.00
AUTOPILOT	2.1
BaseTrack	5 Wed/Thurs
Be-Mobile	3.01
Bestmile	0.34
Blickfeld	10 Mon/Tues
CABSEAD	16 Mon/Tues
Cargoroo	11 Mon/Tues
CEIIA (MaaS and IoT)	1.6 Mon/Tues
City 4.0	13 Wed/Thurs
CGI	3.09
CGI Finland Oy	0.15
City of Helsinki	0.15
Cityscoot	12 Mon/Tues
Cityway SA	0.2
C-Mobile	2.1
Coast to Coast Smart eMobility	1.12
Connection Systems	3.12
Connekt ITS Netherlands	3.24
Cross Zlin, a.s.	0.31
cyclope.ai	0.33
Devecitech B.V	2 Mon/Tues
dots. (WeAreDots, SIA)	0.25
Drivit	1.6
Ducktrain	4 Mon/Tues
DynaRoads	0.80
Dynniq	3.11
Dynniq	0.1
eBikeLabs	18 Wed/Thurs
EFACEC Transportation	1.6
Eindhoven	3.04
Einride	13 Mon/Tues
ELVITEN	2.1
ENSEMBLE	2.1
ERTICO - ITS Europe	2.1
ERTRAC	0.11
EU-Project MeBeSafe	0.77
European Commission	2.2
EV Reel B.V.	21 Mon/Tues
FIA Challenge	0.51
Finnish Ministry of Transport and Communications	0.15
Finnish Transport and Communications Agency Traficom	0.15

Company	STAND
Fleet Complete	0.15
FLIR Intelligent Transportation Systems	0.3
Fluidtime Data Services GmbH	0.10 Mon/Tues
Geovelo	14 Mon/Tues
GEWI Europe GmbH & Co. KG.	0.17
Google BeNeLux	0.76
GoSwift	0.15
Goudappel Coffeng	3.16
HAL24K	1.1
Heijmans	3.14
Helmond	3.05
HERE Technologies	0.8a
IDNOMIC	0.26
IFPEN Transports Energie Carnot Institute	0.18
Infotripla Ltd	0.15
INRIX US	0.23
Intertraffic Worldwide Events	0.82
Iomob	3 Wed/Thurs
IRT SystemX	0.26
ITS (UK)	0.74
ITS 2020 Lisbon	1.6
ITS Asia-Pacific	0.81
ITS Estonia	0.15
ITS Finland	0.15
ITS Hamburg 2021 GmbH	0.45
ITS Perception AS	1 Mon/Tues
Karhoo	15 Mon/Tues
Klimator AB	0.9
K-ryole	17 Mon/Tues
Lightmotion	10 Wed/Thurs
Localyse NV	0.76
MaaS Alliance	2.1
Magment	4 Wed/Thurs
Mellowcabs	17 Wed/Thurs
Metropolitan Region Rotterdam-The Hague Province of Zuid-Holland	3.17
Metropolitan Region Amsterdam	3.20
Ministry of Infrastructure and Water Management	3.23
Mobility Sensing	5 Mon/Tues
Moovit Ltd	0.12
Moprim Oy	7 Wed/Thurs
Motion-S S.A.	0.19
NavInfo	0.6
NaviParking	3 Mon/Tues
NAVYA	0.16
NDW	3.06
Nextérité	20 Wed/Thurs
NeMo	2.1
NIRA Dynamics AB	0.9
NXP + Technical University of Eindhoven	3.18
ODIQ	0.76
OpenAirlines	18 Mon/Tues
opti Truck	2.1

Company	STAND
Orolia	0.79
Parifex	0.64
PayiQ	0.15
Peazy	19 Wed/Thurs
PTV Group	3.13
Qucit	7 Mon/Tues
RDW	3.22
Reach-U	0.15
Rijkswaterstaat	3.02
Road Safety State Company	0.65
Roadcloud Oy	0.15
RoadEO	12 Wed/Thurs
Roll2Go	11 Wed/Thurs
Royal HaskoningDHV	19 Mon/Tues
SAFE STRIP	2.1
Shotl	19 Mon/Tues
Siemens Digital Industries Software	0.5
Simob	9 Mon/Tues
Sioux Logena	0.4
Sitowise Oy	0.15
SkedGo	0.10
Smart Mobility Embassy	Dutch Street
SmartwayZNL	3.03
EU project SOCRATES 2.0	0.21
Solita Oy	0.15
SPIE Nederland B.V.	0.78
SWARCO AG	0.14
Sweco	3.15
Swiftly, Inc.	0.32
Tallinn University of Technology	0.15
Tatarstan Investment Development Agency (TIDA)	0.65
Technolution B.V.	0.13
The City of Tampere	0.15
TNO	3.19
TomTom	0.7
Tracefy	8 Mon/Tues
Traffic Management Finland Group	0.15
Trafi	0.55
Transdev	0.8
TransformingTransport	0.3
Translink	0.22
Traveller Information Services Associations	2.1 and 0.17
T-Systems International GmbH	2.3
TWAICE	20 Mon/Tues
UFT	9 Wed/Thurs
Vaisala	0.15
Vialis	3.07 & 3.08
VI-DAS	2.1
Videalert Limited	0.74
VMC	6 Wed/Thurs
VTT	0.15
WPS Parking Systems B.V.	0.1

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CONGRESS
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WHAT TO EXPECT



1200 delegates



120 Exhibitors



2000 Visitors to
the exhibition area



50+ journalists
from trade &
news media



50+ countries
represented



**Government,
state and city
representatives**



**Private sector
representatives from
multiple industries**

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- Network with 3200+ smart mobility stakeholders & influencers
- Discover the latest mobility solutions
- Share experiences and lessons learnt
- Monitor progress and measure results
- Exhibit and experience innovative technologies
- First-hand experience through demonstrations

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For more information please contact:

Registration & Accommodation

ITS Congress Registration Secretariat
Phone: +31 20 575 4220
Email: registrations@itsineurope.com

Programme

Pamela Valente
T: +32 (0) 2 400 0785
E: p.valente@mail.ertico.com

Delphine Soubies (Technical/Scientific and
Special Interest Sessions)
T: +32 (0) 2 400 0741
E: d.soubies@mail.ertico.com

Commercial Partnership

Benoit Augarde
T: +32 (0) 2400 0786
Brainport.partners@mail.ertico.com

Exhibition

Jasvinder Sidhu
T: +44 (0) 2079734700
Brainport.exhibition@mail.ertico.com

Press and Media

Danielle McDonald
T: +32 (0) 2400 0754
E: d.mcdonald@mail.ertico.com

Hosts

Connekt / ITS Netherlands
Marije De Vreeze
T: +31 (0) 15 251 6565
E: devreeze@connekt.nl

City of Helmond
Gert Blom
T: +31 (0) 6532 148 51
E: g.blom@helmond.nl

City of Eindhoven
Astrid Zwegers
T: +31 (0) 618 34 8440
E: astrid.zwegers@eindhoven.nl

