## Congress Topics

The latest technologies, the most innovative solutions for cities and citizens, the third mobility dimension, the integration of different forms of transport into a single, on-demand service: this and much more will be discussed by experts from around the world. The Congress is organised under the six topics listed below:

#### 1. AUTOMATED, COOPERATIVE AND CONNECTED MOBILITY

Improvements to artificial intelligence, sensors, data processing, mapping and location technologies have catalysed the development of highly automated and highly connected vehicles.

#### 2. MOBILITY ON DEMAND (MOD), **MOBILITY AS A SERVICE** (MAAS)

Traditional mobility is a mix of low utilisation private vehicle ownership and open access public transport. MaaS and MOD use a platform and personalised user interfaces to provide multimodal 'mobility' for all users with savings and productivity gains.

## 3. GOODS JOURNEY FROM PORTS TO CUSTOMERS

The technologies underpinning automated and connected driving offer substantial gains for goods delivery. Paperwork can be reduced while fleet utilisation and load tracking can both be improved.

## Congress Format

## **PLENARY SESSIONS**

All attendees are welcome to join the Opening and Closing Ceremonies and the Plenary Sessions which are dedicated to key ITS issues and which will be addressed by major personalities.

### **EXECUTIVE SESSIONS**

In these sessions high-level industry executives, public officials and academia from around the world will share their experiences and give their views on ITS achievements as well as comments on today's issues and challenges.

## **BUSINESS PRESENTATION SESSIONS**

Business Presentations are designed to report on an activity aimed at generating or improving a specific product, device or idea that is either on the market or

## ITS Congress App

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INFRASTRUCTURE

4. INTELLIGENT

The digitising of physical infrastructure enables smarter mobility for all with associated gains from more efficient asset maintenance and management. But how do we share data from these systems while retaining high levels of privacy, reliability and data security?

### 5. NEW SERVICES FROM **NEW TECHNOLOGIES**

What are the benefits for end-users from developments with established technologies and completely new solutions for example fuel cells, on-vehicle sensors, blockchain and drones?

### ■ 6. SOLUTIONS FOR CITIES AND CITIZENS

The demand for urban space is intense - passenger and freight vehicles, active modes such as walking & cycling, and also parking all compete for a limited resource. Connectivity brings new data but can it reduce travel time?

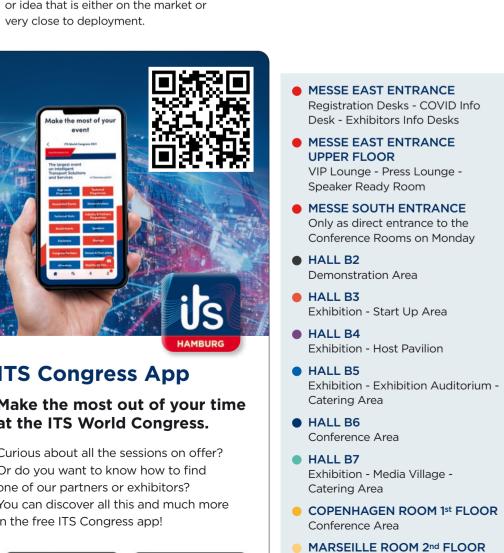
SISs are organised and managed by groups of international experts developing and deploying ITS. These tailor-made sessions provide an opportunity to focus on specific topics of interest with a mix of presentations

**SPECIAL INTEREST SESSIONS** 

#### TECHNICAL / RESEARCH **PAPER SESSIONS**

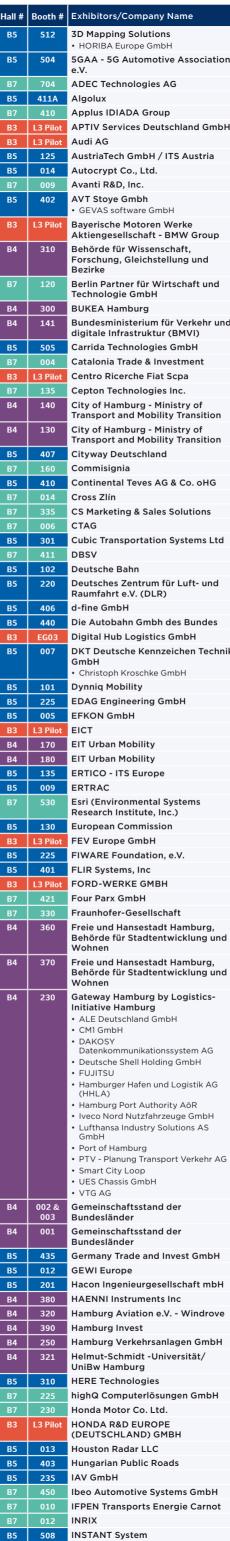
and interactive discussion.

These sessions are facilitated by a moderator and comprise the presentation of papers by international experts on a variety of topics encompassing practical, economic, technological, organisational and societal aspects of ITS.



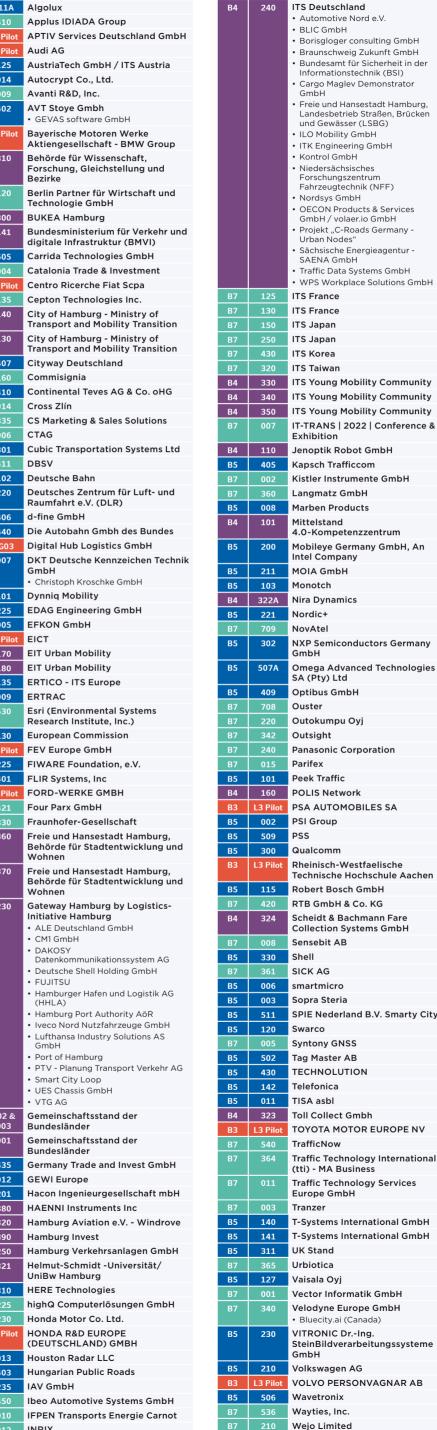
Conference Area





nstitut de Recherche

echnologique SystemX







Let's

nternational Road Dynamics

ntertraffic World Wide Events

TS Asia-Pacific



# Congress Programme!

ERTICO - ITS Europe, the Free and Hanseatic City of Hamburg and the German Federal Ministry of Transport and Digital Infrastructure are hosting the 27th ITS World Congress from 11 to 15 October 2021 at the Hamburg Messe and Congress Center. Under the theme Experience Future Mobility Now the Congress will display the host city's latest achievements in the field of intelligent mobility services and link to the city's changing mobility vision and strategy. In addition to the engaging conference programme and the large indoor exhibition area, the streets of Hamburg will be available for the display of innovative ITS demonstration projects.

ITS brings a piece of the future to current times so we can experience what smarter cleaner and faster mobility looks like.

## Hamburg - driving innovation & digitalisation of transport

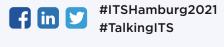
Come and explore it with us!

The future of mobility is now, with new developments to experience, apply and understand. In Hamburg, an international trade hub and model region for intelligent transport and logistics, numerous innovative projects already demonstrate what the future holds.

Autonomous driving, shared and multimodal transport and the use of unmanned aerial vehicles in logistics and mobility are just a few of the fast evolving transport trends that will be discussed at the 2021 Congress.

The Congress will be an excellent opportunity to exchange knowledge and good practice with orther experts from the ITS community, and to enlarge your personal network within the industry. And we also have a wide-ranging social programme which will invite you to discover this vibrant German city.

Join the ITS conversation



Yunex Traffic - A Siemens

ZF Group

itsworldcongress.com

Monday 11 October  10H30 11H 12H30 14H 15H30 16H 17H45	Tuesday 12 October 7H15 9H 10H30 11H 12H30 14H 15H30 16H 17H 17H15 18H15	Wednesday 13 October 7H30 9H 10H30 11H 12H30 14H 15H30 16H00 17H00 17H15 18H15 0H00	Thursday 14 Oct	tober Friday 15 October 15H30 16H 17H 17H15 18H15 9H 10H30 11H30 12H30 13H 19H
MAAS FORUM 6-Room 1 1 10 10 11 11 11 11 11 11 11 11 11 11	PLENARY 1 ITS SUMMIT CCH - Hall Z 12h-16h00 CCH-Room X9810	PLENARY 2 CCH - Hall Z CCH-Room X9 Green lights	PLENARY 3 CCH - Hall Z	
Mobility for everywhere  ERTICO MOONSHOT 1  CCH-Room X1  Mobility for everywhere  ERTICO MOONSHOT 1  CCH-Room X1	Ensuring (by invitation only) sustainable mobility  FORUM 2 CCH-Room X3  ERTICO MOONSHOT 2 CCH-Room X3	Delivering safe, efficient and integrated solutions  GLOBAL FREIGHT & PORTS FORUM  14h-17h   CCH-Room X2	Navigating the digital marketplace EXECUTIVE 04  EXECUTIVE 04  CCH-Room X9  CCH-Room X9	
-17H45   C PENING CE -19H30   ME 19H00   MI	Urban mobility challenges in emerging Asia-Pacific mega-cities  EXECUTIVE 01  Licenses 16:00-18:00  EXECUTIVE 02  EXECUTIVE 03	From the factory to your front door  PATHWAYS TO FUTURE MOBILITY  PATHWAYS TO FUTURE MOBILITY	Smart traffic management: removing the roadblocks  Implementation Green Intelligent Transport Systems	igent "herd immunity" with
16H- OP	MESSE B6 - Room 1 Where are all the CAVs?  MESSE B6 - Room 1 Future Mobility, Digital evolution or digital revolution?	13h15-16h30   CCH-Hall Z  Solutions and Perspectives  The results of the German National Platform on the Future of Mobility 2018-21	RHS S	
SENTS  ection of walk and gement	TM 2.0 MESSE B3 Copenhagen 3 General Assembly	WORKSHOP DEUTSCHE BAHN 11h-12h CCH-Room X1  CCH-Room X1  CCH-Room X1  ERTICO PRESENTS 14h-15h CCH-Room X1  Smart - the future of mobility (Dialogue among mobility)	ERTICO ACADEMY 2  11h-12h30  CCH-Room X1  WORKSHOPS  14h-15h CCH-Room X1  Interactive Traf	NT MANAGEMENT MANAGEMENT CCH-Room X2
AMME	BREAKFAST VOLKSWAGEN CCH-Room X9 7/30-9h Mobility out of the Box:	BREAKFAST VORKSHOP SOPRA STERIA Nesse B3    WORKSHOP GOOGLE SOPRA STERIA Nesse B3 CCH-Room X9	Management: f concept to real	from business models for network management  Traffic Management
ESENTS ON HALLS	Messe B3 Copenhagen 1  BREAKFAST GOOGLE 8h-9h  Messe B3 Climate Change - how much do we care?  SG LOGINNOV MESSE B3 - Copenhagen 1 General Assembly	Messe B3 Copenhagen 3  Messe B3 Copenhagen 1  Copenhagen 2  Signature mobility 15h30-16h - Coffee break in Foyer  NPM PRESS CONFERENCE  Messe B3  14H-15H30	SIEMENS 14h15-17h30	AGEN - PM WORKSHOP  1
COCCH - H G CEREMO	Messe B3 Copenhagen 2  VOLOCOPTER  SHOW PRE-HACKATHON	CCH-Room X5  CCH-Room X10  CCH-Room X10  SATELITE EVENT  ACATECH EVENT	MESSE B3 - Copenhagen 1  BREAKFAST MOBILEYE	Final Event
16H-17H45 OPENIN	11h-12h MESSE B3 Copenhagen 1  URBAN AIR MOBILITY FORUM	8h-12h45 CCH-Room X3 Digital S-Bahn Hamburg VIP Event" (Siemens Rail Mobility Business)  URBAN AIR MOBILITY FORUM	8h-9h MESSE B3 - Copenhagen 3	H30-12H3 CLOSING
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FRIENDS OF ITS MESSE B6 - Room 10	LUNCH DEUTSCHE BAHN Messe B3	EVENT 5GAA 9h-12h30   CCH-Room X10  ASSOCIATED EVENTS 14h30-16h   HALL X9 MaaS Alliance CCH-Room X3		ASSOCIATED EVENTS 16h30-18h CCH-Room X3 The mobility stakeholder group of the northern cities of Germany, aiming to implement MaaS on the coming year
MESSE B6 - Room 11 B6 - Room 11 B6 - Room 11	Copenhagen 3  SIS 24 MESSE B6 - Room 11  SIS 106 CCH TP7 MESSE SIS 105 17h30-18h30 MESSE B6 - Room 11  Room X1 B6 - Room 11	Working group on Architecture and Technology  SIS 41 MESSE B6 - Room 11 MESSE B6 - Room 11 MESSE MESSE MESSE	SIS 98 MESSE B6 - Room 11 B6 - Room 11 B6	MESSE
nd meets sus: taking ions to the KI Familie: A large-scale collaboration in Artificial Intelligence for autonomous driving Smart Mobility mobility	The next step for shared automated public Business Model for MaaS? transport - an authority perspective SIS 104 CCH Room X3  Impact of automation and Innovative applications for congestion management and smart cities on public roads and defragmented ODDs	Data for road safety  Data for road safety  Enabling future mobility through resilience and reach  B6 - Room 11 Influencing traveller behaviour behaviour	Infrastructure support Ubiquitous 5G deployment Exploring ways for CCAM: observations to develop citiz	rs How does automation affect Route 2030: the present and Transport by air and water
MESSE SIS 8 MESSE SIS 17 MESSE	intelligent infrastructure on the mobility data space  SIS 25 MESSE SIS 33 MESSE TP 8 MESSE TP 17 MESSE	SIS 42 MESSE SIS 52 MESSE TP 28 MESSE B6 - Room 12 B6 - Room 12 MESSE MESSE	SIS 61 MESSE SIS 70 MESSE RP 11	MESSE 6 - Room 10 B6 - Room 12 B6 - Room 12 B6 - Room 12
B6 - Room 12 ships and aking world autonomous ships in European waters le  B6 - Room 12 Drones above Seaports - impact, benefits and the future of urban air mobility	B6 - Room 12  MaaS: International best practices on low-carbon transport and services integration  B6 - Room 11  It's not just the technology, stupid! What's really important for automated mobility  B6 - Room 12  Improving mobility and safety through ITS  What's really important for automated mobility	loT driven digital infrastructure for next generation Mobility  Cybersecurity challenges and implications in ITS  and implications in ITS  management strategies for sustainable transport sustainable transport	Detecting and managing stopped vehicles on live highways  Data - how to use it, secure it and protect it and protect it	supply Improving maintenance and Sensors, FVD and object Automated driving
MESSE B6 - Room 10 poperational ency gains Pficiency gains Pfi	SIS 26 MESSE B6 - Room 10 Intelligent Supply Chains need sustainable solutions  SIS 97 MESSE B6 - Room 12 Sustainable Urban Mobility Planning  TP 18 MESSE B6 - Room 12 Traffic and information management	SIS 43 MESSE B6 - Room 10  The changing role of humans: regulation in the world of automated vehicles  SIS 53 MESSE B6 - Room 10  Internationally harmonised testing procedures for the approval of automated driving systems  TP 29  MESSE B6 - Room 10  Infrastructure solutions in connected and	SIS 79 MESSE B6 - Room 10 User-friendly, sustainable charging technologies and services	
MESSE B6 - Room 2 utonomous ected driving  SIS 9  MESSE B6 - Room 2  Bicycles on the move	SIS 27 MESSE B6 - Room 2 Proactive safety - solutions for a highly automated and mixed traffic environment TP5 MESSE B6 - Room 10 C-ITS services as a game changer and architecture TP9 MESSE B6 - Room 10 System engineering and architecture TP9 MESSE B6 - Room 10 Demonstrating impact and architecture	SIS 44 MESSE B6 - Room 2  ITS Data generation and use: how are we addressing societal and ethical Issues?	SIS 62 MESSE B6 - Room 10 Diverse, Accessible, Equitable and Inclusive Technology-Enabled Mobility  SIS 72 MESSE B6 - Room 22 New business models as an enabler of a circular economy of mobility  Technology-Enabled Mobility	
MESSE B6 - Room 3 In of VRU automated driving automated driving systems  MESSE B6 - Room 3  Testing of highly-automated driving systems  MESSE B6 - Room 3  Leveraging V2X data to create sustainable Public-Private	SIS 28 MESSE B6 - Room 2 Messe B6 - Room 2 Managing road traffic in cases of large-scale emergencies Energy energencies SIS 35 Messe B6 - Room 2 Using data for better information services Intelligent infrastructure innovations		SIS 63  MESSE B6 - Room 2  The age of 5G - enabling future mobility	Bus Pres 3 MESSE B6 - Room 2 New solutions for vehicles  Bus Pres 12 MESSE B6 - Room 2 Support for multimodality
MESSE B6 - Room 4 Incorporation of OEMs In urban public  MESSE B1 MESSE B6 - Room 4 Incorporation of OEMs Into connected vehicle	SIS 29 MESSE B6 - Room 4 Automated public transport a change maker  SIS 36 MESSE B6 - Room 3 Deploying connected mobility services Traffic applications of sensor technology	Challenges, Strategies and Opportunities  SIS 56  MESSE B6 - Room 4  Assessing the impacts of autonomous vehicles for autonomous vehicles for	revolution: solutions for cities connected and automated connectivity fo	or MaaS evolution: the state of Mitigation of barriers for the practice MaaS Curbside innovations to support the last 50m
MESSE B6 - Room 5 aviour and HMI Connected vehicle TP2 MESSE B6 - Room 4 Integrating	for sustainable mobility in rural areas?  SIS 37 MESSE B6 - Room 4 Efficient communication  V2X communication  V2X communication  Simulation & Modelling	integrated planning demand-responsive services 1 demand-responsive services 2 SIS 47 MESSE B6 - Room 5 Bringing MaaS to the MaaS in Developing demand-responsive services 2 TP 31 MESSE B6 - Room 4 Messe B6 - Roo	and citizens multimodal mobility a reality sustainable mo	MESSE B6 - Room 4 Towards seamless and Bus Pres 8 MESSE B6 - Room 4 Towards seamless and Messe B6 - Room 4 Managing the streets
Communications: opportunities and challenges  MESSE B6 - Room 6 on of Urban  Communications, data and networks  SIS 21 MESSE B6 - Room 5 How does CCAM	networks for road and rail corridors  SIS 30 MESSE B6 - Room 5 Connected automated  NESSE B6 - Room 5 Cross cutting and Collective learning: Use cases for	Masses  Countries  Citizen engagement in mobility on Demand using automated vehicles  SIS 95  MESSE B6 - Room 6 e-Mobility as a service  CAD, Safe Platooning  Citizen engagement in mobility on Demand using automated vehicles  TP 32  MESSE B6 - Room 5  MESSE B6 - Room 5	An integrated view on urban Equity assessment of new Climate goals a	MESSE B6 - Room 5 B6 - Room 5 B6 - Room 5 B6 - Room 5 A future perspective
ty into ve Intelligent :Systems  SIS 91  MESSE B6 - Room 6  MESSE B6 - Room 6  MESSE B6 - Room 6	driving based on roadside sensing and mobile edge computing    SIS 93	and 5G eco-Systems for verticals  SIS 48 MESSE B6 - Room 7 B6 - Room 7 B6 - Room 7 Maritime ITS Solutions  TP 40 MESSE B6 - Room 7 MESSE B6 - Room 6 B6 - Room 6 B6 - Room 6		MESSE RP 13 MESSE B6 - Room 6 B6 - Room 6 B6 - Room 6 B6 - Room 6
Digital transformation in logistics  MESSE B6 - Room 7  Digital transformation to smarter step to smarter connectivity  SIS 13  MESSE B6 - Room 7  B6 - Room 7	Impact of CCAM and digital infrastructure standards on air quality targets    SIS 31	eHighway and ITS: how heavy road freight is going smart and green  SIS 49 MESSE B6 - Room 8  MaaS in the 15-Minute City Hand Sin the 15-Minute	Multi-modal mobility account for low-income travellers  MESSE B6 - Room 6  MULTi-modal mobility Account for low-income travellers  The rise of Maa cities taking co their mobility d	ontrol of and logistics Management systems
d driving r universal How should an ADS react in atypical situations?  MESSE SIS 18 MESSE SIS 23 MESSE	How we overcome challenges to deploy sustainable L4 driverless mobility services  TP 4 MESSE  Connected & Automated Driving research cooperation between Europe and Japan  Connected & Automated Driving research cooperation between Europe and Japan  TP 15 MESSE  TP 15 MESSE  TP 25 MESSE	Open standards enabling a traveller-focused affordable MaaS ecosystem enopassing diverse business models  Open standards enabling a traveller-focused affordable MaaS ecosystem encompassing diverse business models  Technology-enabled mobility services driving standards harmonisation: Where are we?  SIS 103  B6 - Room 7 Progress with Maas and MoD standards climate change impacts  TP 43	Al for inclusive Mobility  Barriers and solutions for scaling drone transportation systems  SIS 67  MESSE  Barriers and solutions for scaling drone transportation systems	Using the air space 1 Using the air space 2 Drone technologies and cargo services for emerging African markets  MESSE Bus Pres 6 MESSE Bus Pres 10 MESSE Bus Pres 15 MESSE
B6 - Room 8  us public  Making transport systems in Africa smarter and safer  Making transport systems obstacles when passing from experiment to public transport service	B6 - Room 8 Bringing the bits Stogether: what else is needed?  Next Generation Traffic Incident Management for Puture Safety and Mobility  Reference of the property of the pr	MESSE MESSE B6 - Room 9  SIS 60 MESSE B6 - Room 9  B6 - Room 9  Going further with	B6 - Room 7 Urban Air Mobility - from research to commercial operation  B6 - Room 7 The past, prese future of ITS de who is in the in	B6 - Room 8 B6 - Room 8 B6 - Room 8 Delivering the most from data 1 Getting and using data 1 Getting and using data 2
MESSE B6 - Room 9 Cybersecurity - applying lCT approaches to ITS and information lise restionalise restionalise	SIS 32 MESSE B6 - Room 9  Current status of V2X in Europe and the United States  SIS 40 MESSE B6 - Room 9  Close the gap: on-demand solutions for efficient mobility systems  TP 16 MESSE B6 - Room 9  Improving road safety lmproving road safety and homologation of automated road transport	SIS 50 MESSE B6 - Room 9 Leveraging incentives, access, and insights on the true cost of travel  SIS 50 MESSE B6 - Room 9 Cogning demonstrates opportunities in new EU policies  Going further with ITS: connected cycling demonstrates opportunities in new EU policies  MESSE B6 - Room 9 Change acceptance and user behaviour	SIS 68 MESSE B6 - Room 8 Connecting the dots: the latest ITS standards ecosystem  MESSE B6 - Room 9 Bus Pres 2  Developments with platforms Bus Pres 2  Developments with platforms Bus Pres 2  Achieving mult as well as sustained by the platforms Bus Pres 2  Developments with platforms Bus Pres 2  Bus Pres 3  Bus Pres 3  Bus Pres 1  Bus Pres 1  Bus Pres 1  Bus Pres 2  Bus Pres 3  Bus Pres 4  Bus Pres 3  Bus Pres 4  Bus Pres 4  Bus Pres 5  Bus Pres 1  Bus Pres 2  Bus Pres 1  Bus Pres 2  Bus Pres 2  Bus Pres 2  Bus Pres 1  Bus Pres 2  Bus Pres 1  Bus Pres 1  Bus Pres 1  Bus Pres 1  Bus Pres	
SIS: Special Interest Session TP: Technical Paper Session RP: Research Paper Session Bus P		mobility Mobility as a service / MoD Goods journeys, ports to customers Intelligent infrastructure New services from new technologies Cities and	nd citizens solutions	