We are pleased to welcome you to the Advanced Mobility 2025 Conference.

This two-day event will gather industry professionals in advanced mobility to understand the realities of future urban mobility and goods movement. The conference will specifically focus on the expected level of mobility which can be achieved by 2025 and the key enablers in terms of on-board and off-board vehicle technologies, investments and policy changes required to make this happen.

Sessions will involve keynote presentations and interactive panel discussions on technology roadmaps, market requirements and business case for services. Topics will include technology developments and requirements from vehicle OEMs, new entrants and suppliers, the role of government regulation and investments, cost-benefit scenarios and consumer behavioral patterns for mobility preferences.

At the end of each day, a summary of key insights will be provided. In addition, a short report on these insights will be provided to attendees within two weeks after the conference.

Enjoy our inaugural Advanced Mobility Conference with us! We hope to meet your expectations during this two-day conference and continually improve for the future, and that’s why we would be pleased to hear any suggestions related to the conference and supporting program. Please send your feedback or message to taylor.lee@ricardo.com.

If there is anything we can do to improve your experience while you are with us, please feel free to speak to a member of the conference organization team, who will be glad to assist.
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Details</th>
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<tbody>
<tr>
<td>7:30 – 8:30 am</td>
<td>Networking Breakfast</td>
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<tr>
<td>8:30 – 9:00 am</td>
<td>Opening Session: 2025 Vision for Urban Mobility</td>
<td>Speaker: Dr. Marc Wiseman, Ricardo Strategic Consulting</td>
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<td>9:00 – 11:00 am</td>
<td>Consumer Behaviors and Mobility Needs</td>
<td>Mobility services will be shaped by consumer demands and responses to market offering. The conference will kick-off with a deep dive into our current understanding of consumer interest and expectations for ride hailing and ride sharing, and the intersection of mobility services and public transit. With the focus on 2025, the panel will also touch on short term implications for congestion, fuel efficiency and city developments. Moderator: Giovanni Circella, Institute of Transportation Studies, UC Davis Speakers: Austin Lannes Brown, Policy Institute, UC Davis Mark Platshon, Icebreaker Ventures Therese Langer, ACEEE</td>
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<tr>
<td>11:00 – 11:15 am</td>
<td>Networking Break</td>
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<tr>
<td>11:15 – 12:15 pm</td>
<td>Connectivity and Cyber Security</td>
<td>Connectivity enables linking of disparate elements in the transport system from individual cars to city wide traffic management and backend infrastructure, effectively creating an IoT transport system. This creates significant opportunities but also risk. This session will discuss how the IoT explosion will transform transportation by 2025 and what is required to achieve digital resilience and safeguard against cybersecurity risk. Speakers: Peter Lockhart, Roke Mo Poorsartep, Valeo Stephane Fosso, Ricardo Strategic Consulting</td>
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<tr>
<td>12:15 – 1:30 pm</td>
<td>Lunch Break</td>
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<tr>
<td>1:30 – 2:30 pm</td>
<td>Connectivity and Cyber Security – Outlook for technology deployment</td>
<td>Technology session continues with view on outlook for Level 4 autonomy and a panel discussion Moderator: Peter Lockhart, Roke Panelists: Mo Poorsartep, Valeo Stephane Fosso, Ricardo Strategic Consulting</td>
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<tr>
<td>2:30 – 2:45 pm</td>
<td>Networking Break</td>
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<tr>
<td>2:45 – 4:45 pm</td>
<td>Investment, Innovation and Policy</td>
<td>Advances in mobility will need innovation, investment, and legislative and policy support. These aspects are not typically aligned as product developments need to be successful in the shorter term while policy and legislation are typically required to support longer term societal needs. This panel will present and discuss what will be needed and whether these will enable or hinder the 2025 mobility vision developed earlier in the day Moderator: Alan Taub, University of Michigan Panelists: Alexei Andreev, AutoTech Ventures Jennifer Dukarks, Butzel Long</td>
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<tr>
<td>4:45 – 5:15 pm</td>
<td>Closing Session: Reality of 2025 Vision</td>
<td>Closing remarks and key findings of the day</td>
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<td>5:15 – 7:00 pm</td>
<td>Reception</td>
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## 2025 Vision – Goods Movement

### Day 2

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<td>Speaker</td>
<td>Aneesh Padalkar, Ricardo Strategic Consulting</td>
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<tr>
<td>9:00 – 11:00 am</td>
<td><strong>Trucking Industry Challenges and Needs</strong></td>
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<tr>
<td>Speaker</td>
<td>Mike Britt, MG Britt Consulting Inc.</td>
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<tr>
<td>Panelists</td>
<td>Aravind Kailas, Ph.D, Volvo Group North America</td>
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<td>Dave Schaller, NACFE</td>
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<td><strong>Connectivity, IoT and Cybersecurity Opportunities and Challenges</strong></td>
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<td>Speaker</td>
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<td><strong>Connectivity, IoT and Cybersecurity (continued)</strong></td>
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<td>Moderator</td>
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<td>Gloria D'anna, Author, SAE CyberSecurity for Commercial Vehicles</td>
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<td><strong>Platooning and Autonomous Technology</strong></td>
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<td>Moderator</td>
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<td>Mathew Hall, Peloton Technology</td>
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<td>Shadi Mere, Bedestrian</td>
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Adoption of New Transportation Technologies and the Future of Mobility

Giovanni Circella
Director of the 3 Revolutions Future Mobility Program at the University of California, Davis

Dr. Circella’s presentation will focus on recent mobility changes associated with the adoption of new transportation technologies and will present results from recent behavioral studies developed as part of some of our research projects, including analysis of the profiles of the users of these services, the impacts on the use of other modes, and propensity towards (and expected impacts of) the adoption of automated vehicles in the future.

Policy Options for the 3 Revolutions

Austin Lannes Brown
Executive Director of the Policy Institute for Energy, Environment, and the Economy at the University of California, Davis

The impacts of new mobility technology like automation, pooling, and electrification (the 3 Revolutions) depend entirely on how the technology manifests. Research has identified huge potential but also an enormous potential for unintended consequences. Even as our understanding of some of the behavioral aspects of new mobility grows, deep uncertainty remains as to what business models are likely to win out and what their impacts will be. This discussion will review recent research into policy option at the federal, state, and local levels to help steer the 3 Revolutions towards broad benefits.

Mobility 2025 Will Look Nothing Like Today: It will be the beginning of a new Tomorrow

Mark Platshon
Managing Director and Co-founder, Icrebreaker Ventures

Everybody uses Uber or Lyft. Everybody knows about them. Many pundits argue that although Uber, Lyft and other mobility service companies have matured into valuable public companies, they are no longer growth companies. They argue that reaching their current impressive scale without profitability dooms the whole category to an ugly “race to the bottom” future.

Mark will build the case that MaaS is still in the early innings of a longer game that will improve service, safety, access, congestion and economic growth. Level 4 autonomy will be an important part of the story. Everything in the urban/suburban ecosystem and the passenger economy will change, creating amazing opportunities as well as some terrifying challenges. OEMs and the whole mobility supply chain needs to envision this new tomorrow and figure out their role in a new mobility world.

Technology and policy in sustainable transport

Therese Langer
Transportation Program Director at the American Council for an Energy-Efficient Economy (ACEEE)

Vehicle automation and other technological developments offer the biggest opportunity in decades to restructure our transportation system. In terms of environmental imperatives and sustainability, changes could be for the better or for the worse. As cities, states, and other entities work to anticipate advanced vehicles and shape new mobility systems, what policies are they considering?
Session 2
Connectivity and Cyber Security

Cloud and connectivity, enabling technologies for automated driving

Mo Poorsartep
Advanced Engineering Manager Valeo, Comfort and Driving Assistance Systems

Mo will discuss how cloud based storage and processing can enable autonomous features. The talk will cover the evolution of connectivity which is key to utilizing the cloud for big data analysis and also supporting vehicle operations. Examples will be provided of cloud based, enhanced driving features which could be deployed by 2025.

A Systems Approach to Future Mobility

Pete Lockhart
Professor, Head of Commercial Technology, Roke

In this session, Pete will discuss the potential high level system properties of a future mobility system, and he will outline potential approaches to delivery, development and operation.

The path to L4+ Autonomous Driving – A hurdle race through 2025

Stephane Fosso
Manager at Ricardo Strategic Consulting in Detroit, USA

The concept and definition of “Self-driving” and “Automated driving” terms remain rather ambiguous in the automotive industry. During the last decade major OEMs, Suppliers, startups have increased their efforts and investments to enable complex automated and autonomous driving situations. The jump from partially automated (L3) commonly available in vehicles today to highly automated (L4) driving modes will not only benefit from advancements in new technologies, signal processing and artificial intelligence but will also need to overcome some hurdles to increase deployment through 2025 - The session presentation will look at technology deployment, enablers and barriers of L4+ adoption.
Strategic Venture Capital’s role in driving required innovations

Alexei Andreev
Managing Director, Autotech Ventures

When established corporations consider options for augmenting their internal innovation processes with external innovations, they face several distinct alternatives. Academia collaborations, tech scouting, consulting engagements, M&A, and CVC have been known in the industry for a number of years. Recent emergence of Strategic Venture Capital - a hybrid business model that combines strategic consulting with financially driven vertically focused investing - shows that the traditional external innovation toolkit might and should be expanded. We discuss SVC using Autotech Ventures as an example, demonstrating its ability to act as is a powerful external innovation and technology landscape surveying tool.
Trucking Industry Challenges and Needs

**Michael Britt**  
*Founder, MG Britt Engineering*

The trucking industry is faced with several challenges such as costs, driver shortage and retention, hours of service, etc., that can potentially be mitigated by connectivity and autonomy. Join us and hear directly from industry stakeholders on the needs of the industry and how connected autonomous technology can enable improvement in truck operations.

Truck Technology Adoption; Benefits & Challenges

**Dave Schaller**  
*Industry Engagement Director, NACFE*

Electronic engine adoption in the 1980’s started the technology adoption trend and introduced the first data link on the truck (although it only talked to service tools at first). ABS, Traction control and electronic transmissions followed along as connectivity grew. Now NACFE tracks nearly 100 technologies in an annual fleet fuel study. Data has become… BIG. Some signs point to careful slow adoption to avoid risks of downtime. But there are also indications that some fleets are adopting new technologies at an incredibly fast pace.

Application pathways for connected and automated vehicles

**Aravind Kailas, Ph.D.**  
*Research and Innovation Manager, Volvo Group North America*

Connectivity & Automation are very important to the Volvo Group, and the organization will gradually introduce these technologies by working with the end users and other relevant stakeholders in the ecosystem.
Session 2
Connectivity, IoT and Cybersecurity Opportunities and Challenges

A vision towards the reality of connected and autonomous Trucks

Ali Maleki
Founder and CEO of Traxen

In recent years, early successes in developing proof-of-concept Level-4 (L4) autonomous driving systems have fueled a ground swell of investments with great urgency and stratospheric valuations.

The following three self-driving technology myths are particularly false with respect to heavy-duty trucking.

1. L4 is a solved problem
2. It will be revolutionary
3. The transition will happen fast

I have been involved in self-driving technologies since 1999, starting with adaptive cruise control. I was a big advocate and promoter of the above three conjectures over the past decades. However, my views have evolved significantly as we find ourselves sliding down the Trough of Disillusionment on the Gartner’s Hype Cycle. My presentation is my general comments on the evolution and adoption of autonomous driving technologies in the heavy-duty trucking industry.

Cross-sector collaborations for ITS development & deployment

Aravind Kailas, Ph.D.
Research and Innovation Manager, Volvo Group North America

Multi-stakeholder collaborations are critical for the wide scale deployment of ITS. By engaging regional public agencies, signal shops, etc., the technology providers can develop & deploy the right connectivity solutions to solve transportation problems to benefit the society.

IoT & Digital Twinning: (Re)Delivering Customer Value

Aniket Didolkar
General Manager, Intangles

The talk will comprise of
- Digital twin paradigm
- Hybrid analytics model for predictive vehicle health monitoring: AI on stateful data pools and physics-based analytics via traditional data mining techniques
- Machine learning and fuel pilferage detection
- Barrier of cross platform/OEM OBD protocol compatibility in the commercial vehicle ecosystem
- Driver ranking and grading using advanced behavioural monitoring
- Fleet operations automation using OBD data
Day 2

Should We Be Paranoid? – CyberSecurity for Commercial Vehicles

Gloria D’Anna
Author “SAE CyberSecurity for Commercial Vehicles”

This is a brief overview of the 2019 SAE Published Book, SAE CyberSecurity for Commercial Vehicles, by Gloria D’Anna. Gloria gives us an overview of how the book came to be, including highlights of book chapters. This book is written as a non-fiction novel for CyberSecurity. It focuses primarily on Class 7 & 8 Vehicles with J-1939 CAN neural network. However, many of the chapters can be extended to the entire commercial vehicle range (Class 4 through 8) as well as into Electric Vehicles. Some of Gloria’s favorite chapters will be highlighted, along with continuous cybersecurity work that is spawning from this book. Chapter 2 of this book written by Doug Britton is entitled, “Should We Be Paranoid”, and after 8,000 words, you will be. Or as Doug says, “In the parlance of existing firearms security, cyber would be like a multi-hop bullet that can turn corners, pause in mid-air, wait for someone to open a door, jump inside, wait for 6 months, and shut down a system from the other side of the Earth, all the while convincing you that it was never there in the first place.”

Session 3
Platooning and Autonomous Technology

Autonomous Technology – Development and Trends

Richard Saady
Technical Business Manager, Ricardo

A review of developments and trends in automated goods movement, platooning and ADAS focusing on 2025.

Delivering Connectivity-enabled Automation, Today

Matt Hall
Vice President, Business Development, Peloton

Peloton Technologies, from Mountain View, California is engaged in developing platooning and automation technologies for the Class 8 Logistics space. Their current product, PlatoonPro, delivers connected solutions that allow trucks to engage in safety-focused platooning, saving fuel and encouraging safety. This topic is hotly debated among logistics companies, OEM’s and Tier 1 suppliers. But, the broader question is how do technologies such as platooning lead to further levels of automation, including driverless and full automation. This talk with look at some broad topics, touch on why platooning is important and relevant, and how Peloton plans to take the next step to automation.

Automated goods movement 2025: The future of autonomous delivery of goods and services

Shadi Mere
Founder and CEO, Bedestrian

How Mobility technologies will influence the future of logistics and delivery in serving as the next evolution of the continued explosion of e-commerce and the future of retail, as well as the implications of the intersection of mobility and health for the future of healthcare and senior care, and how these domains will be transformed by mobility technology by giving access to delivery on demand instead of encumbering us to travel. Discuss autonomous mobility approaches for densely pedestrian-populated environments, where novel strategies are needed for indoors, as well as, outdoor urban settings, from an autonomous technology perspective, and from a Human-Machine-Interface and User Experience perspective.