



Critical Technologies for Sustainable Vehicle Production

2025 CONFERENCE

Final Program



February 26 and 27, 2025



Sheraton Detroit Novi Hotel
Novi, Michigan, USA

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Program Agenda – Day 1: FEBRUARY 26

- 7:00 a.m. **Registration, Networking, and Continental Breakfast**
- 8:00 a.m. **Opening Remarks and Session Chair**
Mitra O'Malley, Managing Director and Co-Founder
The ITB Group

BIO-BASED MATERIALS: ADVANCING PERFORMANCE AND SUSTAINABILITY

- 8:10 a.m. **Beyond Bio-based**
Luis Fernando Flores Bustos, Account Manager
Arkema
The production of nylon 11 globally will be less than 1.3 kg CO₂ e/kg in 2025. Continuous reductions will be further achieved via systematic processes both in production and with customers. A diverse range of recycled materials are offered including grades with a minimum recycled content of 30%.

- 8:30 a.m. **Bio-Nylon 6,6 from Wood Waste**
Khorcheska Batyrova, CEO and Co-Founder
OzoneBio
A breakthrough solution of bio-based nylon 6,6 derived from renewable wood waste is presented. This sustainable alternative not only eliminates the severe carbon footprint associated with conventional adipic acid production but also leverages waste resources, aligning with circular economy principles.

- 9:00 a.m. **Biobased Polyurethanes: Pathway to Commercial Success**
Christopher Bradlee, Sustainability Manager
BASF
Challenges to commercialize sustainable polyurethane include avoiding *green-washing*, reliable and consistent supply of biobased/recycled feedstocks, same performance and cost balance to incumbent fossil-feedstock components, stakeholder acceptance of mass balance approaches and clear understanding of sustainability value. The presentation will discuss these key factors and present case-study examples of biobased polyurethane foams for automotive applications.

- 9:30 a.m. **Networking Break** ☕

- 10:15 a.m. **KEYNOTE ADDRESS**
Stepping into Carbon and Plastics Pollution Headwinds
Mark Bacchus, Senior Manager, Carbon Neutrality and Regulatory Affairs
Toyota Motor North America

- Session Chair: Darren Nowak, Director, Research & Analysis**
The ITB Group

DESIGNING FOR CIRCULARITY: IMPLEMENTING REAL-WORLD SOLUTIONS

- 11:00 a.m. **Circular Design in Automotive**
Karen Guzman, Automotive Marketing & Sustainability Manager
Covestro

The principal challenges of achieving circularity are highlighted including the importance of collaboration throughout the value chain. Examples of specific cases in automotive that have been redesigned for sustainability are discussed.

- 11:20 a.m. **Packaging EPR Lessons for the Automotive Industry**
Adam Peer Senior Director, Plastics Sustainability
American Chemistry Council

What can the automotive industry learn from packaging EPR? This presentation explores the role of Extended Producer Responsibility (EPR) and mass balance principles in funding infrastructure for greater circularity and can promote sustainable vehicle production.

- 11:35 a.m. **Recycling the Impossible: What Do Wind Turbine Blades, Light-weighting Composites, and Glass Fiber Remelt All Have in Common?**
David Morgan, Chief Strategy Officer
Carbon Rivers

Effectively and economically recovering glass fiber from decommissioned wind blades is explored. This will include preparing the rGF for intermediates including thermoplastics, non-wovens, additive manufacturing, and having a next-life cycle circular economy component ready for the tier supply chain.

- 11:55 a.m. **Lunch**

- 1:15 p.m. **Using Life Cycle Assessment to Drive Internal Decision Making and Assess Industry Knowledge Gaps**
Nicholas Hammond, Sustainability Engineer
Shawmut Corporation

The value and flexibility of an LCA model is showcased together with some of the challenges encountered in this development. Among the challenges are gaps in clear guidance for various product categories in conducting LCAs for the purpose of Environmental Product Declarations.

- 1:35 p.m. **Production and Application of Advanced High Strength Steels using the Circular Steelmaking Process**
Dean Kanelos, Market Development & Product Applications Manager
Nucor Automotive Group

Steel produced in an electric arc furnace, or the circular steelmaking process produces significantly lower greenhouse gas emissions than the conventional

extractive steelmaking process made in a blast furnace and basic oxygen furnace. Besides having lower embedded emissions, this process can produce all the steel grades used in modern and future automobiles.

**Session Chair: Xavier Maury, Operations Director
OPMobility**

**FROM CONCEPT TO PRACTICE: A
TIER-1 APPROACH TO
SUSTAINABILITY**

1:55 p.m. OPMobility's Sustainability Roadmap
Xavier Maury, Operations Director and Fernando Alves, HSE & Sustainability Director, Exterior and Lighting
OPMobility
Life cycle analysis for eco-design, waste reduction, and process optimization in paint technology is leveraged. This roadmap integrates circular economy principles, addressing sustainability across the supply chain while achieving CO₂ reduction targets.

2:15 p.m. Raw Materials - Re-Use at All Scales
Nathalie Veiga, Senior Materials Engineer
OPMobility

2:30 p.m. Painting - Efficiency and Waste Elimination
Eric Guizol, Industrial Process Performance Leader
OPMobility

2:45 p.m. Supply Chain - Green Road to Sustainability and Efficiency
Laurent Peyrelongue, Supply Chain Associate Director
OPMobility

3:00 p.m. Networking Break ☕

3:30 p.m. Special Address
From the Bottom Up
Chad Pregracke, President
Green Current Solutions

**Session Chair: Dr. Joel Kopinsky, Managing Director and
Co-Founder - The ITB Group**

**STRATEGIES TO LOWER
CARBON FOOTPRINTS**

4:00 p.m. Sustainability and Circular Economy – Applying New Sustainable Materials into Plastic Parts
Dr. Bhuvneesh Kumar, Technical Support and Application Development Manager
UBQ Materials
The integration of sustainable compounds into automotive parts is demonstrated. This presentation features collaborative development processes and a successful case study of serial part implementation.

4:20 p.m. Advancing Sustainability Initiatives at Kautex
Summer Javed, Sustainability Engineer
Kautex Textron
Progress towards carbon neutrality, focusing on Scope 3 emissions is discussed. Sustainable material innovations are showcased together with engineering integration and fostering a culture of sustainability.

4:40 p.m. Automotive Packaging Sustainability
Bridget Grewal, Director, Packaging Continuous Improvement
Magna International
Tools developed by the Suppliers Partnership for the Environment to design highly recyclable automotive packaging are introduced. These tools simplify sustainability implementation across the supply chain.

5:00 p.m. A Peek into Rivian's Carbon Footprint and the Need for Harmonization
Dr. Nick Santero, Principal, Sustainability Science
Rivian
This presentation offers insights into Rivian's carbon footprint assessment, detailing how life cycle analysis informs vehicle design and investment decisions. It also emphasizes the need for standardization in EV carbon footprint calculations.

5:30 p.m. Closing Remarks and Cocktail Reception

Exhibitors

- ▶ **Arkema**
- ▶ **BASF**
- ▶ **Borealis**
- ▶ **College for Creative Studies***
- ▶ **Covestro**
- ▶ **Dow**
- ▶ **Evonik**
- ▶ **Mazlite**

* The College for Creative Studies will showcase innovative student design concepts focused on future mobility and sustainability.

Program Agenda – Day 2: FEBRUARY 27

7:30 a.m. **Registration, Networking and Continental Breakfast**

8:00 a.m. **Welcome and Opening Remarks**
*Dr. Joel Kopinsky, Managing Director and Co-Founder
The ITB Group*

**Session Chair: Kari Bliss, Principal Sustainability
PADNOS**

OPTIMIZING MATERIAL RECOVERY FOR SUSTAINABILITY

8:10 a.m. **Towards a Sustainable and Secure Rare Earth Elements Supply Chain**

Karl Meira, Director OEM Partnerships
Cyclic Materials

REEs are pivotal in technologies including permanent magnets which are essential for clean energy and EV transitions. The current REE market faces challenges with demand outpacing production by 30% by 2035. Cyclic Materials technology is capable of recycling PM-containing products at scale and offers a path towards sustainability goals and securing the REE supply chain for OEMs.

8:30 a.m. **Increasing Used Tire Recovery Rates Via Cross-Industry Collaboration**

Kyle Gregoire, President
Granulum

Tire recycling is a challenge for every jurisdiction in the world. They are a difficult product to break down into their constituent components, and developing adequate markets for tire crumb is a continual challenge. Used tires that have not reached end-of-life have real value and ensuring that they are not prematurely recycled is an important but sub-optimized element of the tire recycling space. Collaboration with vehicle recyclers needs prioritization so more tires stay on the road for their complete life cycle.

8:50 a.m. **Closing the Loop: Harnessing Post-Consumer Scrap to Drive Decarbonization in Automotive Applications**

Helen Weykamp, Principal Engineer
Hydro Aluminium

Sam Padnos, Non-Ferrous Trading Manager
PADNOS

Alusort LLC, a joint venture between Hydro and PADNOS, is taking a transformative approach to aluminum recycling in the U.S. Leveraging Hydro's proprietary HySort technology, Alusort digs deeper into the aluminum scrap pile to capture valuable post-consumer material that would otherwise end up in landfills. An overview of the process and impacts on a circular economy will be discussed.

9:30 a.m. **Networking Break ☕**

10:10 a.m. **KEYNOTE ADDRESS**

Bridging the Gap to Carbon Neutrality

Amanda Nummy, Senior Polymer Materials Engineer
Hyundai Motor Group

This keynote will give an overview of Hyundai Motor Group's pathway to carbon neutrality, provide insights on policies and regulations, and emphasize a systems-thinking approach to increasing impact, with a focus on defining and connecting various roles in the sustainability ecosystem to balance multiple objectives.

**Session Chair: Sean Osborne, Vice President
The ITB Group**

CLOSING THE LOOP: INNOVATIONS IN BATTERY RECYCLING

10:55 a.m. **Building a Critical Materials Domestic Supply Chain to Scale and Enhancing the Circular Economy**

Tom Edwards, Quality, Environmental Health & Safety Manager

Cirba Solutions

This presentation examines the battery and EV market outlook, detailing the journey of critical materials through the supply chain. It explores strategies for building a domestic supply chain that enhances circularity and independence in critical material sourcing.

11:10 a.m. **Challenges Associated with the EV Battery Carbon Footprint**

Paul Hernley, Assistant Manager, EV Battery Sustainability and Recycling

General Motors

The EV battery carbon footprint is evaluated with a focus on European regulations, data quality challenges, and emission hot spots. This presentation explores strategies for addressing these challenges and reducing emissions through innovations such as battery passports.

11:40 a.m. **Lunch**

**Session Chair: Dr. Nico Depner, Manager Process Innovation
Yanfeng**

SUSTAINABLE INTERIORS: MATERIALS AND METHODS FOR THE FUTURE

12:55 p.m. **As Sustainability Begins to Mature as a Topic - What do OEMs Mean by that Term?**

Dr. Nico Depner, Manager Process Innovation
Yanfeng

Historically, there have been many different definitions for sustainable solutions in the interior environment. Mass reduction is the oldest criteria, but many other competing metrics are fighting to be the most important. GHG reduction, CO₂e reduction, circularity, value of PIR vs PCR, value of mechanical vs chemical reprocessing are all metrics being considered for assessing the improvement in sustainability for a given vehicle. But some of these metrics are mutually

exclusive. In this world of tradeoffs, what should we expect as far as OEM decision making on prioritizing one metric over another? This overview presentation will take a global look at the range of OEM customer behaviors and provide conjecture on what those decisions might look like in the near to mid-term.

1:25 p.m. The BioLAN Disruption - Bringing Sustainability and Cost Improvement
Timothy Richter, Vice President
Prisma Renewable Composites
OEMs are offered a breakthrough solution for replacing injection-molded substrate components, achieving cost efficiency, performance improvements, and significant emission reductions. This presentation explores the creation of creating a win-win for sustainability and business.

1:40 p.m. Advanced Solvent-Based Technology for the Closed-Loop Recycling of Engineering Plastics
Norbert Fraunholz, CEO
ReSolved Technologies
A hybrid recycling method for styrenics (ABS, SAN, ASA, HIPS) has been developed that combines mechanical and solvent-based techniques. This process delivers high purity, even from contaminated waste, with low carbon emissions and cost efficiency, advancing engineering plastics recycling.

1:55 p.m. Challenges and Advancements in Mainstreaming Automotive Plastics Recycling and Circularity through Molecular Recycling Technologies
Gary Hawkins, Automotive Applications Development
Eastman
Molecular recycling technology converts mixed plastics into high-performance components, supporting automotive sustainability goals. The presentation highlights the impact of molecular recycling on circularity and resource efficiency in the industry.

Session Chair: Dr. Joel Kopinsky, Managing Director and Co-Founder - The ITB Group

SHAPING THE FUTURE WITH SUSTAINABLE AUTOMOTIVE MATERIALS

2:10 p.m. Sustainable Automotive Seating Materials – Design for Recycling
Missy Brudzynsky, Engineering Director, Innovation Lead
Xi Chen, Application Development Scientist
Dow
FlexAir™ is the first extruded 3D loop polyethylene cushioning technology developed for automotive. It delivers luxury-level comfort, is 100% recyclable, and provides a lower environmental footprint than polyurethane-based alternative. The approach enables the diversion of 2.5 billion lbs/year of seating material from landfills by using designs that focus on disassembly and recyclability.

2:30 p.m. Networking Break ☕

3:00 p.m. Sustainable Plastics in Automotive Applications: Market Needs, Waste Hierarchy, and Carbon Footprint
Arnd Herwig, Vice President Development
Brose North America

An overview of the automotive plastics market along with existing and emerging legal and customer requirements will be presented. Waste hierarchy, cradle to end-of-life recycling, and case study comparisons will be highlighted.

3:20 p.m. Driving Vehicle Circularity and Decarbonization with Polyurethane
Selamawit Belli, Strategic Market Manager
Dow

This presentation will discuss global regulations for CO₂ footprint reduction and recycling for vehicles, introduce different solutions for polyurethane recycling in mobility, and explain how OEMs and suppliers can incorporate recycled content into the vehicle life-cycle to achieve circularity and decarbonization goals.

3:40 p.m. Glass Fiber Circularity and Sustaina® Loop
Paul Salach, Product Leader
Owens Corning

Sustaina® Pro is made through an ISCC+ certified process where post-industrial waste glass is re-fed directly into the furnace allowing the manufacture of new glass fibers containing circular content. This presentation will highlight the process and address key sustainability trends.

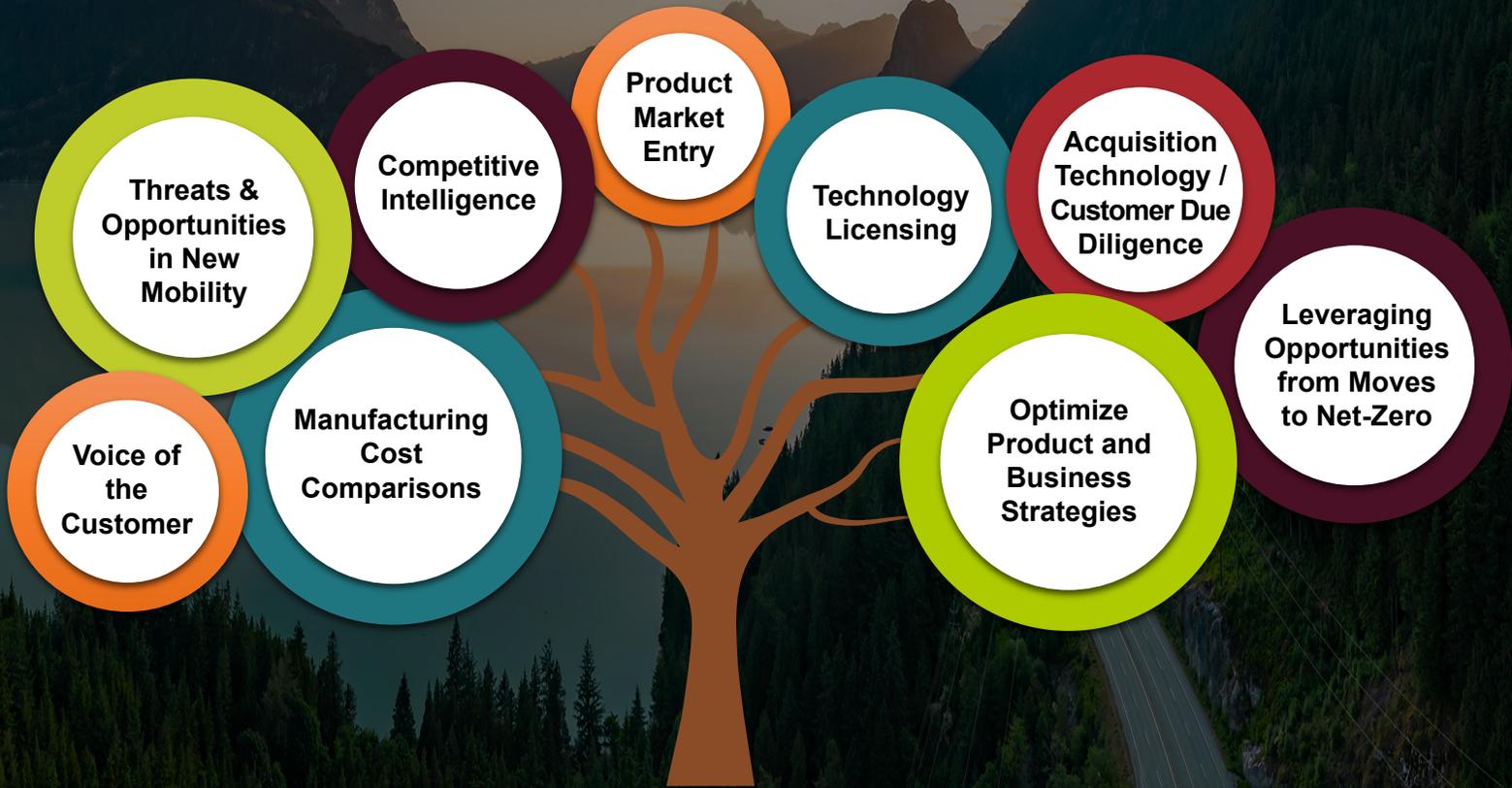
4:00 p.m. Sustainability in the Automotive Electronics Industry
Thomas Klena, HW Excellence Manager and Engineering Sustainability Lead
Continental Automotive

In this presentation, Continental shares some of the strategies it implements in making electronic components and circuit boards more sustainable, all while maintaining competitiveness.

4:20 p.m. Closing Remarks - End of Conference



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