itB GROUP

Critical Technologies for Sustainable Vehicle Production 2023

Final Program

In-Person
February 15 and 16, 2023

Sheraton Detroit Novi Hotel
Novi, Michigan, USA

Sponsored by:

American Chemistry Council | Plastics Division

ARKEMA

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Program Agenda - DAY ONE

Presentations will be made available to conference attendees two weeks after the conference has concluded AND when provided permission by the speaker

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

8:30 a.m. **Welcome and Opening Remarks**
Mitra O'Malley, Managing Director and Co-Founder
The ITB Group

8:45 a.m. **KEYNOTE ADDRESS**

Decoding Barriers to Sustainability
Durable Markets Advocacy Leader
American Chemistry Council Plastics Division
and
Sustainable Manufacturing Technologies Group Leader - **Oak Ridge National Lab**
The council will share the latest updates on plastic sustainability efforts, including an aggressive end-of-life roadmap for automotive plastics and a Memorandum of Understanding for automotive plastics circularity with Oak Ridge National Lab. This joint presentation will unravel the complex supply chain constraints and considerations contributing to the landfilling of shredder residue, discuss key challenges and development needs to enable circularity for durable automotive plastics, and disclose preliminary results from the ongoing collaboration.

9:45 a.m. **Networking Break**

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

Decarbonization in Design and in Practice

10:30 a.m. **Paths to Tackle Scope 1-2-3 GHG Emissions Reductions Towards Final Carbon Neutrality**
Global Director Energy and Sustainability
Kautex Textron
Kautex committed to achieving an 80% reduction for Scope 1-2 emissions and a 30% reduction for Scope 3 emissions by 2030 before reaching Carbon Neutrality in 2050. Kautex explains its journey in this sustainable roadmap and practical steps which have been set in place to tackle this challenge at all levels of the organization including Process-to-CO_2, Procure-to-CO_2, Design-to-CO_2 and Recycling-to-CO_2.

11:00 a.m. **Design for Carbon**
Application Engineer, Sustainability
AKRO-PLASTIC
The presentation compares CO_2 footprints of plastic applications. Explanations with examples of different inputs including fillers, additives and the transport of compounds will be included. A guideline, and examples of how to reduce the footprint of the final application by using different polymers, different fillers, blends, and smart processing techniques will be highlighted.

11:30 a.m. **Circularity Adoption in the Auto Value Chain**
Global Segment Director, Mobility
Trinseo
The industry is facing multiple challenges which can be overcome to fill the gaps and enable solutions for wide scale decarbonization of automotive manufacturing. Hurdles preventing the industry from unlocking the full value of renewables and recycling streams to minimize greenhouse gas emissions will be considered. Furthermore, tools that track sustainability across the value chain, environmental impact criteria, and third-party certification will be addressed.

12:00 p.m. **Lunch**

Session Chair:
Dr. Rose Ryntz, Vice President, Sustainability
The ITB Group

Delighting Consumers: Renewable/Recycled A-Surfaces

1:15 p.m. **Feel the Difference**
CEO
Bader Leather
Bader has created a Sustainability Competency Center that supports social responsibility in maintaining a low carbon footprint in leather production. This presentation will discuss Bader's position in maximizing the use of leather, its natural leather recycling strategy in conjunction with upcycler Avema, preventing waste in hides, and creating products with upcycle potential.

1:35 p.m. **Sustainable Interior Surfaces in Artificial Leather**
Manager Research & Development, Artificial Leather
Continental Surface Solutions
Artificial leather materials are being developed with attributes including recycled content, biomass content, and reduced VOCs. Use of recycled and biomass materials reduces reliance on virgin petroleum-derived materials. These concepts reduce the Global Warming Potential of materials with minimal changes to the performance.

1:55 p.m. **Enhancing Sustainability and Circularity in the Automotive Industry**
Market Development Manager
Kraton Polymers
Technology solutions that enable circularity and lower carbon footprints using recycled and renewable content, such as IMSS, CirKular + and CirKular+ ReNew products, will be discussed. An overview of Kraton's overall commitment to sustainability including approaches to enable the circular economy will highlighted.

(continued)

Program Agenda - DAY TWO

2:15 p.m. **Round Table Discussion**

How to Create Sustainable Options in Manufactured Products

With the automotive industry now mandating sustainability content, it is imperative to understand the definition of sustainable as well as what options exist to get there. The round table will discuss options for automotive components, recycling, renewable energy manufacturing of carbon, and LCA methods for determination of greenhouse gases.

Sales Director - **Monolith**
Senior Application Engineer - **The Materials Group**
CEO and Co-founder - **KTON**
Mobility Marketing Manager - **Covestro**

3:30 p.m. **Networking Break**

Session Chair:
Darren Nowak, Director Research and Analysis
The ITB Group

Bringing Sustainable Products to Market

4:00 p.m. **A Plastic Replacement for a Greener Future**

CEO - **Dongnam Realize**

A new material called CXP Wood, the first injectable wood in the market, will be introduced. This technology will allow carbon emission reductions by replacing plastics. Examples of potential automotive applications will be highlighted.

4:30 p.m. **Decarbonization Beyond Vehicle Electrification: A New Business to Deliver Innovative Sustainable Materials**

Sales Director Interiors North America
and
Feedstock & Recycling Manager - **FORVIA**

The decarbonization of the use phase of automobiles is being addressed by electrification. With approximately 60% of a car's production CO_2 footprint made up of its material, the next step is decarbonizing the production footprint of automobiles. MATERI'ACT, a FORVIA brand, is providing low-emission materials in four categories: compounds, foils as alternative to leather, carbon fibers, and green steel.

5:00 p.m. **Leveraging Material Developments to Realize Carbon Neutrality and Enhance Vehicle Sustainability**

Senior Polymer Materials Development Engineer
Hyundai Motor Group

The presentation will outline methods where Hyundai/Kia has embraced sustainable material development through an analysis of commitments made towards these goals. And more importantly, how they are working towards realizing them.

5:30 p.m. **Closing Remarks - End of Day One**

8:00 a.m. **Registration, Networking, and Continental Breakfast**

8:30 a.m. **Welcome and Opening Remarks**

Dr. Rose Ryntz, Vice President, Sustainability
The ITB Group

8:40 a.m. **KEYNOTE ADDRESS**

GM's Supply Chain Sustainability Program

Senior Manager, Socially Responsible and Sustainable Supply Chains
General Motors

Topics including the impetus for GM's program, program focus areas, and key building blocks will be discussed. The presentation will conclude with an outlook for upcoming initiatives for the program. GM's multilevel philosophy *Everybody In* will be highlighted with illuminations of where GM seeks supplier input when shaping the program.

Material Developments for Improved Net-Zero Performance

9:20 a.m. **Enabling Circularity: Mono-Material Design for Automotive Applications**

Business Development Manager
Evonik Corporation

Strides towards sustainability and material developments that are enabling Tiers and OEMs to fulfill zero emission targets and achieve full circularity will be discussed. Strategy, challenges, and solutions for materials and applications, including a case study, will be presented.

9:40 a.m. **Zinc Phosphate Variants and Thin Film Pretreatments Using Life Cycle Analysis**

Technical Manager Surface Treatment
Henkel

A cradle-to-grave life cycle analysis of an OEM pretreatment line will be detailed, seeking to replace traditional zinc phosphate pretreatment with Thin Film technology. An evaluation of the technologies' respective environmental footprints is presented. The assessment demonstrates clear gains in sustainability in the transition to Thin Film and provides a methodology for life cycle evaluations of other pretreatment technologies.

10:00 a.m. **Beyond Bio-Based: Super-Sustainable Polyamide 11**

Business Development Engineer
Arkema

Arkema will provide updates on its growing recycling business, its new bio-polymer plant, and recent partnerships made with downstream customers to provide sustainable automotive components. An update on Arkema's bio-feedstocks and the reduction in manufacturing carbon footprints will be included.

(continued)

10:20 a.m. **Networking Break**

10:50 a.m. **Advanced Recycling: Opportunities for Sustainable Vehicle Production**
Senior Market Development Lead
ExxonMobil Product Solutions
Automotive OEMs intend to meet sustainability goals while maintaining product performance. A discussion on how to leverage mechanical and advanced recycling to help support automotive OEMs as they work to achieve these objectives, as well as an introduction of Exxtend™ technology for advanced recycling, will be provided.

11:10 a.m. **Into the Future: Lifting Sustainability to Scale**
Director of Sustainability
Ascend Performance Materials
The presentation will disclose bringing low-carbon materials to scale and improving material performance through mechanical recycling. A new toolkit will be formulated including Bio and Carbon credits, and keeping a high emphasis on clean energy and lowering emissions on prime products.

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

Analytical Approaches to Measurement

11:30 a.m. **Life Cycle Assessment of Chemical Recycling**
echnical Director, Americas
Sphera
The capabilities and limitations of the globally accepted life cycle tools will be explored. System boundary impacts will be detailed, including systems expansion through both additive and subtractive means. Finally, the potential associated risks of misinterpretation by non-technical audiences will be discussed.

12:00 p.m. **Traceability in Automotive Supply Chains and Empowering Suppliers**
Lead Business Developer and Strategy N.A.
Circularise
Through traceability and accounting of the materials, processes, and impacts at each step of the value chain, automotive suppliers, OEMs, and other stakeholders can make informed decisions to make vehicle production more sustainable. This will aid in compliance with emerging regulations and extract greater value through improved part reuse and material recovery.

12:30 p.m. **Lunch**

1:30 p.m. **Strategic Use of LCAs - A Comparative Review of Leather and Alternatives**
Technical Director
Sustainable Leather Foundation
Life Cycle Analyses (LCAs) provide a tangible context and a definable output, supporting the industry on sustainable decision-making globally. However, these practical applications largely miss the grander concept of what LCAs, and comparative data provide. The comparative nature of leather and its alternatives provide a timely example for how LCA data should be calculated, interpreted, and utilized in purchasing, development, and strategic decisions.

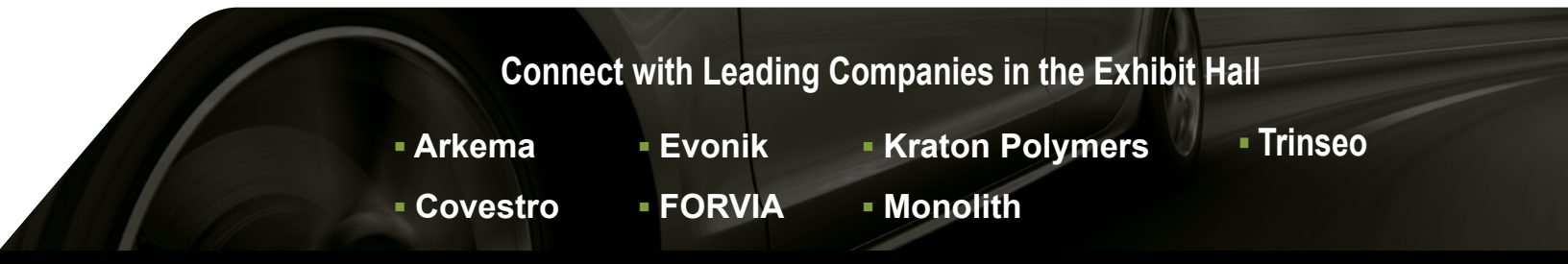
Session Chair:
Darren Nowak, Director Research and Analysis
The ITB Group

Re-Imagining Multi-Layer Electronics

2:00 p.m. **A Solution for Increased Use of Automotive Electronics: A New, Low-carbon Circuit Board**
Co-founder, CEO and CTO
Elephantech
Elephantech invented a novel process to manufacture low-carbon circuit boards with inkjet printing technology. The technology reduces CO_2 emissions by 77% and water consumption by 95%. Mass-production began in 2020 and is growing to meet the increasing demand for low-carbon techniques.

2:30 p.m. **Monetizing Sustainability with IMSE**
Janne Jääksä, Manager Product Planning and SVP, Marketing
TactoTek
Independent Life Cycle Analysis (LCA) studies show that IMSE can reduce CO_2 emissions in the manufacturing phase by up to 60%. There is financial value in recovering the metals and the plastics, unlike the conventional recycling practice which burns plastics. Preliminary results from chemical recycling studies provide a strong indication for economically viable plastics recovery. By combining the intrinsic benefits of IMSE, material savings, thinness, and simplified manufacturing, cost savings are being realized.

3:00 p.m. **Closing Remarks**



List of Sponsors

American Chemistry Council

The American Chemistry Council's Plastics Division represents America's Plastic Makers. Plus, the half million+ scientists, engineers, technicians, and other innovators who make plastics for many essential and lifesaving products that are vital to modern life – including safe, sustainable automotive transportation.

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Arkema

Arkema is a leading global supplier of Advanced Bio-circular Materials (ABC) for the automotive industry. Building on its unique set of expertise in materials science, Arkema designs materials to address the ever-growing demand for innovative and sustainable materials, driven by the challenges of new energies, new technologies, the depletion of resources, mobility, and increasing urbanization.

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Covestro

Covestro is a leader in high-quality, high-performance polymers– along with dedicated support to help our customers simulate and achieve their desired performance needs and numerous different surface effects, textures and colors. For more than 50 years, Covestro has been a valued supplier and developmental collaborator to the Automotive industry. Our tailor-made materials provide innovative solutions that can be used all throughout vehicle design – from interior to exterior, bumper to bumper. At Covestro, we're committed to supplying high-tech materials that meet the mobility needs of today, while also developing next-generation solutions for the transportation needs of tomorrow. By replacing traditional materials with durable, light, more environmentally-compatible and cost-effective materials, Covestro makes significant contributions in areas such as lightweight construction in the automotive industry. Sustainability is a core element of our mission, and an integral part of our strategy.

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Evonik

Evonik is one of the world's leading specialty chemicals companies. It's VESTAMID® long chain polyamides have been the material of choice to produce sophisticated fluid handling systems for the automotive industry. Sustainability is a central element in Evonik's purpose "Leading Beyond Chemistry". Based on innovative capabilities and leading technology positions, Evonik empowers its customers to offer sustainable and resource-efficient solutions to the automotive industry.

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Henkel

As the global leader in adhesives, sealants, and surface technologies to the automotive industry, Henkel provides performance-driven high-impact solutions with a comprehensive technology portfolio and specialized technical services. We partner with automotive OEMs to provide adhesives, sealants, and surface technologies along the entire manufacturing value chain. Our high-performance material solutions enable customers to design and build advanced, sustainable lightweight constructions, while meeting continuously tightening automotive regulations.

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Trinseo

Trinseo (NYSE: TSE), a specialty material solutions provider, partners with companies to bring ideas to life by combining its premier expertise, forward-looking innovations and best-in-class materials to unlock value for customers. In 2021, Trinseo reported net sales of approximately $4.8 billion with 3,400 employees around the world.

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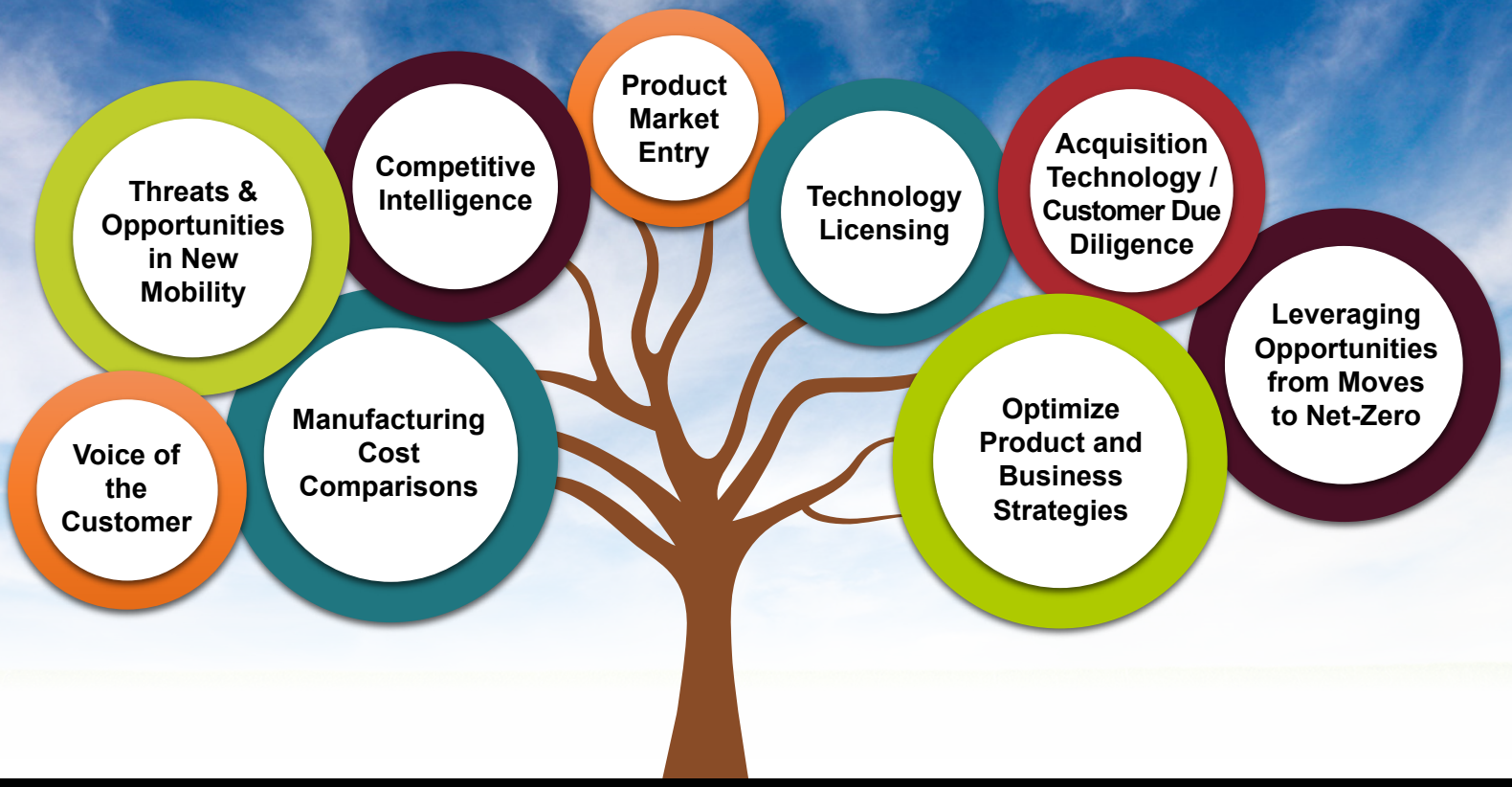
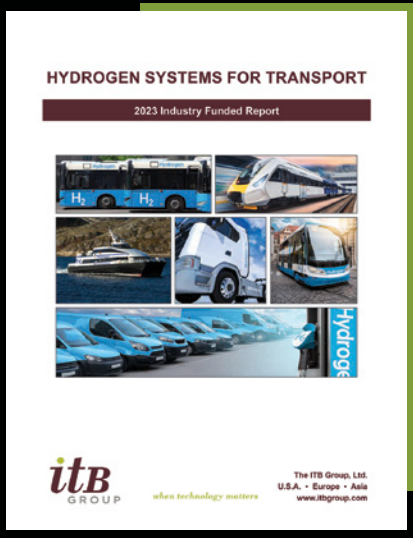
ITB Segments and Projects



ITB's Industry-Funded Technical Reports



Contact The ITB Group for more information

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