

Panel

Advancing Bio-based Materials Through Supply Chain Partnerships

Presentation: [Click here to download slides](#)

Moderator:

Michele Jalbert, Chief Operating Officer, GC3

Presenters:

Jason Clark, Materials Lead – Open Innovation, Renewable Chemicals & Materials, Braskem

Jad Finck, Vice President of Innovation and Sustainability, Allbirds

Søren Kristiansen, Senior Director of Technology, The LEGO Group

Summary:

This session explored the supply chain partnerships between Braskem, a bio-based materials supplier, with two of its customers, Allbirds and The LEGO Group.

Braskem is a large petrochemical company and the world's leading biopolymer producer. It started its development of biopolymers with “green” polyethylene and now makes other biopolymers including EVA. To understand market needs, Braskem speaks with brands and retailers and develops solutions that meet these needs. This has required new ways of organizing and collaborating with different actors. Allbirds is a San Francisco-based sneakers startup that makes shoes from environmentally friendly materials such as merino wool and eucalyptus tree fiber. It is a “purpose driven brand” that tells its story directly to the consumer. Allbirds wanted to develop a springy midsole from an environmentally sustainable material. The company originally used EVA and approached Braskem about making “green” EVA from sugarcane. Allbirds calls this new material SweetFoam™. It is carbon negative in production through the efficiency of carbon capture. Sweet Foam™ is used in Allbirds flip flops. Every part of the flip-flop is bio-based or recycled. The company is profitable and is one of the fastest growing shoe companies in history. It has worked with Braskem to open up the IP for its bio EVA to grow the market for the material.

The LEGO Group is a privately held, family owned company, founded in 1932, based in Denmark. The LEGO philosophy is “that ‘good quality play’ enriches a child’s life and lays the foundation for later adult life.” LEGO has long had an emphasis on creating high quality and durable toys. The LEGO Group has made a commitment to use sustainable materials in core products and packaging by 2030. LEGO worked with Braskem to develop a sugarcane-based polyethylene that is now being used in LEGO botanical elements such as leaves, bushes and trees. LEGO is continuing research to develop other sustainable materials for its products. This development has required engagement and partnership with suppliers, universities, NGOs, employees, and consumers, including children. It has been important to engage with the entire value chain in evaluating new materials. Collaboration with suppliers has required developing openness and trust and the sharing of costs and risk.

Following the presentations and panel discussion, participants, discussed at their tables what has worked to overcome barriers and then shared with the full group what they understood as enabling factors for green chemistry startups.

Key Takeaways:

- To understand market needs, suppliers of new materials must reach out to brands and retailers.

- To identify sustainable materials, partnerships must be explored and developed with entities that a company may not have partnered with before.
- The entire value chain must be engaged in the development of sustainable materials.
- Both startups and larger suppliers must mutually benefit from any partnership that is developed.
- It can be valuable to leverage government grants when startups are creating agreements with industry partners.
- It is important not to be so protective of IP that business opportunities are missed.

Trust and transparency are critical for partnerships to work effectively.