

Panel

Circular Economy & Green Chemistry

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

Moderator:

Amanda Cattermole, CEO, Cattermole Consulting

Presenters:

Tammy Ayers, Manager, Global Sustainable Design & Development, Steelcase

Serena Pozza, Manager, Healthy Materials, DSM-Niaga

Dhruv Raina, Director of Sustainability, Tarkett

Summary:

Use of safer chemicals is a critical enabler of circularity. Three leading companies are developing new materials, products and lifecycle product management systems based on green chemistry and circular economy principles. Flooring company, Tarkett, office products company, Steelcase, and product design startup and carpet producer, Niaga, shared emerging thinking on new materials development, supply chain collaborations, information systems for tracking chemicals and materials in products, and the underlying sustainable business models, and commitments that enable their work.

- Serena of DSM-Niaga noted that, "...there is no away when we throw away stuff." DSM-Niaga's product design philosophy is reverse design for products that are recyclable and used production waste. To achieve their objectives, they conduct tests in-house, track and trace content, as well as share knowledge with suppliers and consumers to obtain stakeholder input.
- Tammy noted Steelcase's shift to a subscription-based model, where consumers can switch out their products when they want to. For sustainability goals, Steelcase's approach is to identify what issues are important, the levels they can be considered at, and the means to measure progression. Tammy shared the details of Steelcase's in-house tool to evaluate where a project falls on the spectrum of: compete, lead, or innovate as well as their Division Frameless Screen exemplifying simple materials, easy disassembly, and working with supplier to ensure fabric takeback.
- Dhruv discussed that Tarkett USA takes a holistic approach to assess all raw materials, use 75% of recycled material, consider how can product be taken back (adhesives make it difficult). Product examples include Ethos Modular Carpet Tile, utilizing windshield waste as carpet backing and iD Revolution, which is recyclable, contains 85% recycled content, and made with 100% renewable energy.

In addition to sharing the details of their efforts, they discussed their challenges and provided example products that exemplify their success. The following emerged from the discussion:

- To improve circularity in products, each of the companies stressed the importance of starting early in the development phase, and working collaboratively, both within the company and with suppliers.
- Shared challenges include finding quality sustainable materials, meeting customer expectations, keeping ahead of the innovation/regulatory curve, and reverse logistics.

- While the efforts of all three companies extend beyond certifications, certifications help with verification and communication.
- GC3's role in transitioning to circular systems is facilitating collaborations to connect companies with potential solutions.