



## CONFERENCE REPORT

### Introduction

The Green Chemistry & Commerce Council hosted its first in person European Forum in September 2022, responding to increasing pressures from the European Green Deal, investors, and market forces. GC3 gathered representatives from European companies, consulting firms, governments, and non-governmental organizations to discuss how supply chain collaboration and partnership can help accelerate green and sustainable chemistry's growth and implementation throughout the value chain. Hosted by the LEGO Group, this two-day meeting explored both the challenges and opportunities to advance safer and more sustainable chemistry in Europe.

*“Collaboration across different industries is key to achieving a better green chemistry future”*

- GC3 Attendee

### Key Takeaways

Six key themes surrounding the successful implementation of green chemistry solutions emerged from the Forum:

1. The growth of green chemistry involves overcoming several key challenges. Companies are balancing multiple goals, such as safety, climate impact reduction, performance, and costs. In addition, companies that are moving away from problematic chemicals do not yet have a clear path as to how to purchase, implement, and market. Those making more sustainable chemistries do not have adequate incentives, demand pull, or willingness to pay for more sustainable solutions compared to incumbents.
2. Value chain collaboration is key. The secure exchange of both critical design criteria for safe and effective alternatives and chemical composition are need for all members of the value chain to succeed. Recent global events have further reinforced the need for resilient supply chains.

3. Education and effective communication focused on sustainable chemistry continue to be needed. From executives to the next generation of employees, all stakeholders need to be aware of the needs, opportunities, and practice of green and sustainable chemistry. There is also a need for companies to communicate their sustainable chemistry-related efforts to consumers, who are asking for safer and sustainable products.
4. Policy is needed that both discourages chemicals of concern while encouraging and rewarding frontrunners who have already implemented green chemistry solutions. Crafting fiscal policies that incentivize investment and creating methods for secure supply chain chemical communication are both key areas that the government can help companies.
5. There is no time to lose – green chemistry solutions must be accelerated to meet pressing societal and planetary needs. Everything from new molecules to new infrastructure and digitization processes will be needed to address the challenges of climate change, chemical pollution, and biodiversity loss.
6. The GC3 can fill a missing niche in accelerating green and sustainable chemistry in Europe. Participants advocated for clearer criteria and case studies that demonstrate successful strategies in growing green chemistry across the value chain. They also appreciated the collaborative nature of the GC3 – breaking down the silos that exist between companies as well as between companies and governments, allowing discussion on real challenges and pragmatic solutions.

## Forum Summary

The Forum included keynotes from leading thinkers, short presentations, and panel discussions, as well as small discussion groups.

The meeting began with companies sharing their green and sustainable chemistry journeys. From across the value chain, presenters stressed that their journey continues to evolve. Ten years ago, the focus was on constructing lists of restricted chemicals, but now there is a much more holistic view of green chemistry needs. This holistic view also encompasses lower toxicity, circularity, climate impact, other sustainability criteria, and (of course) performance. Next, the barriers to the adoption of safe and sustainable chemistry were discussed in breakout sessions. Participants discussed the need for metrics and the need for green chemistry solutions to scale quickly. The issue of adequate data on chemical ingredients and toxicity – both for internal and regulatory purposes – also emerged as a current barrier.

Accelerating research, innovation, adoption, and scale of sustainable chemistry was the focus of the next set of presentations and breakout sessions. Presenters and participants noted that long-term goals were essential to guide a roadmap to sustainable chemistry and, eventually, implementation. Policy advocates, NGOs, and government representatives also detailed their upcoming initiatives and gathered feedback from the audience. In breakout sessions, participants identified training, collaboration across value chains, and transparency as accelerators for green and sustainable chemistry. Policy's potential to drive green and sustainable chemistry was also identified as a critical driver, and the specific areas where governments could help companies were identified.

The following session focused on advancing the design and adoption of sustainable plastics. Presenters stressed that this field was rapidly evolving, and therefore their approach was multi-pronged in the

assessment and use of recycled or biobased plastics. There was broad agreement that the current trend of using virgin fossil-based carbon had to end, that sustainable plastics must also be safe, and that companies increasingly see themselves as responsible for plastics throughout their life cycle.

The Forum ended with a discussion about how GC3 could benefit European efforts in safe and sustainable chemistry. Select GC3 members indicated that networking across the value chain – a hallmark of GC3 - was invaluable. Attendees thought that GC3 could help them to identify specific innovation challenges and facilitate discussions on solutions. The GC3 could also help with the search for big picture and long-term solutions that transition chemistry. Particular areas where the GC3 could be helpful include: Bringing a voice of individual companies into discussions on implementation of European Green Deal Strategies; linking innovative start-ups with value chain partners to solve technology challenges; engaging European retailers with brands and chemical suppliers to advance safe and sustainable alternatives to chemicals of concern ahead of regulation; engaging the investment community around sustainable chemistry; supporting implementation of Green Deal strategies, and developing criteria and approaches to measure progress towards sustainable chemistry.

## Participants and Feedback

GC3 European Forum participants represented a broad range of constituents, including companies across sectors and the value chain, government representatives, consultants, and NGOs – demonstrating the broad and trusted networks GC3 engages. Company representatives made up the majority of those present (85%). Company representatives from vastly different points in the supply chain engaged with each other at the Forum – from chemical manufacturers to retailers. Service providers to these industries, who may supply data pipelines or chemical safety information or services, were also present.

GC3 European Forum participants were involved in many distinct roles within this mix of companies. Among the attendees were CEOs and Chief Sustainability Officers, who provided big-picture perspectives. The GC3 Forum included technical professionals, such as R&D directors, scientists, and product managers, who were skilled in discussing problems and specific emerging solutions. Regulations and communications specialists, such as policy officers, sales, and communications managers, provided necessary context and framing for the development of new chemicals and products. The GC3 leveraged these participants' various perspectives to create a network that identified the sustainable chemistry communities' needs and opportunities.

About 75% of participants were based in Europe from nine different European countries, in addition to the US and Canada

Responses to the post-event survey indicated that 88% of the respondents indicated that they would either be *likely or highly likely* to attend another GC3 Forum.

## Next Steps

There are other organizations in Europe working across the value chain to advance green and sustainable chemistry solutions. As such, there is a unique and evolving role for the GC3, partnering with other key organizations in Europe, such as ChemSec and CEFIC and other trade associations across the value chain, and research organizations, such as the Nova Institute, in advancing sustainable chemistry as part of Green Deal policies.



The next GC3 European Forum will be hosted by Covestro at their corporate headquarters in Leverkusen, Germany on June 13-15, 2023.

If you are interested in becoming a member or sponsoring the engagement efforts of the GC3, please contact Jenny MacKellar, Program Director, at [jenny@greenchemistryandcommerce.org](mailto:jenny@greenchemistryandcommerce.org).

***“We look forward to working with you as we strengthen our organization’s impact in accelerating the growth of green and sustainable chemistry solutions.”***

**- Joel Tickner, Executive Director of the GC3**