

Building an agenda to scale up

GC3 outlines its strategy to mainstreaming green chemistry



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This month, the Green Chemistry and Commerce Council (GC3), a cross sectoral, business-to-business network of companies and other organisations working to advance green chemistry, will release its *Agenda to mainstream green chemistry*.

This is the result of more than two years of research, interviews and discussion among GC3 member companies and other stakeholders. It outlines the council's strategy and planned actions to accelerate research, innovation and the scale of green chemistry.

It will guide our work, in the coming years, as we collaborate with businesses, policy makers, investors, researchers and advocates.

In my previous article, I wrote about barriers that we have identified. These include: the complexity of global supply chains, the costs and time to implement and adopt new technologies, and limited investment, incentives, education and metrics. While discussing these barriers and drivers, the agenda focuses on how the GC3 and other stakeholders will push efforts to scale up globally.

The areas identified are:

- » **enhance market dynamics.** Building a comprehensive, ongoing understanding of enablers, market drivers and obstacles allows more effective intervention that creates market shifts to support its research, development and adoption.
- » **support smart policies.** Designing and advocating innovative state and federal policies can support the supply of, and demand for, green chemistry solutions.
- » **foster collaboration.** Facilitating the flow of information among suppliers and producers, as well as putting together



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The Green Chemistry and Commerce Council's agenda aims to "integrate" green chemistry into research, education, policy and efforts to accelerate innovation

partnerships to tackle priority challenges and supporting the collaborations necessary to grow it in the marketplace.

- » **inform the marketplace.** Disseminating information about the economic, health and business benefits, as well as the opportunities and funding that create a clearer case.

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- » **track progress.** Improving metrics, data gathering and reporting progress provides a way of demonstrating the benefits and helps us understand where interventions

are necessary to accelerate green chemistry. To support dialogue on designing appropriate metrics, the GC3 released a white paper on *Measuring progress towards green chemistry*.

The agenda also outlines actions that the GC3 will carry out to integrate green chemistry into research, education, policy and efforts to accelerate innovation. These include:

- » supporting innovative policies, such as the US Federal Sustainable Chemistry Research and Development Act of 2015, that would create incentives, education, research and partnership opportunities, and support funding and technical support for research, adoption and manufacturing. The GC3 will be working with the American Chemical Society Green Chemistry Institute (ACS GCI) and others to organise briefings with policy makers to discuss a range of policies and incentives;
- » convening a national summit on green chemistry research and education, to elevate the importance of its focus in these

areas [similar to the 2015 summit on climate change and health, hosted by the US White House and leading schools of public health]. It would build on existing efforts by the ACS GCI, Beyond Benign and the Green Chemistry Education Network to embed the approach in science, engineering, business and public health;

- » establishing collaborative supply-chain partnerships to accelerate research, development and adoption, such as the GC3's Collaborative innovation project for preservatives in the personal care and household products sectors. The GC3 recently released a statement on criteria for new preservatives for personal care and household products that was developed with twelve major brands. It is now working with these, and major retailers Walmart and Target, to design green chemistry inspired preservatives, including an evaluation of how to take identified solutions to scale; and
- » developing innovative tools and resources to support education, research, collaboration and adoption. There is a need for easily accessible resources to build the community of researchers and practitioners. To help support this, the GC3 has recently launched two web-based portals. The

Innovation Portal, developed with the ACS GCI, helps practitioners identify needs and opportunities for innovation, links research and business communities and educates the market about existing green chemistry solutions and R&D efforts. The Safer

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Chemistry Training for Business curriculum is a web-based course for continuing supply chain education to enhance practitioners' understanding.

The agenda is focused primarily on the US. However, given the global nature of supply chains, it is critical to build collaboration that can advance the strategies, outlined in the agenda, worldwide. For example, the German government recently launched an International Sustainable Chemistry

Collaborative Centre, to create synergies between initiatives globally. The centre has a specific focus on integrating green chemistry into the United Nations activities on chemicals management, such as the Strategic Approach to International Chemicals Management (Saicm). York University in the UK has established the Global Network of Green Chemistry Centres (G2C2) to foster collaboration between researchers and educators around the world. The GC3 will continue to work with these organisations.

While recognising the many challenges to mainstreaming, we remain hopeful that there are sufficient drivers, opportunities and energy to advance green chemistry in the coming years. However, we know this will require a more strategic, coordinated and collaborative approach.

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