

GC3 Project Updates 2016-2017

Measuring Progress Towards Green Chemistry

In 2015, the GC3 contracted with Ann Blake, of Environment & Public Health Consulting, to perform a landscape analysis of potential green chemistry metrics. The purpose of that analysis was to identify the types of metrics that might help measure positive movement towards making green chemistry become mainstream practice nationwide. Blake classified metrics in to 4 categories:

- Molecular/Process-Level
- Product and Material-Level
- Firm and Sector Level
- Societal-Level

This past year, the GC3 built on this work to look more deeply into societal-level metrics—macro-level (vs firm-level) metrics that can be used to measure progress on any or all of the five activities the GC3 includes in its vision of green chemistry becoming mainstream practice*. It also identifies potential partners to consider in developing or measuring metrics. The goal is to help identify ways to measure whether state and federal programs that support green chemistry are being successful in achieving their goals.

To develop this paper, the GC3 reviewed the earlier 2015 green chemistry metrics landscape analysis and other literature and interviewed key resource-people to get their perspectives regarding the types of metrics that would be appropriate and who might be responsible for collecting them. The GC3 updated members on the results of this research on its March member call. The results of this work will be turned into a white paper for input by GC3 members and others before determining next steps. The GC3 will explore how these metrics can get integrated into federal and state green chemistry policy initiatives.

For questions or further information, please contact Amy Perlmutter at amy@aperlmutter.com.

* The GC3 defines the mainstreaming of green chemistry as being when it is embedded in the sustainability goals, innovation, R&D and sourcing strategies of firms through design guidelines, personnel hiring and reward practices, and metrics; it is an integral part of all chemistry education, including workplace education; it is a core element of all government and private sector funding for chemistry and materials research and sustainability initiatives; products of green chemistry are readily available throughout the value chain at high performance and reasonable cost; and an ecosystem of green chemistry entrepreneurs is flourishing.

Communications Strategies for Enhancing the Impact of the GC3

Last year, the GC3 started a communications process to support expansion of its network and impact and increase its visibility and message around green chemistry innovation. In the first phase of this work, the GC3 contracted with the communications firm WestWordVision in 2016. WestWordVision reviewed the GC3 website, reports, PowerPoint presentations and other select documents, and looked at existing key messages. Paula Schaper of WestWord Vision also designed and conducted twenty-five hour-long interviews. The result of this work was identification of the GC3's value proposition and impact (a key message platform), along with recommendations for how to communicate them.

To build on this work, this year the GC3 hired the communications and marketing firm, Sustainability Consult, based in Brussels, to turn this information into new marketing materials for the GC3 that better reflect its value to its target audiences. This work will be completed over the next few months. Sustainability Consult will also recommend an ongoing outreach strategy.

For questions or further information, please contact Amy Perlmutter at amy@aperlmutter.com.

Funding Green Chemistry Innovation and Scale

The GC3 hired Michele Jalbert, of Effective Advocates, LLC, to identify sources of federal government funding and financial support that could potentially be accessed to support green chemistry— from R&D through market development, including grants, loans and loan guarantees, and purchasing programs. This research has yielded a list of programs that, while not necessarily targeted directly towards green chemistry, are concerned with topics of relevance to green chemistry, such as water and energy conservation and waste reduction, improving public health, creating jobs, and/or purchasing less toxic materials. The survey of programs will be discussed in a Solve My Problem breakout session at the Innovators Roundtable to get feedback on what experiences participants have had with any of these programs and what, if any, programs may be missing. The final document will be a report that makes the case for more funding for green chemistry, even without unlikely new appropriations. It will provide some analysis for funding agencies about how green chemistry fits with their priorities, and provide examples of how funds would be helpful to meet green chemistry needs. It will also be helpful to GC3 member companies in identifying sources of funding that they may not have been aware of, and may include a searchable database on the GC3 website.

For questions or further information, please contact Amy Perlmutter at amy@aperlmutter.com.

Advancing Federal and State Level Green Chemistry Policy

The metrics, communications, and funding projects all form part of the GC3's new strategy initiative to advance green chemistry policy at the federal (and state). An additional component of this strategy is interviews of staff on Capitol Hill and at agencies, and advocates to gain an understanding of priorities under the current administration, and opportunities to advance green chemistry. These interviews and outreach have conducted by Michael Parr, of The Parr Policy Group, and Michele Jalbert. They have also organized the kick off panel for the Roundtable, The Changed Political Landscape: What This Means for Green Chemistry, featuring a wide range of

views, and a breakout session on the last day of the event. The work will result in a report to the GC3 with suggestions of messaging, approaches, and partners to promote green chemistry on the federal level. The goal is to leverage the GC3's market strength to enhance federal and potentially state leadership in green chemistry innovation.

For questions or further information, please contact Amy Perlmutter at amy@aperlmutter.com.

Retailer Leadership Council (RLC)

The GC3 Retailer Leadership Council (RLC) was formed in December 2013 to promote safer chemicals, materials and products across retail supply chains. The RLC meets on a monthly basis via conference call to share ideas and discuss different approaches retailers are using for sourcing and selling safer products. RLC members include Best Buy, CVS Health, Home Depot, Lowe's, Staples, Target, and Walmart and welcomed Kingfisher as a new member in 2016. Kingfisher, based in the UK, is comprised of several brands, including B&Q, a home improvement and garden center retailer.

In 2016, the GC3, in consultation with the RLC, developed educational/training materials for retailers to use in conversations with their suppliers about green chemistry and safer alternatives to chemicals of concern. Materials have been created for two product categories: household cleaning/janitorial products and furniture. RLC members are now adapting these materials for use in their organizations. The RLC is now exploring additional projects, some of which may build from its Joint Statement on using Green Chemistry and Safer Alternatives to Advance Sustainable Products.

For questions or further information, please contact Sally Edwards at sally_edwards@uml.edu.

Green & Bio-Based Chemistry Start-up Network

The GC3 Green & Bio-based Chemistry Startup Network was launched in 2016 to help accelerate the development and market adoption of green chemistry technologies by supporting the growth of green and bio-based startup companies. Building on the success and energy from the inaugural [Startup Event](#), held the day before the 2016 Innovators Roundtable, we have created a community of innovative startup companies who are actively bringing technologies and products to market that advance one or more of the 12 Principles of Green Chemistry. [We now have 18 startup members](#), with technologies ranging from safer textile processing chemicals to greener flame retardants to novel bio-renewable surfactants.

On Feb 1, 2017 we held a workshop focused on partnering and investing at Levi Strauss & Co Headquarters entitled [Leveraging Partnerships to Accelerate Green & Bio-based Chemistry Innovation](#). Twenty six startups, 20 large companies and investors - over 80 people total - participated in the one-day workshop and networking event in San Francisco. An article summarizing the event and key learning [was published in GreenBiz](#) on March 15th.

We also launched the Innovation Spotlight webinar series to highlight technologies being developed by GC3 Startup Network members. [The first webinar](#) focused on greener flame retardant technologies of two Startup Network members: FRX Polymers and Paxymer. We will

continue to spotlight green chemistry technologies and solutions through these webinars in the upcoming year.

At this year's Innovators Roundtable, we will be hosting the second annual startup event, entitled the [Green & Bio-Based Chemistry Technology Showcase & Networking Event](#). We will be featuring 10 invited startup companies as well as discussing strategic needs of 5 different industry sectors – providing an opportunity to discuss both technology needs and technology solutions.

For questions or information, please contact Laura Hoch at laura_hoch@uml.edu or Monica Becker at monica@monicabecker.com.

Collaborative Innovation - Preservatives Competition

After months of collaborative work with our partner InnoCentive, and signing on 20 sponsors, the GC3 is about to launch a global competition to identify and award prizes to innovators with promising, safe and effective preservative systems for cosmetics, personal care and household products.

The sponsors are 11 consumer product companies, 2 major retailers, 4 chemical suppliers, an NGO and a government agency: Babyganics, Beautycounter, Beiersdorf, Colgate-Palmolive, Johnson & Johnson (J&J), Kao, Method – People Against Dirty, Procter & Gamble (P&G), Reckitt Benckiser (RB), SC Johnson, Unilever, Target, Walmart, Dow Microbial Control, Lonza, Schülke, Thor, Environmental Defense Fund and the Minnesota Pollution Control Agency. The companies sponsoring the competition seek to partner with innovators to co-develop, license or invest in new technologies to speed them to market.

This competition will award 3 – 5 cash prizes from the \$175,000 prize pool, with a minimum single prize award of \$25,000. The sponsors seek submissions for broad spectrum or single action chemical agents that are effective on gram-positive bacteria, gram-negative bacteria, yeast, and mold; preservative boosters and multi-functional ingredients that have a primary non-preserving function, yet enhance antimicrobial efficacy. Up to 5 finalists will be invited to present their technologies at a meeting in the winter of 2018 in the U.S. and to network with representatives from consumer product companies, major retailers, and preservative suppliers. Innovators will not be required to give up their intellectual property, rather, all who submit to this competition will gain significant visibility and receive feedback on their technologies.

Through this work the GC3 is developing a collaborative model for bringing new, strategically important green chemistry technologies to market for one or more sectors or applications. We plan to replicate the model in other areas.

For questions or information, please contact Monica Becker at monica@monicabecker.com.