

# 11<sup>th</sup> Annual GC3 Innovators Roundtable Session Proceedings

Hosted by Seventh Generation in Burlington, VT

May 26<sup>th</sup>, 2016

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## GC3 PROJECT BREAKOUT SESSIONS:

*Mainstreaming, Communication, Education, and Innovation*

### 1) Mainstreaming Green Chemistry

Facilitator: Joel Tickner

This discussion group focused on concrete government and market policy activities that would serve to accelerate adoption of strategies outlined in the GC3 Agenda to Mainstream Green Chemistry.

Joel Tickner presented a summary of the Sustainable Chemistry R&D Act that was not successfully included in the TSCA reform language. These provisions could become a set of government support elements that GC3 could advocate for moving forward:

- **Support for sustainable chemistry research, development, demonstration, technology transfer, commercialization, education, and training** through grants, partnerships, loans, prizes and interagency collaboration
- **Developing methods for federal government to create incentives for sustainable chemistry**, including funding technical support, etc.
- **Expanding the education and training** of students and professionals
- **Collecting and disseminating information on sustainable chemistry research, development, and technology transfer -- barriers and opportunities**
- Supporting (including through technical assistance, participation, financial support, or other forms of support) **venues for outreach and dissemination of sustainable chemistry advances**
- **Developing metrics** to track the outputs and outcomes of the Program

The core question that guided the discussion was what actions are needed that GC3 could support to advance the cause of green/sustainable chemistry, particularly on the policy front.

Discussion revolved around the following ideas:

### **Engage with Federal Agencies/Congress:**

- Compile a list of federally available funding opportunities and incentives (such as tax incentives, international tariff support) for GC3 members, including non-traditional green chemistry funders such as USDA and Department of Energy. Use this list to publicize green chemistry within federal agencies that may have money for adjacent efforts and educate them on the potential linkages.
- Organize a Green Chemistry 101 training for key policy-makers and their staff on the federal, state and local levels. This should involve Small and Medium Enterprises (SMEs) to tell powerful green chemistry business stories.

### **Engage More Effectively with Business Leaders to Build Support for Green Chemistry Actions and Policies:**

- Engage C-suite leaders in a discussion about green chemistry, with a focus on long-term investment in research, development and adoption (a model could be business leaders convening internationally around climate change).
- Engage investment community leaders in discussions about the need for long-term investments in green chemistry solutions and the business case.

### **Engage New Constituencies in the GC3 to Accelerate Green Chemistry:**

- Bring more value-chain players to GC3 discussions, perhaps through sector side-meetings along the lines of the Retail Leadership Council, and including new sectors such as the Auto sector.
- Find creative ways to educate supplier networks more effectively without changing the intimacy of the GC3 Innovators Roundtable.
- Expand usage of the Chemical Footprint Project to the same level as the Carbon Disclosure Project, increasing the environmental and sustainability interest of the investment community.
- Reach out to non-chemistry academic partners in engineering, architecture, business, etc., to identify champions.
- Think broadly about potential partners that can help leverage green chemistry's message to new audiences (similar to the climate movement's partners in the religious community). Suggestions include the American Sustainable Business Council, the B Corp Community, etc.

## **2) Communication**

Facilitator: Amy Perlmutter

One of the GC3's five strategies for mainstreaming green chemistry is to Inform the Marketplace. This group discussed:

- communication-related actions that the GC3 could take to address any of the barriers described in its Agenda to Mainstream Green Chemistry;
- topics that members might like to know more about regarding communicating within firms, B:B, and B:C;
- research or experts that could be featured on a GC3 webinar or considered as part of a panel for next years' Roundtable.

### **Communication-Related Actions That The GC3 Could Take:**

- Create incentives (cash reward, recognition, etc.) for GC3 partner organizations that work together to launch a new product based on green chemistry. This could be used to create case studies, and also provide evidence that the GC3 network is working.
- Collaborate with search engine sites such as SpecialChem, UL Prospector, and CleanGredients to include a special note for chemicals and materials that are green chemistry. This would be helpful for chemists and material scientists to search for materials based on desired properties.
- Automotive and healthcare represent the largest segment of the U.S. economy, however, they are not represented at the GC3 Roundtable. It is important to include them to have more purchasing power over the supply chain to adopt green chemistry products.
- Help consumers to understand the difference between "acute" and "chronic" health effects, as well as the difference between "exposure" and "risk."
- The "Dr. Oz effect" can be huge- when he says something, people listen. What trusted expert(s) can the GC3 approach to talk about green chemistry?
- Educate journalists and other media experts about green chemistry issues and messages.

### **Topics You Would Like to Learn More About Regarding Communicating Within Firms:**

- There are numerous labels and it generates a lot of confusion to firms and their consumers. Labels such as Safer Choice are not green chemistry, but are a step in the right direction. What are the positive or negative perceptions of the various labels and certifications in the green/sustainability space?
- Which terms have the most positive resonance with consumers: chemical-free, safer, sustainable, green chemistry, wellness, etc.
- Methods to communicate and spread sustainability and green chemistry concepts and awareness within a company.
- How to educate merchants and buyers about green chemistry within a company.
- How retailers and other companies can better communicate to the scientific/engineering community to highlight the product needs in the area of green chemistry, i.e. safer water repellants, safer wrinkle free chemicals, etc.

- How to inform people about the hazards of chemicals without scaring them.

### **Research or Experts That Could Be Featured by GC3:**

- Research on consumer trends/preferences by the Natural Marketing Institute.
- Communicating about science, perhaps combining scientists and journalists/marketers on a webinar to explore the best methods to communicate technical and scientific results.
- A Roundtable session or webinar focused on effective communication strategies for green chemistry-related messages.

### **3) Education**

Facilitator: Saskia Van Bergen

The education work group discussed its two major projects: Safer Chemistry Training, and the internship program.

#### **Safer Chemistry Training:**

The training has been edited so that viewers can watch the whole presentation or jump to individual speakers. Each talk also is ranked by the level of chemistry involved. Discussion focused on how to get more people using it, including those outside the sustainability field:

- Sections have been added to the UW professional and continuing education Green Chemistry and Chemical Stewardship certificate program.
- The training has been added to a few websites and mentioned in the GC3 innovation portal when people ask for an education resource.
- A blast email was sent to Mrs. Meyer's Clean Day group.
- Could be referenced in an email when trying to educate others
- It should be pushed to new employees/interns.
- Highlight specific material to certain people.
- Link certain parts of the material to certain topics.
- Mark Mason (University Professor) hopes to link some of the webinars in the Fall to some of his courses).
- Are there any follow-up webinars that can be added?
- Push it through industry associations.
- Offer something to entice people to watch them.
- Send out emails as a campaign rather than just one.
- Tie the webinar/training to the innovation Portal so you can "ask the expert."

- People have the most time to do this kind of thing when they first start a job. How can we get to the new employees? A check-list might engage people more.
- Can the training become accredited for continuing education for LEED AP, Architects, Designers, occupational safety, etc.?
- Build collaborations with partners like Beauty Brains, UL Prospector, etc.
- Offer a certificate of completion to people who finish the training.
- Conduct proactive marketing for one or two webinars that can be used to remind attendees of other webinars.
- Continue the careers webinars of the past two years.

### Internship:

Four internships are available for this summer. The number of student applicants went down from last year, though. How can this be promoted to students, especially outside of chemistry departments, and is this something that GC3 companies are interested in continuing?

- Many companies are looking for someone who is interested in being hired on full time after internships.
- Talk to companies to define what kinds of projects they do with an intern for a limited amount of time.
- Many graduate students in chemistry can't even take a summer internship. Would targeting the internships towards undergraduates make it easier to find applicants?
- Certain universities do allow summer internships for their traditional research-based graduate students (University of Toledo).
- It might be more beneficial to offer options for time frames.
- Send continued reminders to GC3 companies for next year's interns, especially late summer/fall.
- Offer externships.
- More understanding is needed for how the program works:
  - Integrating with current internships programs
  - What is expected
  - Logistics
- Use the Innovation Portal to promote internships.
- There will be more students in the pipeline over the next few years that have a green chemistry interest.
- The universities also tend to have corporate networks where they can place students for internships.
- Consider putting the focus on creating a network between universities and companies, rather than committing to an actual GC3 internship program.
  - Companies said they can find interns fairly easily but don't know what school can offer internships

- Universities would list when the common hiring season is for their students' summer internships
- GC3 as a passive participant rather than active
- Need a metric and way to collect it.
- Parameters for companies:
  - How many interns are usually hired
  - Pay range for internships
  - Skills sought
  - Date range(s) for internships
- Parameters for universities:
  - Types of students looking for internships
  - Hiring season
  - Links to department websites
- Parameters for students:
  - Availability (dates, hours, etc.)
  - LinkedIn profile link
  - Interests
  - Skills
- Use the matchmaking portal for full time jobs, not just internships.
- Send out a survey every year to all participants re: matches, hiring of interns, stories, etc.
- Better leverage LinkedIn?
- Create a community of practice—highlight interns each year, even if they are not technically GC3 interns.
- Show that internships help with a path to employment, especially if students have a diverse background (business, engineering, GC, etc.).

### **Additional Thoughts:**

- Include green chemistry in ACS standard exams- its impossible to create green chemistry innovation without more people with green chemistry backgrounds.
- A stand-alone certificate might be a better option than making green chemistry part of the curriculum.
- Get a Khan Academy course in Green Chemistry.

## **4) Innovation**

Facilitator: Monica Becker

This session largely focused on the Collaborative Innovation Project on Preservatives. The goals of the project (expanding the palette of safe and effective preservatives for personal care and household products, and creating an accelerated model of pre-commercial collaboration) were reviewed. Initial efforts resulted in the release of a

need statement and development criteria by the companies involved in the project. This is being utilized by preservative suppliers to guide their preservative development efforts, and is serving as the foundation of the soon-to-be-launched open innovation competition organized by the GC3. Acting as the catalyst for this competition, GC3 is looking to bring brands, suppliers, and retailers together in a crowd-sourced open innovation challenge. Individuals and organizations in academia and industry will be asked to submit ideas for new preservative technologies, which will be evaluated by a panel of judges, tested for efficacy and screened for safety by contract labs and risk assessors, respectively. GC3 is looking to cast a wide net, and not looking for a specific technology, so submissions in skincare, detergents, etc. are acceptable. InnoCentive will run the competition and make sure that participants' IP is not threatened. Suppliers will get access to the submissions after finalists are selected.

The new GC3 Green & Bio-Based Chemistry Startup Network was also briefly discussed. An inaugural event was held prior to the 2016 GC3 Roundtable with the goal of connecting bio-based startups to large companies, brands, and retailers to enable faster market adoption of green technologies. Each of the 10 participating startups gave a 5-minute presentation on their technology followed by networking. Suggestions to expand the event and evaluate its effectiveness were discussed, including asking the participating chemical and product manufacturers and retailers to present their needs at the meeting (a deeper look at the demand side), in addition to having start-ups present their companies, technologies and products.