





GC3 Green Chemistry & Commerce Council





Green Chemistry and Commerce Council (GC3): A Year in Perspective

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Headlines





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GC3 Green Chemistry & Commerce Council

Chemicals, alone or in combination, are the platform upon which key elements of the global economy have been built, and have been incorporated into millions of products used every day. Many chemicals may have inherently harmful characteristics that can impact ecological and human systems as they are used throughout supply chains.

A growing number of companies are discovering that the approaches of green chemistry and Design for Environment (DfE) allow for a transition to safer alternatives. The Green Chemistry and Commerce Council provides open conversation about the challenges to and opportunities for this successful transition.





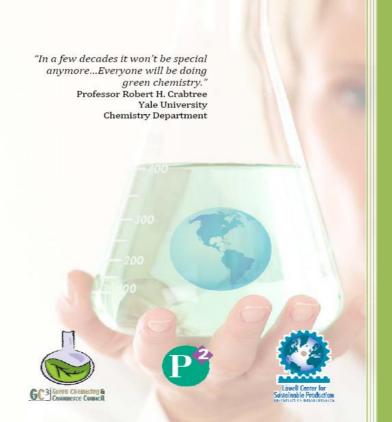
GC3 Highlights

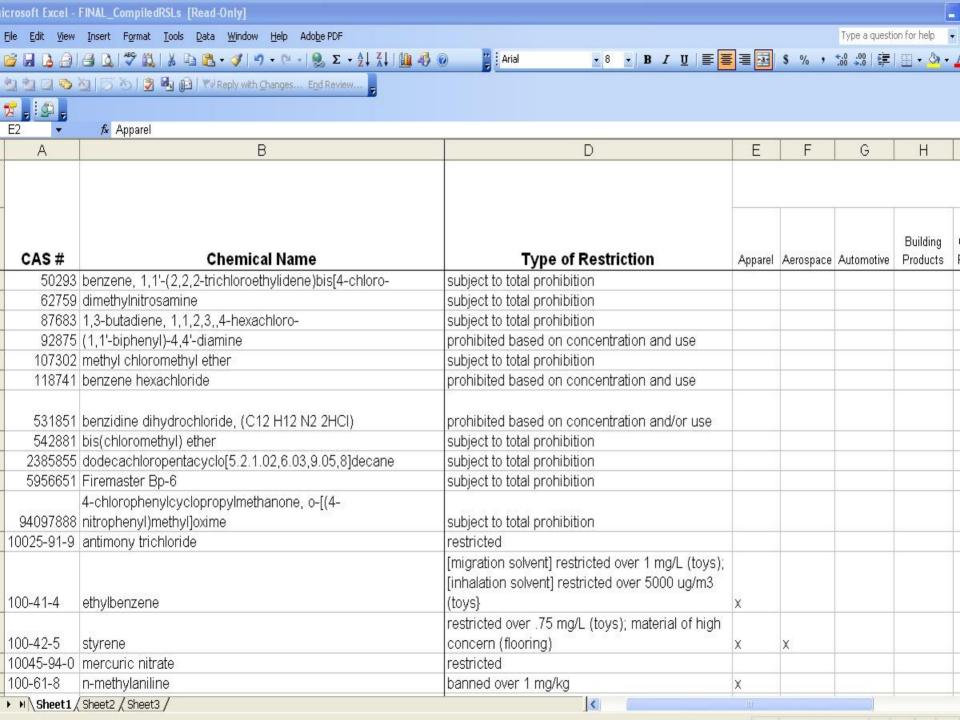
- Publication of "An Analysis of Corporate Restricted Substance Lists and Their Implications for Green Chemistry and Design for Environment."
- Publication of "Growing the Green Economy Through Green Chemistry and Design for Environment: A Resource Guide for States and Higher Education (State's Guide to Creating Opportunities for Green Chemistry and Design for Environment) with the National Pollution Prevention Roundtable.
- Development of GC3 Business Plan and Advisory Committee Elections.
- Research on supply chain information flows for publication. Presence at the RILA Conference and engagement with retailers.
- Research on product chemicals management in the retail industry for publication.
- Development of a "green glossary."
- Significant progress in discussions towards a formulators DfE "standard."
- Increased recognition of GC3 as a powerful network of leading firms dedicated to advancing safer chemicals and products.

2009

A Resource Guide for States and Higher Education

Growing the Green Economy Through Green Chemistry and Design for the Environment





GC3 Advisory Committee

- Melissa Coffin, Lowell Center for Sustainable Production
- > Richard Cottrell, Sysco
- Berkeley Cue, Pfizer (retired)
- > John Frazier, Nike
- Lauren Heine, Lauren Heine LLC
- Bob Israel, Johnson Diversey
- > Rich Liroff, Investor Environmental Health Network
- Dave Long, Environmental Sustainability Solutions
- > Roger McFadden, Corporate Express
- Joel Tickner, Lowell Center for Sustainable Production
- > Yve Torrie, Lowell Center for Sustainable Production

GC3 Working Groups

- Advancing Design for Environment (DfE) and Green Chemistry
 - Focusing on transparency of the federal Design for Environment program; advancing green chemistry legislative initiatives; advancing state green chemistry initiatives.
- Tools for Chemical Assessment and Safer Design Exploring lessons of how companies share information up and down supply chains and how they apply that information towards safer design; exploring creation of a "minimum data set" of information needed to make better chemical choices.
- Drivers for Innovation and Marketing Exploring the role of the retail sector in advancing safer products and how to effectively engage this sector.

Progress in Working Groups

- ➤ Tools RSL database and report, initial case studies discussions on chemical assessment, prioritization and management schemes.
- DfE/Green Chemistry meeting with EPA officials, Meetings with National Pollution Prevention Roundtable.
- Drivers Discussions around "green" terminology and preliminary survey of retailer product chemicals management systems.

What's new in the past year

- Change in tone and tenor in Washington and beyond.
- Growth of and excitement about Green Jobs and the Green Economy.
- Economic Crisis.
- Increased acknowledgement of limits of TSCA and need for reform. Still disjointed approach to policy.
- More and more policy development at state level and collaboration between states.
- Companies preparing for REACH and its implications for supply chains. First Authorization list.
- Increased consumer concern about toxic substances in products.
- Increased retailer and chemical user engagement in demanding greater information and safety through supply chains.



New Era of Hope, Positivity and Collaboration – Younger Generation Engagement

- http://oneminuteshift.com/videos/its_not_too_late
- http://www.youtube.com/watch?v=kA_DZsDRvyA&featur e=PlayList&p=CF1EB44A578E5B1F&playnext=1&playn ext_from=PL&index=2



One Hundred Tenth Congress of the United States of America

AT THE SECOND SESSION

Begun and held at the City of Washington on Thursday, the third day of January, two thousand and eight

An Act

To establish consumer product safety standards and other safety requirements for children's products and to reauthorize and modernize the Consumer Product Safety Commission.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE: TABLE OF CONTENTS.

- (a) SHORT TITLE.—This Act may be cited as the "Consumer Product Safety Improvement Act of 2008". (b) Table of Contents.—The table of contents for this Act
- is as follows:
- Sec. 1. Short title; table of contents.
- Sec. 2. References.
- Sec. 3. Authority to issue implementing regulations.

TITLE I—CHILDREN'S PRODUCT SAFETY

- Sec. 101. Children's products containing lead; lead paint rule.

- Sec. 102. Mandatory third party testing for certain children's products.
 Sec. 103. Tracking labels for children's products.
 Sec. 104. Standards and consumer registration of durable nursery products.
 Sec. 105. Labeling requirement for advertising toys and games.
- Sec. 106. Mandatory toy safety standards.
- Sec. 107. Study of preventable injuries and deaths in minority children related to consumer products.
- Sec. 108. Prohibition on sale of certain products containing specified phthalates.

TITLE II—CONSUMER PRODUCT SAFETY COMMISSION REFORM

Subtitle A—Administrative Improvements

- Sec. 201. Reauthorization of the Commission.
- Sec. 202. Full Commission requirement; interim quorum; personnel.
- Sec. 203. Submission of copy of certain documents to Congress.
- Sec. 204. Expedited rulemaking. Sec. 205. Inspector general audits and reports.
- Sec. 206. Industry-sponsored travel ban.
 Sec. 207. Sharing of information with Federal, State, local, and foreign government agencies.
- Sec. 208. Employee training exchanges.
- Sec. 209. Annual reporting requirement.

Subtitle B—Enhanced Enforcement Authority

- Sec. 211. Public disclosure of information.
- Sec. 212. Establishment of a public consumer product safety database.
 Sec. 213. Prohibition on stockpiling under other Commission-enforced statutes.
 Sec. 214. Enhanced recall authority and corrective action plans.
- Sec. 215. Inspection of firewalled conformity assessment bodies; identification of
- supply chain. Sec. 216. Prohibited acts.
- Sec. 217. Penalties.
- Sec. 218. Enforcement by State attorneys general.
- Sec. 219. Whistleblower protections.



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TSCA Notice Preparations

Extensive Experience with TSCA Submissions and Reporting www.chemonecompliance.com federal government to limit or ban the use of toxic chemicals or to even obtain the information

needed to devise effective regulations, several witnesses testified before a House Energy and Commerce subcommittee

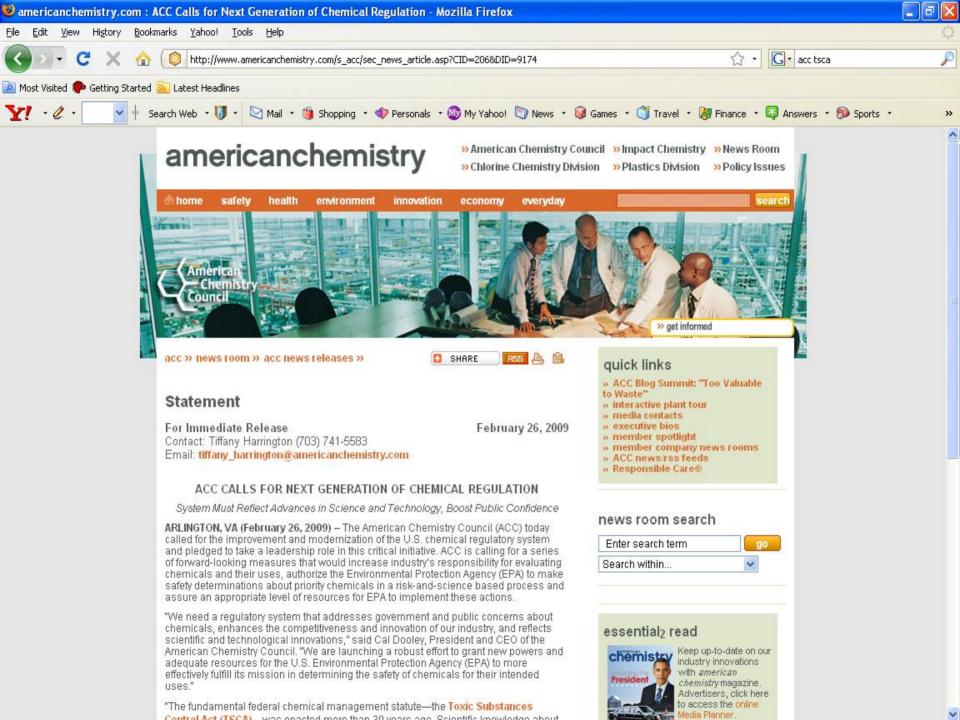
The hearing focused on the effectiveness of the Toxic Substances Control Act. Enacted in 1976, the statute gave the U.S. Environmental Protection Agency the authority to regulate chemicals

But the agency has only required testing for some 200 of the more than 82,000 chemicals in commerce and has issued regulations to control only five existing chemicals.





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FOR SAFER CHEMICALS AND SUSTAINABLE MATERIALS

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SAFER CHEMICALS Guiding Principles for Chemicals Policy



Given the debates and discussions on how to implement green chemistry, the Working Group recognized the need to develop a set of principles that would outline the path to greener and safer chemicals. The joint development of these principles helps businesses in shaping their chemical policies and NGOs in understanding the challenges and critical steps to green chemistry implementation. **Endorsement List**

To endorse the Principles, click here

Guiding Principles for Chemicals Policy by the Business-NGO

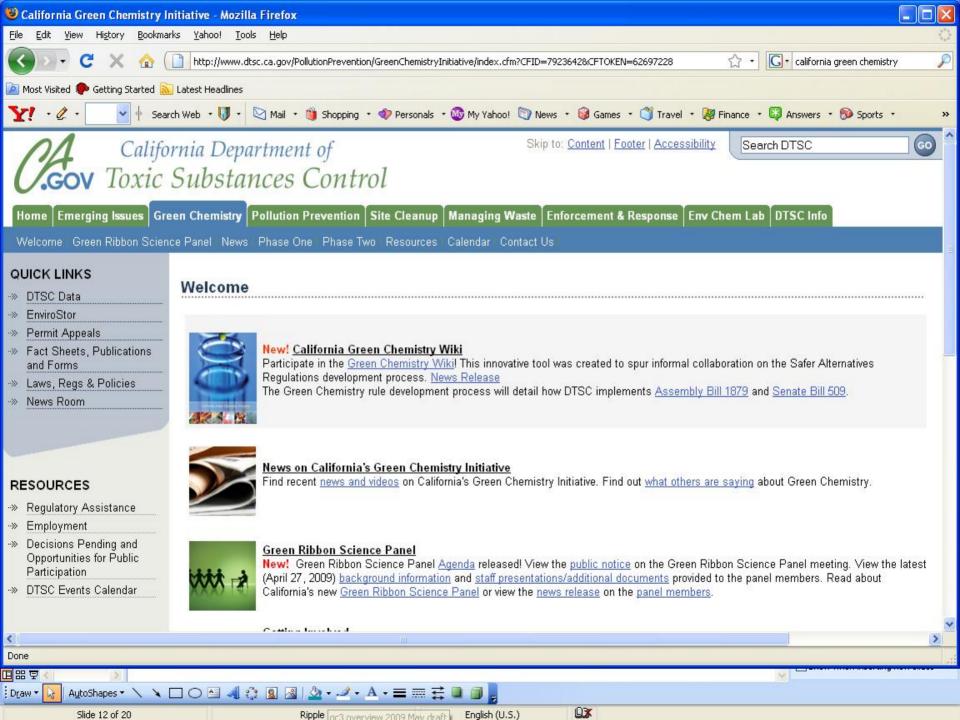
Working Group

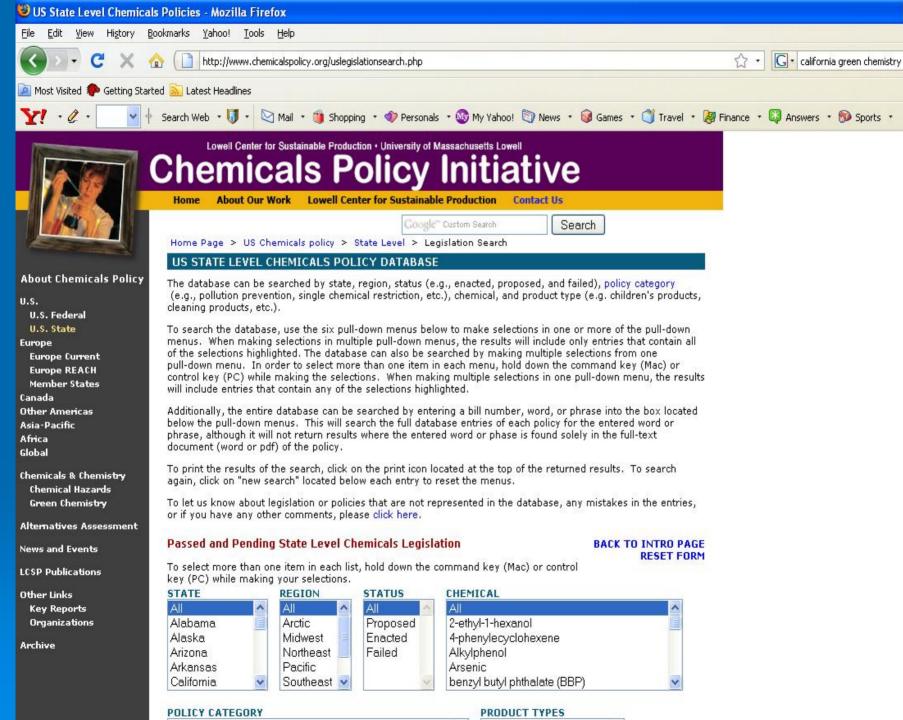
Creating Healthy Solutions for the Environment, People and the Economy

Demand for products made from greener chemicals is growing rapidly. Consumers, investors and governments want chemicals that have low to no toxicity and degrade into innocuous substances in the environment, * Leading businesses are seeking to capture these emerging market opportunities by redesigning their products and catalyzing change in their supply chains.

To advance an economy where the production and use of chemicals are healthy for humans, as well as for our global environment and its non-human inhabitants, responsible companies and their supply chains should adopt and implement the following four guiding principles for chemicals policy:

- 1. Know and disclose product chemistry. Manufacturers will identify the substances associated with and used in a product across its lifecycle and will increase as appropriate the transparency of the chemical constituents in their products, including the public disclosure of chemicals of high concern. Buyers will request product chemistry data from their suppliers.
- 2. Assess and avoid hazards. Manufacturers will determine the hazard characteristics of chemical constituents and formulations in their products, use chemicals with inherently low hazard potential, prioritize chemicals of high concern² for elimination, minimize exposure when hazards cannot be prevented, and redesign products and processes to avoid the use and/or generation of hazardous chemicals. Buyers will work with their suppliers to achieve this principle.
- 3. Commit to continuous improvement. Establish corporate governance structures, policies and practices that create a framework for the regular review of product and process chemistry, and that promote the use of chemicals, processes, and products with inherently lower hazard potential.
- 4. Support public policies and industry standards that: advance the implementation of the above three principles, ensure that comprehensive hazard data are available for chemicals on the market, take action to eliminate or reduce known hazards and promote a greener economy, including support for green chemistry research and education.









Retailers and States Take the Lead

he U.S. chemical industry has seen a new trend emerge on the regulatory front in recent years—the environmental initiatives of "big box" retailers and other downstream customers have become de facto regulatory requirements. This is a shift from the aggressive federal rules of the 1980s and 1990s that were the ndustry's primary concern. Instead, retailers as well as individual states appear to be haping environmental policy.

Federal officials have issued relatively few egulations in recent years. One example s the 1976 Toxic Substance Control Act TSCA), which provides EPA with authority o ban hazardous substances. EPA has used

the law to ban only five compounds since TSCA's creation, however.

Most of the significant environmental rules in the last 10 years have come from states, a trend that sometimes requires industry to comply with a maze of overlapping rules. The industry has also had to manage a long list of retailer demands, including calls for more sustainable packaging and the elimination of certain chemicals from finished products.

Wal-Mart (Bentonville, AR), one of the U.S. industry's most powerful customers, surprised industry executives in 2006 when it announced that it would ban three substances: propoxur and permethrin, both used in household insect-control products; and nonylphenol ethoxylates (NPE), an

ingredient in some cleaning products. Wal-Mart has not said when it will fully phase out those products, however. "Wal-Mart has worked with its suppliers and developed a timeline for elimination of these three chemicals of concern from our products and to replace them with less harmful alternatives," the company says.

Wal-Mart had also planned to announce restrictions on 17 other substances used in "chemical-intensive" products by the end of 2008, but that may take longer than anticipated, the company says. Wal-Mart is in the process of developing a screening tool to help it assess and prioritize product restrictions. "The process to prioritize the list of harmful chemicals is labor-intensive and robust

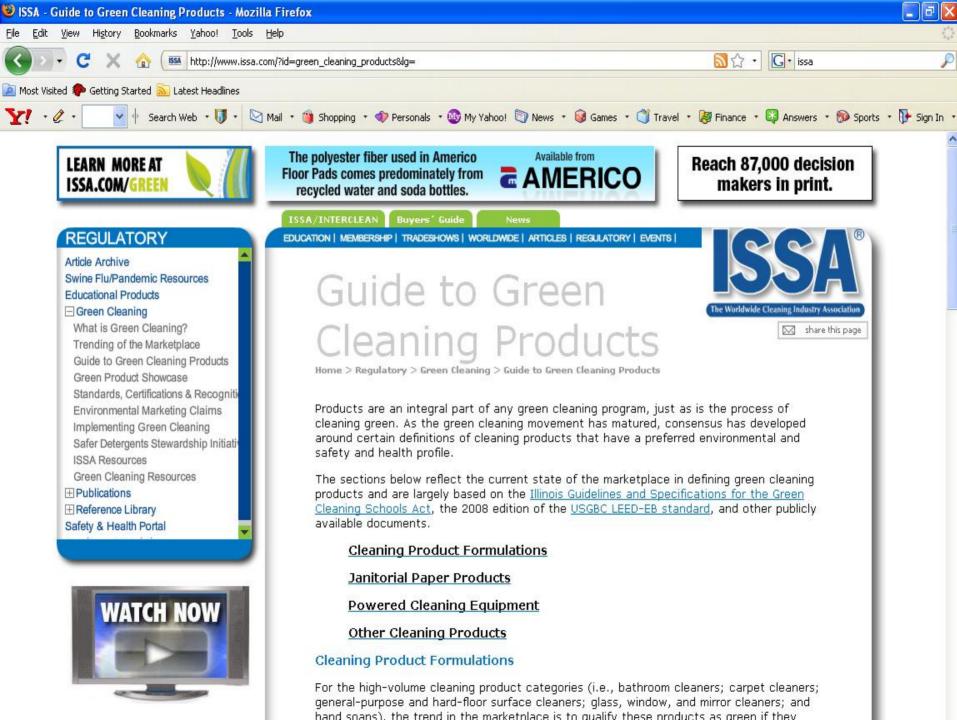
.6 Chemical Week, April 14/21, 2008 www.chemweek.com

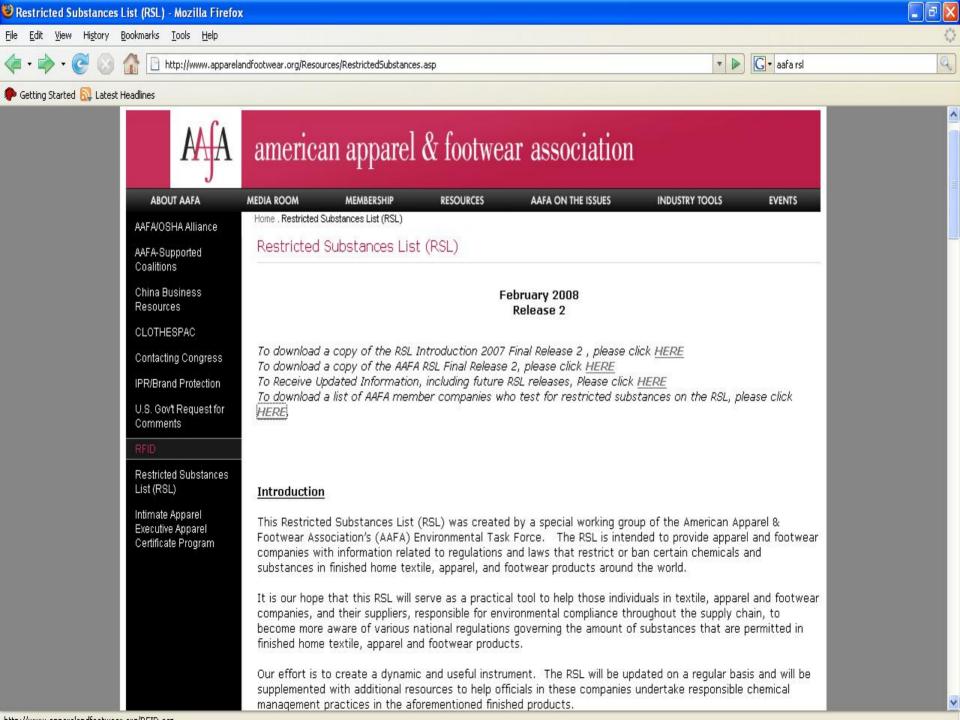






Green-wash (green'wash', -wôsh') – verb: the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service.







Why an Economic Crisis Could Be the Right Time for Companies to Engage n 'Disruptive Innovation'

ublished: November 12, 2008 in Knowledge@Wharton

While globalization has witnessed the decline of U.S. dominance in nanufacturing, energy and even finance, one thing had long been presumed nassailable: Good old American ingenuity.

low it appears that's not safe, either. China, whose industries have been nyied in the West more for their tenacity than their ingenuity, has stablished a multi-year framework to become more innovative and, nerefore, competitive. So has Singapore. Finland is merging its top usiness school, design school and technology school to create a nulti-disciplinary "university of innovation" next year.

council members of the National Academy of Sciences and the National cademy of Engineering have "expressed concern that a weakening of cience and technology in the United States would inevitably degrade its ocial and economic conditions and in particular erode the ability of its itizens to compete for high-quality jobs," according to a 600-page report from the National Academies

hort-term costs that come with the territory of innovating.



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ublished in 2007 and titled, "Rising Above the Gathering Storm." The wild card these days is what will happen to innovation -- the advance of progressive ideas in science, echnology and business -- now that the world economy is in a tailspin. The conventional wisdom might uggest that business, government and academia will be less willing to embrace the risk-taking and

et Paul J.H. Schoemaker, research director for the Mack Center for Technological Innovation, suggests nat, for some companies, the economic crisis can actually provide an innovation platform. "The crisis has nultiple impacts," Schoemaker says. "Loss of revenue and profit will at first instill a cost cutting nentality, which is not good for innovation. But if the patient is bleeding you need to stop that first. Then, owever, a phase starts where leaders ask which parts of their business model are weak (and perhaps nsustainable) and that, in turn, can lead to restructuring and reinvention."

Ie also cautions against too much caution -- over-reliance on incremental innovation versus ansformative, or "disruptive," innovation. In innovation circles, the two have come to be differentiated s "little i" and "Big I" innovation. "The largest gains in business come from more daring innovations that hallenge the paradigm and the organization," Schoemaker says.

Challenges for the future

- Ensuring that DfE/Green Chemistry remain priorities in the new era of Green Jobs, and that programs are adequately resourced.
- Ensuring new policy developments support innovation in DfE and Green Chemistry.
- Ensuring adequate information and tools are available to ensure companies can make informed decisions in moving towards safer materials.
- Ensuring good communication and dialog up and down supply chains to move in the right direction. Engaging retailers and trade organizations more effectively in this.
- Education of purchasers and manufacturers about safer options.

Programmatic questions as we move forward

- How do we identify key focal areas where the GC3 can provide much needed input and direction, define deliverable work products, and how they best advance the mission of the GC3 and its participants?
- What projects will best engage participants actively in providing concrete impacts in practice and policy?
- Which projects can provide the best value added for the GC3 and its participants?

Strategic Directions - Projects

- Develop a set of options for retailers to develop product chemicals management systems, including a strategy for the GC3 to educate consumers around green chemistry and design for environment practices.
- Work toward passage of the federal Green Chemistry Research and Development Act in the current Congress (and ensure green chemistry is an important part of stimulus package funding).
- Ensure green chemistry and DfE are high priority areas in toxics at EPA (and other agencies) through development of a roadmap for the Administration on advancing DfE and green chemistry.
- Develop a roadmap for green chemistry/DfE application in the context of REACH implication.
- Enshrine the alternatives assessment/GC/DfE approach through an NAS report.

Strategic Directions - Organizational

- Attain media recognition for the GC3 through at least one major article.
- Expand the GC3 by at least 20 participants from key sectors.
- Secure adequate funding to ensure more hands on coordination while identifying at least 2-3 participant "leaders".

Organizational Questions as We Move Forward

- How to expand the network more participants along supply chains from chemical production to retail.
- How to ensure active participation to build energy and interest in the GC3 and "ownership" over the network and projects.
- How to ensure adequate resources for coordination, administration and research/outreach.
- How to link more effectively to other efforts to avoid duplication.
- How to increase media, industry, and government attention to GC3 and its vision and activities and with it the GC3's impact

Overall Meeting Objective

Share information, experience and understandings among a diverse group of companies and other stakeholders on advancing implementation of green chemistry and design for environment (DfE).

Agenda – Monday afternoon

- > 12:00-1:30 pm Registration and Lunch
- > 1:30-2:30 pm Welcome and Introductions
- 2:30-3:15 pm Overview of Working Group Activities in 2008
 - Advancing Design for Environment and Green Chemistry
 - Drivers for Innovation and Marketing Safer Products
 - Tools for Chemical Assessment and Safer Design
- > 3:15-4:15 pm Discussion of Future GC3 Strategy
- > 4:15-4:30 pm Break
- > 4:30-6:00 pm New Politics: Chemicals Policy in the Obama Administration

Objective: How will chemicals policy change under the new administration and how can the GC3 provide input into this?

6:00-7:00 pm Tour of Staples' Green Building

- Richard Denison
- > Cheryl Hogue
- David Bennett

Tuesday morning

- > 7:15-8:30 am Breakfast and Discussion of DfE Efforts
- Clive Davies
- > 8:30-10:15 am Dialogs Up and Down the Supply Chain

Objective: What is the role of supply chains and dialog across them in advancing safer products, green chemistry and DfE?

- > Roger McFadden
 - > Ann Wallin
 - Janet Mostowy
 - Mary Ellen Mika
- Drummond Lawson

- > <u>10:15-10:30 am</u> Break
- 10:30-12:00 am Trade Groups as Leaders in Advancing Green Chemistry and Design for Environment

Objective: What is the role of industry trade groups in advancing DfE and green chemistry?

> 12:00-1:00 pm Lunch

Bill BalekStephen LamarChristopher Cleet

Tuesday afternoon

1:00-2:30 pm Product Chemicals Management: Best Practices in Retail

Objective: How can retailers provide leadership in advancing green chemistry and DfE?

- > Jody Villecco
 - Sarah Beatty
- John Leyenberger
- > 2:30-4:30 pm Working Group Breakout Sessions

Objective: Advance discussion and work products of GC3 working groups: Tools for Chemical Assessment, Advancing DfE and Green Chemistry, and Drivers for Innovation and Marketing Safer Products.

- 4:30-5:15 pm Innovation and Sustainability Opportunities in a New Era
 - Andrea Larson
 - Noran Eid
 - David Levine

- > 5:15-6:00 pm Reception
- > 8:30-10:00 pm After Dinner Meet Up

Wednesday

- > 8:00-8:30 am Breakfast
- > 8:30-10:30 am Using REACH Compliance to Advance Green Chemistry and DfE

Objective: How can REACH preparation be a stimulus for green chemistry and DfE?

- > 10:30-10:45 am Break
- > 10:45-11:15 am Working groups report back
- > 11:15-12:45 am Meeting Today's Chemicals Management Challenges with New Approaches and Collaborations

Objective: What innovative new tools exist to advance green chemistry and DfE in commerce?

- > 12:45-2:00 pm Lunch
- > 2:00-3:00 pm Next Steps
- 3:00-3:45 pm Concluding Speaker
- > 3:45-4:15 pm Closing Remarks
- 4:15pm Adjourn

- Christopher BlumEthel Forsberg
 - Barbara Hanley
 - Anita Jain

- Lauren Heine
- Berkeley Cue
 - Julie Manley

Theo Colborn

Logistics