Compete.
Council on Competitiveness

2025 Executive Committee and National Commission

The Future of the Bioeconomy

Buchanan Club at Purdue University
Primient Lafayette Facility

September 17–18, 2025
Lafayette, IN

THE COUNCIL ON COMPETITIVENESS is a nonprofit, 501 (c) (3) organization as recognized by the U.S. Internal Revenue Service. The Council's activities are funded by contributions from its members, foundations, and project contributions. To learn more about the Council on Competitiveness, visit Compete.org.

© 2026 Council on Competitiveness

Table of Contents

© 2026 Council on Competitiveness

© 2026 Council on Competitiveness

Meeting Overview

On September 17–18, 2025, the Council on Competitiveness (Council) Executive Committee and the National Commission on Innovation and Competitiveness Frontiers, alongside the broader Council community and invited leaders from across the bioeconomy, convened in Lafayette, IN, to kick off and chart a bold plan for advancing the future of the U.S. bioeconomy.

The agenda began with a strategic assessment of the bioeconomy's critical role in U.S. competitiveness and global leadership—highlighting its impact on productivity, supply chain resilience, national security, and the revitalization of manufacturing in the heartland. Discussions then explored the key drivers of competitiveness, including talent, investment, technology, and innovation policy. A central focus throughout the meeting was on strengthening and expanding the full bioeconomy value chain—from molecular sciences in research institutions and industry, to agricultural innovation, to bio-based manufacturing across sectors.

The meeting featured a mix of panels, short talks, and open dialogues. Participants were encouraged to contribute throughout. The meeting concluded with a summarizing panel discussion, synthesizing insights into priorities and next steps, particularly in advance of its 40th anniversary in 2026. A comprehensive summary of the meeting follows.

© 2026 Council on Competitiveness

© 2026 Council on Competitiveness

Agenda

September 17, 2025

EVENING

5:00 Reception

5:45 Welcome Remarks

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

Mr. Erik Fyrwald
CEO, IFF
Chairman, Council on Competitiveness

Mr. Jim Stutelberg
CEO, Primient

6:00 Fireside Chat: Leadership Perspectives on the Future of the Bioeconomy

Mr. Erik Fyrwald
CEO, IFF
Chairman, Council on Competitiveness

Mr. Jim Stutelberg
CEO, Primient

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

6:30 Dinner

7:30 Dessert and Lightening Round Participant Introductions

8:10 Stage Setting for the National Commission Meeting

Mr. Chad Evans
Executive Vice President and Chief Operating Officer, Council on Competitiveness

8:15 Coffee and Dinner Concludes

© 2026 Council on Competitiveness

September 18, 2025

MORNING

8:00 Breakfast and Networking

8:30 Welcome Remarks

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

Mr. Erik Fyrwald
CEO, IFF
Chairman, Council on Competitiveness

Mr. Jim Stutelberg
CEO, Primient

8:45 Setting the Competitiveness Context for the Bioeconomy

Council on Competitiveness leaders will open the meeting by framing the generational competitiveness opportunity to advance the U.S. bioeconomy. The discussion will explore how the future of the bioeconomy is rooted in key pillars of the **National Commission on Innovation and Competitiveness Frontiers** agenda, including place-based innovation, the convergence of advanced technologies, and cross-sector collaboration—all focused on driving greater U.S. productivity, supply chain resilience, national security, and economic prosperity for all.

Panelists

Mr. Erik Fyrwald
CEO, IFF
Chairman, Council on Competitiveness

Mr. Gustavo Sergi
CEO, Sustainea

Mr. Jim Stutelberg
CEO, Primient

Mr. Mark Warner
CEO, Liberation Bioindustries

Moderator

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

9:30 The Bioeconomy Ecosystem: An Exploration of the Value Chain's Complexity and How to Optimize It

This high-level discussion will examine the full value chain of the bioeconomy—from discovery to deployment—highlighting the interconnected roles of innovation, industry, and policy. The discussion will span the complexity of the ecosystem, including molecular sciences in universities and industry, agricultural companies with a focus on seed innovation, agricultural processors, fermentation and biomanufacturing firms, chemical, materials, and ingredient producers, and CPG companies. This session will introduce many of the key themes to be explored in depth throughout the day.

Introduction

Dr. Roger Wyse
Co-founder and Managing Partner,
RW Associates

Leadership Perspectives

Mr. John Bode
CEO and President, Corn Refiners Association

Dr. Sarah Glaven
Gerhard R. Andlinger Visiting Fellow, Princeton University

Dr. Sean Jones
Deputy Lab Director, Science & Technology,
Argonne National Lab

Dr. Jill Zullo
Executive Vice President and COO, BioMADE

© 2026 Council on Competitiveness

10:25 Break

10:30 Making the Bioeconomy Transition: For American Consumers, Farmers, and Communities

Too often, bio-based breakthroughs fail to compete with existing products on quality and/or price, failing to deliver real economic impact. This discussion will examine how seed breeders, agricultural processors, and consumer packaged goods companies can help make bio-based products visible, valuable, and viable for mainstream adoption, while ensuring the benefits reach farms, factories, and communities nationwide.

Panelists

Mr. Ben Forsythe
Director of Sustainability and Value Creation, Indiana Soybean Alliance

Mr. Ajikumar Parayil
Founder and CEO, Manus

Dr. Todd Pester
Vice President, Seed Research and Development, Corteva Agriscience

11:20 Tech Talk: The Intersection of the Bioeconomy for National Security and Space Frontiers

Dr. Tahllee Baynard
Vice President, Ignite, Lockheed Martin Space

Dr. Steven H. Walker
Distinguished Fellow, Council on Competitiveness; Professor of Practice, University of Notre Dame

11:40 Creating the Next Generation of Talent to Unleash the Bioeconomy in the United States

The bioeconomy demands a workforce that cuts across biology, data science, engineering, and business. But do our current systems match the pace and complexity of this emerging field? This discussion looks at the gaps, who is addressing them, and how we can reimagine talent pipelines to meet bioeconomy ambitions.

Panelists

Dr. Monica Dus
Director, Office of National Labs, University of Michigan

Dr. Douglas Mans
Director, Environmental Molecular Sciences Division, Pacific Northwest National Laboratory

Dr. Shashank Priya
Vice President, Research and Innovation, University of Minnesota

AFTERNOON

12:20 Lunch and Tech Talk on a Research Discovery

Prof. Lisa Schulte Moore
Director, Bioeconomy Institute, Iowa State University

1:00 Financing the Bioeconomy: Unloacking Capital for Scalable Solutions

The capital needed to scale bio-based solutions is massive, but current investments fall short. What is holding investors back? This session explores public-private models, risk perception, policy signals, and what kinds of capital structures can catalyze growth across the bio value chain. Targeted financing will be critical for

© 2026 Council on Competitiveness

capital-intensive segments such as fermentation facilities and chemical/materials production, alongside early-stage molecular sciences and agricultural R&D.

Panelists

Mr. Dave Resac
Chief Financial Officer, Primient

Mr. Mark Warner
CEO, Liberation Bioindustries

Dr. Roger Wyse
Co-founder and Managing Partner, RW Associates

1:30 From Discovery to Development: Accelerating Innovation from Lab to Market

Due to a convergence of advanced technologies—including AI—innovation in synthetic biology and biomanufacturing is rapid and accelerating. This discussion will examine the groundbreaking discoveries in bio and how the United States can further accelerate the journey from lab to market without compromising safety or public trust. Advances in fermentation and chemical/materials synthesis serve as vital bridges between laboratory breakthroughs and consumer-ready products.

Panelists

Dr. Beth Conerty
Regional Innovation Officer, iFAB Tech Hub

Prof. Arthur Ragauskas
Professor and Acting Head, Department of Chemistry and Biomolecular Engineering, University of Tennessee, Knoxville

Prof. Fabio Ribeiro
Distinguished Professor in Chemical Engineering, Purdue University—CISTAR—LEAPS

2:00 From U.S. Strategy to Global Impact: Driving Partnerships, Innovation, and Standards in the Bioeconomy

The U.S. bioeconomy faces both remarkable opportunity and real risk—fragmented domestic coordination across the value chain, rising competition in global standards-setting, and a lack of alignment in global trade rules. This discussion will explore how a national strategy can expand domestic and international partnerships, accelerate innovation, improve supply chain resilience, strengthen national security, and secure U.S. leadership in the global bioeconomy.

Panelists

Mr. James Glueck Jr.
Plant Based Products Council, Executive Director

Dr. Todd Pray
Chief Strategic Partnerships Officer, Lawrence Berkeley National Laboratory

Mr. Gustavo Sergi
CEO, Sustainea

Dr. Michael Wolf
Senior Vice President of Global Operations, Hevolution

2:30 Leveraging 40 Years of Competitiveness Impact to Grow the U.S. Bioeconomy

Building on a day of bold ideas, this discussion will focus on actionable next steps to advance U.S. leadership in the bioeconomy. Panelists will share insights on the essential ingredients and strategic priorities needed to accelerate the bioeconomy, while exploring opportunities to leverage the Council's 40th anniversary—including the April 2026 bioeconomy-focused Competitiveness Conversation in Omaha, NE—to shape America's competitiveness over the coming decade.

© 2026 Council on Competitiveness

Panelists

Mr. Erik Fyrwald
CEO, IFF
Chairman, Council on Competitiveness

Mr. Jim Stutelberg
CEO, Primient

Moderator

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

3:15 Council Update: 2025 NCF and 2026 Agenda

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

Mr. Chad Evans
Executive Vice President & Chief Operating Officer, Council on Competitiveness

3:30 Adjournment

3:45 Tour of Primient's State-of-the-Art Corn Processing Facility

4:30 Conclusion of Commission Meeting

© 2026 Council on Competitiveness

Welcome Remarks and Fireside Chat Key Takeaways

SPEAKERS

Mr. Jim Stutelberg, CEO, Primient

The Hon. Deborah L. Wince-Smith, President and CEO, Council on Competitiveness

Mr. Erik Fyrwald, CEO, IFF, and Chairman, Council on Competitiveness

- The bioeconomy is a core engine of U.S. innovation, productivity, and national security—not a niche sector, but poised to be the driver of the next great economic revolution. From agriculture and food to textiles, beauty, and consumer goods, biotech now underpins innovations that make products more sustainable, efficient, and resilient.
- Intentional national strategy is essential. Competing nations are advancing coordinated bioeconomy strategies. The United States must match that intentionality—aligning government, industry, and research institutions to maintain leadership.
- The United States' agricultural strength can power a new generation of bio-based materials, chemicals, and fuels, turning corn, soy, and biomass into strategic assets for economic growth.
- Regional clusters that link farmers, researchers, and manufacturers will anchor the bioeconomy and create high-quality jobs across the heartland and beyond.
- Smart policies that attract investment and scale pilot projects are essential to mobilize private capital and de-risk innovation through strong public–private partnerships.
- Sustainability must be built into manufacturing, turning waste into feedstock, enabling circular industrial systems.
- A skilled, adaptable workforce is the foundation of growth, requiring new education pathways, technical training, and hands-on experience across the bio-based value chain.

© 2026 Council on Competitiveness

Session Summary: Launching the Council on Competitiveness Bio+ Economy Initiative

The Council on Competitiveness (Council) convened its Executive Committee and National Commission on Innovation and Competitiveness Frontiers for a leadership meeting in Lafayette, IN. The opening reception and dinner were held at Purdue University—marking the official launch of the Council's new Bio+ Economy Initiative. The evening's opening session, generously hosted by Mr. Jim Stutelberg, CEO of Primient, took place at the Buchanan Club, overlooking Purdue's football field—a fitting venue to spark conversation on the next great wave of competition.

Following a welcome reception, Council President and CEO The Hon. Deborah L. Wince-Smith, Council Chair and IFF CEO Mr. Erik Fyrwald, and Mr. Stutelberg offered opening remarks that framed the evening's discussion and the conversation and work ahead.

© 2026 Council on Competitiveness

Setting the Stage for a New Frontier

The Hon. Deborah L. Wince-Smith,President and CEO, Council on Competitiveness

The Hon. Deborah L. Wince-Smith opened the evening, welcoming participants from across sectors and the country to Lafayette and to Purdue University—a long-standing partner of the Council on Competitiveness (Council). She recognized the leadership of newly elected Council Chair Mr. Erik Fyrwald, whose expertise in science and industry will help guide the Council into its 40th year, and Mr. Jim Stutelberg, Co-chair of the Bio+ Economy Initiative and host for the meeting.

Ms. Wince-Smith's remarks placed the focus on the bioeconomy within the Council's proud legacy of tackling frontier issues long before they reach the policy mainstream. She recounted how, over four decades, the Council has anticipated and shaped many of the United States' most significant competitiveness initiatives—from the Innovate America report that inspired the COMPETES Act, to the high-performance computing and advanced manufacturing partnerships that redefined industrial and scientific collaboration.

The new Bio+ Economy Initiative stands firmly within this lineage. Drawing on groundwork first laid by the Council and U.S. national laboratories in 2017, the Bio+ project aims to harness the power of biosciences to transform energy, agriculture, the environment, and human health. But to realize that potential, Ms. Wince-Smith warned, requires unprecedented coordination across

industry, government, and academia—precisely the kind of multi-sector collaboration the Council is uniquely positioned to lead.

Ms. Wince-Smith also highlighted the growing global race to dominate the bioeconomy: China investing billions in biotech R&D, Europe pursuing new (but potentially overregulated) bioeconomy frameworks, and Brazil and India advancing biomanufacturing and biomass innovation. Against this backdrop, the United States must act decisively to secure its leadership, strengthen supply chains, and create high-value jobs across the heartland.

The Bio+ Economy Initiative, Ms. Wince-Smith said, is about turning vision into action—ensuring the United States becomes not a follower, but the first mover in this next industrial revolution.

© 2026 Council on Competitiveness

A Call for Unified Leadership

Mr. Erik Fyrwald, Chair, Council on Competitiveness, and CEO, IFF

Newly elected Council Chair Mr. Erik Fyrwald, CEO of IFF, followed with remarks that reflected on his deep professional ties to Indiana and Purdue—through his leadership at Nalco, long service on Eli Lilly's board, and decades in global agriculture—Erik spoke with admiration for Purdue graduates' far-reaching impact on innovation worldwide.

He praised the Council as a uniquely American institution—one that unites CEOs, university presidents, national laboratory leaders, and labor representatives to shape strategies ensuring that the United States remains the global leader in technology and innovation. Such collaboration, he noted, is rare anywhere in the world and vital for sustaining prosperity at home and influence abroad.

Looking ahead, Mr. Fyrwald underscored his excitement to work with Bio+ Co-chair, Mr. Jim Stutelberg, describing it as an opportunity to align innovation, sustainability, and economic strength for generations to come.

© 2026 Council on Competitiveness

Powering the Future from the Heartland

Mr. Jim Stutelberg, CEO, Primient; Co-Chair, Bio+ Economy Initiative

Mr. Jim Stutelberg, CEO of Primient, welcomed the group and offered a compelling illustration of the bioeconomy's potential rooted in America's agricultural heartland.

As he described driving from Primient's Decatur, IL, facility to Lafayette that morning—a route lined with miles of corn and soybean fields—Mr. Stutelberg reflected on how each acre represents stored chemical energy and untapped industrial potential. In every bushel of corn, he said, lies the foundation for new materials, sustainable fuels, and bioproducts that can redefine U.S. manufacturing.

Citing impressive figures, Mr. Stutelberg noted that each acre of corn holds 63 to 67 gigajoules of stored energy, and the U.S. corn crop—nearly 15 billion bushels annually—could replace up to 40 percent of fossil fuel–based chemical and polymer production using current technologies. But unlike fossil fuels, corn renews every year, offering a sustainable, secure, and domestic feedstock for high-value biomanufacturing.

Mr. Stutelberg described Primient's partnerships, including with Sustainea, which is building a new bio-based facility next door to transform cornstarch into sustainable plastics and fibers. He envisioned a future where U.S. cornfields and soybean fields are transformed into "factories for value-added materials," powering industrial growth, job creation, and national resilience.

In closing, Mr. Stutelberg raised a symbolic toast—to the Council's vision, to the leaders gathered in the room, and to the shared commitment to transform the bioeconomy into a cornerstone of United States competitiveness.

© 2026 Council on Competitiveness

FIRESIDE CHAT

Leadership Perspectives on the Future of the Bioeconomy

SPEAKERS

The Hon. Deborah L. Wince-Smith, President and CEO, Council on Competitiveness

Mr. Erik Fyrwald, CEO, IFF

Mr. Jim Stutelberg, CEO, Primient

Session Summary

The Hon. Deborah L. Wince-Smith, Council President and CEO, Mr. Erik Fyrwald, CEO of IFF and Chairman of the Council on Competitiveness, and Mr. Jim Stutelberg, CEO of Primient and Co-chair of the Council's Bio+ Economy Initiative, then had a fireside chat. The discussion traced each leader's journey into the bioeconomy, explored the transformative potential of biotechnology, and reflected on U.S. competitiveness in a rapidly shifting global landscape.

Ms. Wince-Smith opened by inviting both leaders to reflect on their personal paths toward the bioeconomy. Mr. Fyrwald, a chemical engineer by training, began his career at DuPont, where he led several major businesses across nylon, paints, and automotive materials before a pivotal moment redirected his trajectory. In 2000, then–DuPont CEO Chad Holliday (also Chair Emeritous of the Council on Competitiveness) asked him to lead the company's agriculture and nutrition division

in Des Moines, Iowa—a move that changed his career and sparked his enduring passion for agriculture and biotechnology.

Mr. Fyrwald described how his early exposure to biotech through DuPont's seed business and later service on the Eli Lilly board deepened his conviction in biotechnology's power to reshape both healthcare and agriculture. Over two decades, he watched Eli Lilly rise from the world's eighteenth-largest pharmaceutical company to its clear market leader—progress he attributed largely to advances in biotechnology. Now leading IFF, which acquired DuPont's industrial biotech business, Mr. Fyrwald said his enthusiasm for biotech continues to grow as the company engineers microbes to create enzymes and other innovations driving more sustainable chemistry and consumer products.

© 2026 Council on Competitiveness

"Across the country, we are seeing powerful regional models emerge. By recognizing our assets, collaborating across sectors, and working in a bipartisan way, we can reach the next level for our citizens and our country."

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

Ms. Wince-Smith noted the Council's long association with Holliday, who chairs the Global Federation of Competitiveness Councils, recalling his visionary leadership in guiding DuPont's transition from a traditional chemical company toward biological innovation.

Mr. Fyrwald expanded on Holliday's foresight, recounting how DuPont's early investments in industrial biotechnology led to pioneering products such as Sorona, a biomaterial used in textiles. Though its initial success was limited, the technology endures today as part of IFF's portfolio—a testament, Mr. Fyrwald said, to Holliday's vision and persistence.

"We still have the best potential to lead. We have the best universities, the best entrepreneurial spirit, and a strong innovation infrastructure. If we pull it together, we can remain global leaders."

Mr. Erik Fyrwald
CEO, IFF
Chairman, Council on Competitiveness

Mr. Stutelberg then reflected on his own path to the bioeconomy, linking his company's work to the very same Sorona project. Primient, he noted, supplied the primary feedstock used to produce Sorona's key polymer ingredient—a connection that, as he put it, "brings the story full circle."

Mr. Stutelberg came to biotechnology from economics, having studied at the University of Michigan before building a career in the chemical industry with companies such as Dow Corning and PPG. His time leading global operations, including nearly a decade in Shanghai, exposed him to the scale of industrial chemistry and the growing importance of sustainable materials. About eleven years ago, a headhunter introduced

© 2026 Council on Competitiveness

"All the chips are lined up for us to start reinvesting and growing more aggressively in the bioeconomy."

Mr. Jim Stutelberg
CEO, Primient

him to opportunities in plant-based chemistry—a moment he described as transformative. "There's nothing wrong with the traditional chemical industry," he said, "but I found it inspiring to see what we could achieve using plant-based materials."

Now, as Primient expands its investments in the bioeconomy, Mr. Stutelberg said he feels the industry has reached a turning point: "All the chips are lined up for us to start reinvesting and growing more aggressively."

Ms. Wince-Smith, an archaeologist by training, reflected that humanity's relationship with plant-based materials stretches back millennia—from ancient Egyptian dyes to Renaissance pigments. "It's almost like a back-to-the-future story," she said, noting how biotechnology is once again transforming beauty, fashion, and food through nature-derived innovation. Mr. Fyrwald agreed, pointing out that most of IFF's work in flavor, fragrance, and beauty already depends on natural ingredients. Biotech, he added, is now enabling scientists to enhance or replicate those molecules in new, sustainable ways.

As the discussion turned to broader questions of competitiveness, Ms. Wince-Smith noted the global economic uncertainty facing industries today—shifts in trade, tariffs, and policy—and asked both CEOs what most concerned them about the United States' competitive posture.

Mr. Stutelberg observed that other nations often display a stronger sense of intentionality and coordination when pursuing strategic industries. "Some countries are very deliberate about identifying the industries they want to win, investing in them, and coordinating across government and industry," he said. "In the United States, we operate as a free-market system, which has been a great strength—but we need to find ways to be more intentional and more coordinated across our ecosystem of national labs, universities, and private industries."

Mr. Fyrwald agreed, noting that China, in particular, has made leadership in the bioeconomy a national priority. Even so, he expressed optimism about America's enduring advantages—world-class universities, entrepreneurial spirit, robust financial markets, and a strong innovation infrastructure. "We still have the best potential to lead," he said. "But we need to pull it together."

He underscored the importance of aligning government and industry around shared goals, supporting science and education, maintaining strong national laboratories, and ensuring regulatory policies both protect consumers and enable innovation.

Ms. Wince-Smith closed by highlighting the Council's **Competitiveness Conversations Across America** series, which brings together leaders in regions nationwide to strengthen innovation

© 2026 Council on Competitiveness

ecosystems and identify actionable strategies for growth. The next gathering, she announced, will take place in Nebraska. “Across the country, we’re seeing powerful regional models emerge,” she said. “By recognizing our assets, collaborating across sectors, and working in a bipartisan way, we can reach the next level for our citizens and our country.”

She thanked Mr. Fyrwald and Mr. Stutelberg for their leadership and partnership in advancing the bioeconomy and the Council’s mission to strengthen U.S. competitiveness.

© 2026 Council on Competitiveness

Behind the Scenes

© 2026 Council on Competitiveness

© 2026 Council on Competitiveness

© 2026 Council on Competitiveness

Day 2 Welcome Remarks

SPEAKERS

The Hon. Deborah L. Wince-Smith, President and CEO, Council on Competitiveness

Mr. Erik Fyrwald, CEO, IFF, and Chairman, Council on Competitiveness

Mr. Jim Stutelberg, CEO, Primient

Key Session Takeaways

- The U.S. bioeconomy has the potential to leverage American technology, talent, investment, and infrastructure to drive innovation, strengthen productivity, and maintain global leadership in science and technology.
- Policy, funding, and regulatory frameworks must support growth in strategic industries—including biotechnology, AI, and quantum—while fostering STEM education, talent recruitment, and workforce retention.
- Regional leadership and public-private partnerships, including collaborations between universities, national labs, and industry, are critical to translating innovation into tangible economic and societal impact.

© 2026 Council on Competitiveness

- Real-world investment and operational excellence, exemplified by Primient's Lafayette facility, demonstrate the importance of integrated ecosystems where national policy, research, and private-sector initiatives converge to advance sustainability, competitiveness, and technological leadership.

Session Summary

The Hon. Deborah L. Wince-Smith, Mr. Erik Fyrwald, and Mr. Jim Stutelberg set the stage for a day of in-depth conversation focused on advancing the U.S. bioeconomy. Ms. Wince-Smith welcomed participants to the Council Executive Committee and the **National Commission on Innovation and Competitiveness Frontiers** with enthusiasm for the meeting at Primient's Lafayette facility—compliments of CEO Mr. Jim Stutelberg and the Primient team.

Ms. Wince-Smith framed the day's discussion around the potential of the bioeconomy to leverage American technology, talent, investments, and infrastructure, and the Council's longstanding mission to accelerate innovation, strengthen productivity, and maintain U.S. leadership in science and technology.

She highlighted the Council's recent work, including the second major report of the National Commission, *Competing in the Next Economy*, which outlined a policy agenda embraced by the administration to foster innovation-friendly tax and regulatory policies, energy security, resilient supply chains, and growth in strategic industries such as AI, quantum, and biotechnology. She also noted the Council's ongoing efforts to expand STEM education through initiatives like modernizing the National Defense Education Act 2.0 and the continued recruitment and retention of top talent. She connected these priorities to the concept of "placemaking innovation," showcasing how regional leadership and partnerships between universities, industry, and national labs are driving innovation and economic growth across the country.

"The bioeconomy represents a generational opportunity to lead with American technology, talent, and infrastructure while driving global business success."

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

Mr. Erik Fyrwald followed, reinforcing the significance of the bioeconomy and the Council's role in supporting U.S. leadership. He underscored the importance of addressing funding and regulatory challenges and maintaining the United States as the global hub for top scientists and engineers. He also highlighted the opportunity to tell the story of biotechnology's transformative impact in health care, materials, and sustainable chemistry, ensuring government and public support align with the sector's growth.

Mr. Jim Stutelberg provided a firsthand perspective, describing Primient's Lafayette plant as a flagship facility for efficiency, sustainability, and innovation. He framed the meeting as a real-world

© 2026 Council on Competitiveness

"We need to make sure the United States stays the greatest place on Earth to develop and produce in the bioeconomy."

Mr. Erik Fyrwald
CEO, IFF
Chairman, Council on Competitiveness

"The bioeconomy ecosystem depends on national policy, funding, and public-private partnerships working together to unlock this generational opportunity."

Mr. Jim Stutelberg
CEO, Primient

demonstration of the bioeconomy in action, with substantial ongoing and planned investments, including a $400 million project to build a state-of-the-art monoethylene glycol plant in partnership with Sustainea. Mr. Stutelberg also noted the interconnected nature of the bioeconomy ecosystem, where national policy, funding, research institutions, and public-private collaboration must converge to unlock this generational opportunity, strengthen U.S. competitiveness, and advance national security and technological leadership.

© 2026 Council on Competitiveness

Setting the Competitiveness Context for the Bioeconomy

Council on Competitiveness (Council) leaders opened the meeting by framing the generational competitiveness opportunity to advance the U.S. bioeconomy. The discussion explored how the future of the bioeconomy is rooted in key pillars of the **National Commission on Innovation and Competitiveness Frontiers** agenda, including place-based innovation, the convergence of advanced technologies, and cross-sector collaboration—all focused on driving greater U.S. productivity, supply chain resilience, national security, and economic prosperity for all.

PANELISTS

Mr. Erik Fyrwald, CEO, IFF, and Chairman, Council on Competitiveness

Mr. Gustavo Sergi, CEO, Sustainea

Mr. Jim Stutelberg, CEO, Primient

Mr. Mark Warner, CEO, Liberation Bioindustries

Moderator: **The Hon. Deborah L. Wince-Smith**, President and CEO, Council on Competitiveness

Key Session Takeaways

- The U.S. has a strategic opportunity to assert global leadership in the bioeconomy by leveraging its combination of raw materials, capital, R&D, and market size, while actively shaping international standards and regulations.
- Scaling the bioeconomy requires expanding domestic manufacturing capacity, including multi-use facilities capable of safe, efficient production, to complement the U.S.'s strong R&D base.
- Bio-based products offer both sustainability and improved performance, creating market-driven incentives that strengthen farm resilience, food security, and downstream economic benefits.
- Accelerating investment, commercialization, and adoption depends on coordinated policy, targeted incentives, and public-private collaboration to move innovations from research and scale-up to full-scale domestic production.

Session Summary

The Hon. Deborah L. Wince-Smith introduced Council members Mr. Gustavo Sergi of Sustainea and Mr. Mark Warner of Liberation Bioindustries to a deeper discussion on the strategic drivers of the

© 2026 Council on Competitiveness

"The United States has articulated the need for product liability reform for years—removing barriers like treble damages is critical if we want chemical plants, innovation, and the bioeconomy to thrive here at home."

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

bioeconomy. Ms. Wince-Smith framed the conversation around both the economic and strategic importance of the bioeconomy and the opportunity for the United States to assert global leadership.

Mr. Sergi shared insights from Sustainea, a joint venture between Japanese and Brazilian corporations, which is investing nearly $500 million in the bioeconomy in Indiana. Mr. Sergi noted that the company's mission spans multiple sectors, leveraging technologies like dextrose conversion from corn to disrupt existing value chains. For him, transparency, safety, and scale are critical—qualities the U.S. market is uniquely positioned to provide.

"The United States has the market, raw materials, R&D, and capital—it could clearly lead the global bioeconomy, shaping the rules rather than following them."

Mr. Gustavo Sergi
CEO, Sustainea

Mr. Sergi also stressed the global context: countries around the world have been actively creating regulatory frameworks and fostering markets for bio-based products for over a decade. The United States, he noted, has a strategic advantage with its combination of raw materials, capital, R&D, and market size—but only if it participates proactively in setting global standards. Beyond regulation, Mr. Sergi highlighted consumption as a critical lever: supporting companies to adopt bio-based materials and creating consumer demand are both essential to elevating the bioeconomy. He felt it was very important for the United States to take a leadership role, shaping rules that favor domestic production while cultivating a robust global market.

© 2026 Council on Competitiveness

"These products are not just sustainable—they are better. And the United States has all the pieces to manufacture them domestically; we just have to pull them together."

Mr. Mark Warner
CEO, Liberation Bioindustries

Mr. Warner focused on the manufacturing side of the bioeconomy. Liberation Bioindustries was founded to address a major gap: while the U.S. excels at research and development in industrial biotech, it lacks multi-use manufacturing facilities that can scale products safely and efficiently. Mr. Warner described their 600,000-liter fermentation facility in Richmond, IN, which is 70 percent complete, and plans for a seven-fold expansion, with additional sites under development in the Middle East and Australia.

Mr. Warner highlighted that many biotech products are not just sustainable—they are objectively better than existing alternatives. For example, fermented whey dissolves more cleanly in water than traditional whey, and synthetic biology enables the production of infant formula components that more closely mimic human breast milk. Sustainability often comes as a "bonus," he noted, because the market is drawn to the improved product quality.

He also stressed the importance of domestic manufacturing for U.S. farmers. By creating demand for higher-value bio-based products, the bioeconomy strengthens farm resilience, ensures food security, and generates downstream economic benefits. Mr. Warner argued all the pieces for a thriving U.S. bioeconomy exist—but it will require intentional coordination to move from research and scale-up to full-scale domestic production.

Mr. Erik Fyrwald painted a broad picture of the bioeconomy's reach. Drawing from decades in agriculture and pharmaceuticals, he described how biotech-enhanced crops have increased yields by 25 percent, reduced pesticide use, and improved efficiency. In healthcare, biologics and gene therapies are transforming treatment landscapes, exemplified by recent breakthroughs in Alzheimer's disease.

Mr. Fyrwald also highlighted everyday innovations: enzyme-based laundry detergent sheets that eliminate plastic packaging, reduce water and energy usage, and outperform chemical alternatives. He underscored the scale of the opportunity: the global bioeconomy is already $4 trillion, with the U.S. share likely understated at $290 billion, and projections for growth to $30–40 trillion by 2040. Breakthroughs in biotechnology, combined with advances in AI, create nearly limitless possibilities.

Ms. Anne White, brought into the conversation by Mr. Fyrwald, shared Lilly's perspective on long-term investment in biotechnology, particularly in Alzheimer's research. She highlighted the first biologic medicine approved to slow Alzheimer's progression and ongoing efforts to detect and treat the disease before symptoms appear. White noted the critical role of investment in biomanu-

© 2026 Council on Competitiveness

"The bioeconomy is everywhere, from your laundry detergent to life-saving medicines—its opportunities are limitless, and we are just scratching the surface."

Mr. Erik Fyrwald
CEO, IFF

"Persevering in biology for decades may seem risky, but it has allowed Eli Lilly to finally slow the progression of Alzheimer's and help thousands of people in just a year."

Ms. Anne White
Executive Vice President, Eli Lilly

facturing, citing Lilly's $5 billion facility in Virginia to produce Alzheimer's therapies. Her remarks illustrated how sustained investment in science, talent, and infrastructure, with an emphasis on the bioeconomy, can turn decades of research into life-changing treatments, reflecting the broader promise of the bioeconomy.

Mr. Jim Stutelberg framed the bioeconomy in practical terms as the ecosystem of products made from biological sources using enzymes, yeast, and other biological conversion technologies. He outlined six major sectors: agriculture, industrial biotech, food and nutrition, healthcare, bioenergy, and defense/strategic materials.

Mr. Stutelberg also pointed to both the strategic and economic urgency: many critical chemicals and pharmaceuticals are imported, leaving U.S. supply chains vulnerable. To accelerate domestic production, he stressed the importance of creating secure demand to de-risk investments. He categorized opportunities into three main types, highlighting which ones represent the "low-hanging fruit." First, onshoring biologically produced materials already in use abroad—particularly those critical to U.S. national security—is the easiest and most immediate opportunity. Second, replacing fossil-fuel-based products with bio-based alternatives is slightly more challenging because cost and functionality must compete with entrenched products. Third, developing entirely new, "never-before-made" bio-based materials is the most innovative but also the riskiest category, requiring targeted incentives, programs like DARPA's ELM, and careful policy support. By tack-

© 2026 Council on Competitiveness

"The low-hanging fruit is onshoring biologically produced materials already critical to our national security; start there, and the rest will follow."

Mr. Jim Stutelberg
CEO, Primient

ling these categories thoughtfully, Mr. Stutelberg argued, the United States can accelerate investment, scale manufacturing, and maintain global leadership in the bioeconomy.

Panel Discussion on Standards and Global Leadership

During discussion on global standards, the panel noted that while no single global framework exists, countries in Europe and Japan have been actively shaping rules for decades, often learning from each other. U.S. participation in these discussions is critical to influence outcomes that favor domestic production and ensure competitive leadership. The panel also noted that regulatory engagement, market development, and fostering consumption all work together to elevate the U.S. bioeconomy.

© 2026 Council on Competitiveness

The Bioeconomy Ecosystem: An Exploration of the Value Chain's Complexity and How to Optimize It

This high-level discussion examined the full value chain of the bioeconomy—from discovery to deployment—highlighting the interconnected roles of innovation, industry, and policy. The discussion spanned the complexity of the ecosystem, including molecular sciences in universities and industry, agricultural companies with a focus on seed innovation, agricultural processors, fermentation and biomanufacturing firms, chemical, materials, and ingredient producers, and CPG companies. This session also introduced many of the key themes that were explored in depth throughout the day.

INTRODUCTION

Dr. Roger Wyse, Co-founder and Managing Partner, RW Associates

LEADERSHIP PERSPECTIVES

Mr. John Bode, CEO and President, Corn Refiners Association

Dr. Sarah Glaven, Gerhard R. Andlinger Visiting Fellow, Princeton University

Dr. Sean Jones, Deputy Lab Director, Science & Technology, Argonne National Lab

Dr. Jill Zullo, Executive Vice President and COO, BioMADE

Key Session Takeaways

The panel highlighted several shared themes, including the need for:

- A unified definition of the bioeconomy;
- Building successful commercialization pathways;
- Cross-sector collaboration;
- Policy standards, tax incentives, and international coordination as levers for growth;
- Translational infrastructure—pilot plants, labs, modeling tools, and workforce development—for bridging gaps between discovery and market impact;
- Trust-building, innovative financial models, and capturing the full environmental and social value of bio-based products surfaced as recurring points of discussion and priority; and
- Integrating end-users and partners early, adopting circular and sustainable practices, and accelerating time-to-market must underpin U.S. leadership in the global bioeconomy.

© 2026 Council on Competitiveness

Session Summary

Mr. Chad Evans, Executive Vice President and COO of the Council on Competitiveness, who emceed the meeting, opened the session by introducing Dr. Roger Wyse and framing the conversation around the bioeconomy's value chain.

Defining and Timing the Circular Bioeconomy

Dr. Roger Wyse, Co-founder and Managing Partner, RW Associates, began by highlighting the importance of speed, rural economic development, and using the bioeconomy to drive U.S. competitiveness. Drawing on his experience as a farmer, agricultural scientist, academic, and venture investor, he proposed a "circular bioeconomy" definition—one that prioritizes biological resources, ecosystem regeneration, and closed-loop systems to reduce fossil fuel dependence and minimize waste. In his view, the bioeconomy encompasses sustainability across economic, social, and environmental dimensions, including rural development and supply chain resilience. He mentioned the critical inclusion of biopharma in this definition, while also distinguishing the distinct challenges of non-healthcare bio-based sectors, which he argued have transformative potential but need for U.S. policy and funding support.

The timing, Dr. Wyse stressed, is right. Converging technologies, market readiness, supportive government policies, and bipartisan backing provide a strong foundation. Importantly, he noted national security policymakers are paying attention, elevating the bioeconomy's strategic relevance. Yet Dr. Wyse cautioned past efforts have fallen short: early-stage companies have struggled with commercialization, long time-to-market, tough economics against established fossil fuel industries, and a lack of fully monetized ecosystem benefits. Success stories are rare, and rebuilding trust among investors and partners is essential. He concluded by calling for innovation not only in technology but in risk management, business models, financial products, and ways to capture the full value of the circular bioeconomy—efforts requiring tight collaboration across industry and government.

"We need innovation not just in technology, but in everything we do—we need new risk management tools, new business models, new financial products, and new ways of working together as an industry and government to reduce time to market by at least half."

Dr. Roger Wyse
Co-founder and Managing Partner, RW Associates

Policy, Standards, and Market Signals

Mr. John Bodey, CEO of the Corn Refiners Association, focused his comments on policy and advocacy imperatives for the bioeconomy. He outlined the creation of the Plant Based Products

© 2026 Council on Competitiveness

"The bioeconomy offers new markets for farmers and rural economic development. This bipartisan appeal gives us real optimism that, despite the challenges, the bioeconomy's promise will continue to grow and gain support."

Mr. John Bodey
CEO and President, Corn Refiners Association

Council, designed to provide a feedstock-agnostic platform for policy engagement. John highlighted the importance of standards, consistent terminology, and certifications to build consumer trust and avoid greenwashing, drawing parallels to the organic industry's explosive growth after establishing national terms. He underscored the need for NAICS codes to generate sector data, inform regulations, and facilitate investment, noting bipartisan momentum through the AG Bio Act and potential inclusion in the Farm Bill.

Capital investment remains critical, particularly in the face of international competition. John stressed tax incentives and policy mechanisms as essential to attracting investment to U.S.-based innovation. John also pointed to the need for pushing public education, consumer demand, and bipartisan support—driven by benefits for farmers, rural development, environmental impact, and competitiveness vis-à-vis China—as key levers to sustain and accelerate growth. Timing was also noted: the next Farm Bill and potential reconciliation legislation could create immediate opportunities, making coordinated messaging to policymakers urgent.

Translating Science to Commercial Impact

Dr. Sean Jones, Deputy Lab Director at Argonne National Laboratory, discussed the critical role of national labs in the bioeconomy. Argonne focuses on sustainable feedstocks, advanced catalysts, microbial and chemical pathways, and modular process systems, all in service of real-market competitiveness. The value chain, Dr. Jones noted, is a complex ecosystem, not a linear pipeline, with different science, capital, and partnership needs at each stage. The labs aim to help industry cross the "valley of death" between lab discoveries and commercialization, accelerate innovation with AI and modeling, and provide translational infrastructure such as pilot plants, demonstration sites, and testing platforms.

Dr. Jones highlighted Argonne's unique capabilities—supercomputers, Advanced Photon Source, and nanoscale characterization tools—as ways to shorten innovation cycles and reduce risk. He also stressed cross-sector collaboration, streamlined regulatory processes, and workforce development as essential priorities for advancing the U.S. bioeconomy. By enabling faster, lower-risk technology translation and supporting talent at the intersection of biology, chemistry, computation, and engineering, the labs are positioned as vital partners in realizing the bioeconomy's potential.

© 2026 Council on Competitiveness

"Argonne and our National Lab colleagues serve as translational platforms to move technologies from molecular discovery toward commercial viability, while providing the technical, economic, and lifecycle insights the industry needs to invest with confidence."

Dr. Sean Jones
Deputy Lab Director, Science & Technology,
Argonne National Laboratory

"When I think about the bioeconomy value chain, it is critical to identify the common priorities across sectors that the federal government can support; otherwise, policy and investment will remain siloed and fragmented."

Dr. Sarah Glaven
Gerhard R. Andlinger Visiting Fellow,
Princeton University

Bridging Federal, Industry, and International Perspectives

Dr. Sarah Glaven, Princeton University Fellow and Former Senior Government Scientist at the White House, echoed Dr. Wyse's focus on the circular bioeconomy and highlighted the importance of federal definitions and international coordination. She noted that technology readiness levels (TRLs) are a key lens for federal support, with U.S. strengths concentrated in R&D but gaps in prototype, demonstration, and commercialization stages. She made the point that it is important for industry and academia to identify common priorities to present a unified voice to policymakers to have the best opportunity to drive federal incentives to bridge gaps between innovation and market adoption.

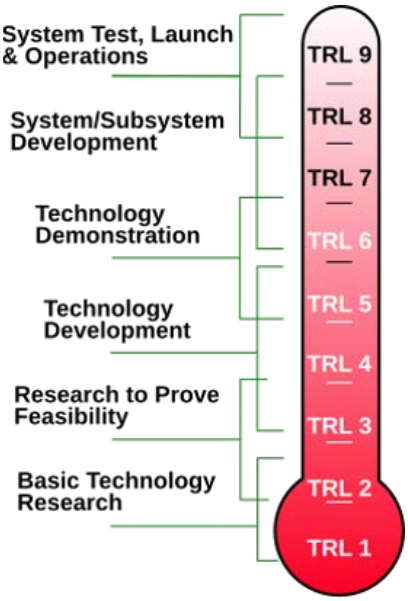
Dr. Glaven also pointed out the siloed nature of the bioeconomy, especially in industrial chemicals, and she encouraged collaboration to accelerate growth. She highlighted the challenge of integrating biomanufactured products into defense supply chains, stressing the importance of partnerships that scale innovations for real-world applications.

© 2026 Council on Competitiveness

Scaling Innovation—Pilot Plants and End-to-End Value Chains

Dr. Jill Zullo, EVP and COO at BioMADE, brought a practical, operational perspective. Drawing on her career in industrial biotech, she highlighted the critical role of pilot plants in moving from discovery to scale. BioMADE focuses on TRL levels 4–7, building pilot facilities to enable flexible, open-space production that accommodates partners and downstream users. Dr. Zullo noted the importance of integrating end customers—whether commercial or defense—early in the process to define specifications and ensure market readiness, and also stressed collaboration across companies and facilities to avoid duplication, maximize limited resources, and "de-risk in the light rather than in the dark."

Dr. Zullo recounted lessons from Cargill and Natureworks, illustrating how even large-scale facilities can fail to achieve commercial impact without end-user engagement. She concluded that value chain success requires thinking from the end-user backward, coordinating partners, and building an ecosystem that supports innovation, adoption, and scalability.



"When we think about the value chain, we have to flip it and start with the end—think about the consumers, think about the specifications, and make sure the right partners are at the table from the beginning to de-risk innovation in the light rather than in the dark."

Dr. Jill Zullo
Executive Vice President and COO, BioMADE

© 2026 Council on Competitiveness

Making the Bioeconomy Transition: For American Consumers, Farmers, and Communities

Too often, bio-based breakthroughs fail to compete with existing products on quality and/or price, failing to deliver real economic impact. This discussion examined how seed breeders, agricultural processors, and consumer packaged goods companies help make bio-based products visible, valuable, and viable for mainstream adoption, while ensuring the benefits reach farms, factories, and communities nationwide.

PANELISTS

Mr. Ajikumar Parayil, Founder and CEO, Manus

Dr. Todd Pester, Vice President, Seed Research and Development, Corteva Agriscience

Key Session Takeaways

- Connecting technological innovation to practical outcomes is essential to ensure the bioeconomy delivers economic growth, high-quality jobs, and benefits for consumers, farmers, and communities.
- Scaling bio-based manufacturing requires repurposing existing facilities, adopting capital-efficient and sustainable production methods, and leveraging AI-driven R&D to accelerate product development and domestic supply chain resilience.
- Access to capital, a trained technical workforce, and harmonized global regulations are critical challenges for U.S. bioeconomy companies, highlighting the need for collaboration between startups and established firms.
- Science-based regulation, consumer engagement, and supportive policy frameworks are key to fostering adoption of new agricultural and industrial biotech innovations, while protecting safety and encouraging investment in early-stage technologies.

Session Summary

Kicking off the session, Mr. Chad Evans, Executive Vice President and Chief Operating Officer, Council on Competitiveness, framed the conversation around one central question: how can the United States ensure that the bioeconomy benefits consumers, farmers, and communities while driving economic growth and creating high-quality jobs? Serving as a guide for the discussion, he elevated the importance of connecting technological innovation with practical outcomes that deliver measurable impact for the U.S. economy.

Dr. Ajikumar (Aji) Parayil, Founder and CEO, Manus Bio, brought the conversation to life with the story of Manus Bio, which he founded in 2011 out of MIT's Chemical Engineering depart-

© 2026 Council on Competitiveness

"We must explore how to make the bioeconomy transition work for American consumers, farmers, and communities."

Mr. Chad Evans
Executive Vice President and Chief Operating Officer, Council on Competitiveness

ment. He described the company's origins as a small lab fueled by a $2 million NIH grant and two early industry partnerships—including Coca-Cola—that helped shape their first commercially viable products.

He reflected on the evolution of synthetic biology over the past 15 years, noting that what may seem like a long time is actually just the opening chapter of a complex field. Early breakthroughs in cell engineering and gene editing laid the foundation for the next generation of bio-based manufacturing. What began as a focus on perfecting cell factories and scaling R&D eventually grew into the challenge of domestic production—competing with the lower costs of overseas manufacturing while adhering to sustainability and regulatory standards.

A defining moment came when Manus acquired a shuttered NutraSweet facility in Augusta, Georgia. Beyond providing the space and infrastructure for large-scale production, the acquisition allowed the company to restore jobs in a community that had lost thousands over the previous decade. Dr. Parayil described the painstaking work of convincing former employees to return and retraining a workforce to operate highly sophisticated biomanufacturing equipment.

"We are applying the fundamentals of engineering principles to engineering cells—to cell factory creation—and creating processes to make products out of them."

Mr. Ajikumar Parayil
Founder and CEO, Manus Bio

Innovation, however, was not limited to biology. Manus pursued capital-efficient, environmentally sustainable production methods—designing a facility that avoided solvents—and embraced AI-driven R&D, now powering 80 percent of their computational design and engineering. The company is now producing a variety of products, from natural sweeteners to onshoring essential medicines, aiming to shift supply chains from overseas to the United States.

© 2026 Council on Competitiveness

He also spoke candidly about challenges in scaling such ventures: access to capital, the need for trained technical workers, and global regulatory harmonization to enable market entry. Despite these hurdles, Dr. Parayil was optimistic, stressing that collaboration between larger and smaller companies is critical for building a domestic bioeconomy capable of competing on the world stage.

Mr. Mark Warner, CEO, Bioindustries, offered a complementary perspective, drawing on his experience consulting on Manus Bio's fundraising. He underscored the rarity of companies like Manus that have multiple products already in the market, noting their success rests not just on innovation but on pragmatic choices, such as retrofitting existing facilities to suit complex processes, and aligning production with real market demand. Mr. Warner framed these strategies as lessons for other startups navigating the bioeconomy, particularly the importance of connecting innovation to consumer and industrial needs.

Dr. Todd Pester, Vice President, Seed Research and Development, Corteva Agriscience, brought a perspective rooted in decades of seed innovation and deep ties to rural communities. Growing up on a diversified farm in Minnesota, he shared firsthand insights on how policy decisions can shape the resilience of farming communities. Drawing on his 20 years at Monsanto and current role at Corteva, he brought up the challenges of introducing new traits and technologies, noting the long timelines and substantial investment required to bring a single innovation to market.

A central theme of his remarks was the importance of science-based regulation that protects consumer safety while enabling faster entry of new technologies. He also stressed the vulnerabilities of intellectual property in the seed industry, the competitive disadvantages created by uneven global trade practices, and the value of collaborative partnerships to de-risk innovation. Programs

"Science-based regulation is paramount—consumer health, consumer safety—but we have to get to a science-based framework that is reasonable in terms of time."

Dr. Todd Pester
Vice President, Seed Research and Development, Corteva Agriscience

like Corteva Catalyst exemplify efforts to invest in early-stage technologies that might otherwise struggle to secure funding.

Dr. Pester reflected on lessons learned from the GMO era, including the need to engage not only farmers but consumers in shaping acceptance of new technologies. Gene editing, he noted, offers a clearer path for adoption than previous genetic modification approaches, given its greater precision and safety. He also pointed to opportunities for optimizing crops for specific industrial applications, such as starch content, highlighting the potential for agricultural innovation to directly support the bioeconomy.

© 2026 Council on Competitiveness

TECH TALK

The Intersection of the Bioeconomy for National Security and Space Frontiers

SPEAKERS

Dr. Tahllee Baynard, Vice President, Ignite, Lockheed Martin Space

Dr. Steven H. Walker, Distinguished Fellow, Council on Competitiveness; Professor of Practice, University of Notre Dame

Key Session Takeaways

- Biotechnology is a strategic asset for U.S. security, with applications spanning food, health, industrial resilience, and defense, emphasizing the need to integrate innovation with national competitiveness.
- Effective innovation requires interdisciplinary collaboration, horizontal integration, and the alignment of technological development with practical, mission-driven outcomes.
- Translating research into scalable solutions depends on understanding and addressing physical and engineering constraints—such as water, energy, and process efficiency—through integrated biology and chemical engineering approaches.
- Long-term investment in high-risk, high-reward research, supported by platforms like DARPA and public-private partnerships, is essential to accelerate breakthroughs from basic science to prototype-ready applications.

Session Summary

U.S. Security, Innovation, and the Frontier of Biotechnology

Mr. Chad Evans, Executive Vice President and Chief Operating Officer, Council on Competitiveness, set the stage by highlighting the opportunity to hear from two of the world's leading minds in shaping the United States' security enterprise. Their conversation explored the intersections of defense, biotechnology, and national competitiveness.

Dr. Tahllee Baynard, Vice President, Ignite, Lockheed Martin Space, began by situating Lockheed Martin's engagement with the bioeconomy within the broader mission of security. "Our job is to deliver products that perform exactly as the mission planner intends," he explained. Baynard's focus on R&D entails understanding systems down to the smallest fractions of a percent, a meticulous approach designed to ensure reliability and performance.

Baynard traced the company's early interest in bioengineering back to preemptive efforts under Lockheed leadership to explore how biological knowledge could inform next-generation product design. This engagement, he noted, is less about chasing financial returns and more about ensuring

© 2026 Council on Competitiveness

"Through bioengineering and biologically inspired design, we can now harness the power of living systems to create things physicists and chemists simply cannot—or at least not as efficiently."

Dr. Tahllee Baynard
Vice President, Ignite, Lockheed Martin Space

"DARPA's role is to prevent technological surprise for the United States, while also creating technological surprise for others. Biology is a very interesting area to do that."

Dr. Steven H. Walker
Distinguished Fellow, Council on Competitiveness
Professor of Practice, University of Notre Dame

the United States has the technologies needed for future missions. The company's venture capital model, he explained, is designed to assess relevance rather than immediate growth—a strategy that demands both patience and foresight.

He also highlighted the importance of horizontal integration, partnering across networks to leverage specialized expertise without attempting to control every stage of production. In his view, understanding the minutiae of inputs and outputs is critical to effective collaboration. Drawing on his background at NOAA, Dr. Baynard also stressed the importance of navigating policy landscapes that can either constrain or enable innovation, noting parallels between climate policy and the emerging bioeconomy.

Transitioning to Dr. Steven H. Walker, Distinguished Fellow, Council on Competitiveness, and Professor of Practice, University of Notre Dame, the conversation expanded into DARPA's pioneering work at the intersection of defense and biology. Walker recounted his tenure as director of DARPA, highlighting the agency's mission to prevent technological surprise while simultaneously generating it for the United States in strategic areas. Biology, he noted, emerged as a frontier for innovation, leading to the creation of DARPA's Biological Technologies Office in 2014.

Walker detailed three priority areas: neurotechnology, infectious disease, and synthetic biology. In neurotechnology, DARPA invested in projects

© 2026 Council on Competitiveness

ranging from deep brain stimulation for PTSD to advanced prosthetics, creating a bridge from laboratory innovation to commercial applications like Neuralink. In infectious disease research on vector-borne illnesses and vaccine platforms ultimately accelerated mRNA vaccine development, illustrating how long-term investment in biology could pay off in public health crises. Synthetic biology, Walker explained, was advanced through DARPA's Living Foundries program, which aimed to create thousands of new molecules for applications in defense and industry, often in collaboration with top academic institutions.

He also spoke too DARPA's role in prototyping high-risk ideas, using the example of Insect Allies—a controversial project exploring gene modification of insects to protect crops. While never deployed in the field, such experiments exemplify DARPA's mandate: to explore ambitious concepts that could ultimately redefine security and technological capability. Walker suggested that initiatives like this, elevated with support from organizations like the Council, could help move promising research from basic science into prototype-ready applications.

The dialogue underscored the convergence of defense, bioengineering, and national competitiveness. Both speakers framed biotechnology not just as a tool for innovation, but as a strategic asset in U.S. security, with implications for food, health, and industrial resiliency.

The conversation shifted to the practical challenges of translating biotechnology research into scalable solutions with Dr. Jill Zullo, Executive Vice President and COO, BioMADE, highlighting the link between biology, engineering, and economics. Using the example of water usage in biological production systems, she explained that many processes hit a natural limit when organisms can no longer tolerate the waste they produce. This constraint, she noted, not only affects efficiency but drives up energy costs and the cost of capital, creating a significant barrier to scaling innovation. "Process intensification," Dr. Zullo said, requires a deep, integrated approach: understanding both the biological systems and the chemical engineering needed to manage water and energy use efficiently. While pockets of research exist, she argued, the field needs far more concerted efforts to connect biology with full-system engineering solutions, whether through DARPA or other research platforms.

The Hon. Deborah L. Wince-Smith, President and CEO, Council on Competitiveness, then provided a historical perspective, illustrating how visionary questions can drive breakthroughs in competitiveness. She recounted her experience with former

© 2026 Council on Competitiveness

DARPA Director Tony Tether in 2004, when he asked how supercomputing could be leveraged to boost U.S. productivity. The Council responded by creating the **High-Performance Computing Initiative**, bringing together both end users and developers to transform digital engineering and manufacturing capabilities. Ms. Wince-Smith stressed that the success of such initiatives hinges on asking the right questions, involving end users from the start, and aligning technological development with practical applications—a lesson that resonates with current challenges in the bioeconomy and security.

The discussion underscored that innovation is rarely linear; it requires interdisciplinary collaboration, careful consideration of physical constraints like energy and water, and a clear understanding of how new technologies fit into broader systems of production and national competitiveness.

© 2026 Council on Competitiveness

Creating the Next Generation of Talent to Unleash the U.S. Bioeconomy

The bioeconomy demands a workforce that cuts across biology, data science, engineering, and business. But does our current education system create the talent necessary to meet the complexity of this emerging field? This discussion looked at the gaps in education, who is addressing them, and how we can re-imagine talent pipelines to meet bioeconomy ambitions.

PANELISTS

Dr. Monica Dus, Director, Office of National Labs, University of Michigan

Dr. Douglas Mans, Director, Environmental Molecular Sciences Division, Pacific Northwest National Laboratory

Dr. Shashank Priya, Vice President, Research and Innovation, University of Minnesota

Key Session Takeaways

Several themes emerged during the discussion, including:

- The workforce—scientists, engineers, technicians—must be looked at as a strategic asset, central to national security and competitiveness.
- From K–12 through graduate education, there is a need for education reform, redesigning programs for career pathways in the bioeconomy, interdisciplinary training, and experiential learning.
- National labs and industry must collaborate to provide hands-on training—apprenticeships, traineeships, and real-world exposure to automated, AI-driven platforms.
- Scaling the bioeconomy depends on a breadth of skilled talent, including manufacturing operators and technicians, as well as those with advanced degrees.
- Technology is both a tool and an equalizer, but scientists must be trained to use AI and automation creatively.
- The bioeconomy is place-based, relying on natural resources, industrial ecosystems, and regional talent pools.

Session Summary

Dr. Monica Dus, Director, Office of National Labs, University of Michigan, opened with a perspective shaped by a rare combination of academic, government, and national security experience. As Director of the Office of National Labs at the University of Michigan, a college professor, and a

© 2026 Council on Competitiveness

"Science is an element of national power, and we should see our workforce—from scientists to engineers to technicians—as a strategic asset, the way we look at the military."

Dr. Monica Dus
Director, Office of National Labs, University of Michigan

former White House fellow serving the Secretary of the Navy, Dr. Dus sees the STEM workforce as a strategic asset comparable to the military itself. She argued that the U.S. cannot continue preparing scientists, engineers, and technicians by inertia; instead, workforce development must be intentional and forward-looking at the needs of tomorrow, akin to military "force design."

Her vision includes rethinking both undergraduate and graduate education. At the undergraduate level, she suggests that many students enter pre-med or pre-dental tracks simply because they love science, not realizing alternative paths exist. She proposed restructuring curricula to offer certificates, apprenticeships, and defined career tracks in the bioeconomy, potentially redirecting tens of thousands of students nationally.

At the graduate level, Dr. Dus highlighted inefficiencies in current Ph.D. programs, noting high attrition rates and a mismatch between federal investment and career outcomes. She suggested that Ph.D. funding could include a service requirement, similar to military training models, ensuring students contribute to the workforce for a defined period. Finally, she stressed stronger industry-academia partnerships to translate technical talent directly into bioeconomy roles.

Dr. Douglas Mans, Director, Environmental Molecular Sciences Division, Pacific Northwest National Laboratory, shared reflections from a career bridging chemistry, biotech, and national labs. Beginning as an organic chemist in pharma, he witnessed firsthand the emergence of monoclonal antibodies, cell and gene therapies, and the broader biotechnology revolution. Dr. Mans noted the bioeconomy extends far beyond biomass and fermentation; new approaches include extracting proteins ex vivo and leveraging existing chemical reactors for efficiency.

He underscored the need to move from genomics as a "part list" to a deeper understanding of biology's emergent, dynamic properties. Automation and AI, Dr. Mans said, are transforming both discovery and scale-up in life sciences—but the workforce to fully leverage these tools is lacking. He stressed that scientists must learn to harness AI creatively rather than feel replaced by it.

Dr. Mans also identified a critical gap in experiential training: universities often lack access to advanced automated platforms that exist in national labs or industry. He advocated for traineeships at DOE facilities, where students could gain hands-on experience, receive certifications, and then enter the workforce equipped for cutting-edge bioeconomy roles. He was clear that

© 2026 Council on Competitiveness

"When you can run literally a million experiments at a time using AI, the challenge is designing those experiments so humans—and soon artificial intelligence—can interpret them. We need a workforce ready to bring their creative best, not feel replaced by technology."

Dr. Douglas Mans
Director, Environmental Molecular Sciences Division, Pacific Northwest National Laboratory

retaining everyone in national labs is unnecessary; the goal is to distribute talent across industry and academia.

Dr. Shashank Priya, Vice President, Research and Innovation, University of Minnesota, framed the bioeconomy as a strategic frontier requiring an entirely new approach to workforce development. He noted that the emerging bioeconomy is place-based: geographic factors such as farms, water availability, and minerals directly influence innovation potential. Dr. Priya also noted the need

"Artificial intelligence and automation are almost like an equalizer—you do not have to go to the most elite program; you can arrive at the same solution as someone with decades of specialized training."

Dr. Shashank Priya
Vice President, Research and Innovation, University of Minnesota

to break down silos between biology, engineering, data science, and business at all education levels—from K–12 through higher education.

At the University of Minnesota, Dr. Priya's team is implementing models to bridge academia and industry. The Biotechnology and Biomanufacturing Innovation Center at the University of Minnesota embeds students in industry from the start of their master's or Ph.D. programs, accelerating lab-to-market translation. AI and automation, Dr. Priya argued, serve as equalizers, enabling broader access to technical problem-solving regardless of formal credentials.

© 2026 Council on Competitiveness

"While higher education is important, our biggest challenge is building a network of skilled operators on the factory floor—this is the backbone of the bioeconomy we cannot lose sight of."

Mr. Mark Warner
CEO, Liberation Bioindustries

He proposed three imperatives:

1. Redesigning talent systems for interdisciplinarity,
2. Expanding entry points into the bioeconomy, and
3. Leveraging AI and geography to create a more equitable, high-impact workforce.

Dr. Priya also suggested flexible program models, such as "two-plus-two" or "three-plus-one" programs, where students combine technical training, company-based internships, and accelerated degree completion to reduce debt while gaining experiential learning.

"If the United States wants to excel in bio manufacturing, we need people making their hands dirty in the factories; and for the next generation of scientists, we must teach the physics and mathematics that underpins every innovation, including artificial intelligence."

Mr. Ajikumar Parayil
Founder and CEO, Manus

Mr. Mark Warner, CEO, Liberation Bioindustries, jumped in to highlight the often-overlooked manufacturing side of the bioeconomy workforce. He pointed out that by 2040, two-thirds of the workforce in the sector may not hold a college degree. Drawing on his experience building multiple biorefineries, Mr. Warner pointed out the critical shortage of trained operators and technicians. While higher education programs are important, the scale-up of bio-based manufacturing depends on hands-on workforce development for factory operations.

Mr. Ajikumar (Aji) Parayil, Founder and CEO, Manus, echoed Mr. Warner's point: America's bioeconomy needs more skilled labor in manufacturing, not just engineers and scientists. Practical, hands-on training for factory operations is a national priority. Mr. Parayil also stressed the importance of foundational STEM education—physics and math—for biologists and chemists, noting that advances like AI diffusion models are rooted in decades-old principles of physical chemistry. Preparing the next generation to leverage these innovations requires rigorous training in both the science and its mathematical foundations.

© 2026 Council on Competitiveness

KEYNOTE

Lunch and Tech Talk on a Research Discovery

Prof. Lisa Schulte Moore, Director, Bioeconomy Institute, Iowa State University, opened her keynote by reflecting on the deep history and enduring relevance of the bioeconomy. She reminded the audience that humanity has always operated within a bioeconomy, though modern approaches increasingly recognize its potential to address sustainability, economic resilience, and societal needs.

Prof. Schulte Moore traced the Bioeconomy Institute's origins to 2002, highlighting its growth into a transdisciplinary hub with 130 affiliate faculty, 20 staff, and 60 students. Iowa's unique agricultural advantages—fertile soils, rain-fed crops, and abundant sunlight across the Corn Belt—position the state as an ideal incubator for bioeconomy innovation. She emphasized that natural resources alone are insufficient; human ingenuity, investment from state and federal partners, and industry collaboration are critical.

The Institute's mission, she explained, is to advance the bioeconomy while serving society, with a vision for a world where both people and nature thrive. She shared a student- and stakeholder-informed definition of bioeconomy, emphasizing the production of food, energy, bioproducts, and associated services from renewable resources. Critically, she included food in the definition to highlight the bioeconomy's role in resilient and circular food systems.

"Natural resources alone are not enough; human ingenuity, state and federal investment, and industry partnership are what make a robust bioeconomy possible."

Prof. Lisa Schulte Moore
Director, Bioeconomy Institute, Iowa State University

Prof. Schulte Moore outlined the Institute's innovation pillars—agroecosystems, processing systems, systems intelligence, and markets and policy—and the foundational capacity pillars of

© 2026 Council on Competitiveness

leadership, resources and services, and workforce development. She highlighted notable projects, including auto-thermal pyrolysis, developed with colleagues at Iowa State, which converts biomass like corn stover and wood into bio-char and bio crude for renewable fuels, carbon fiber, and soil amendments. Partnerships with Chevron, Renewable Energy Group, and the startup Rise Energy have scaled these technologies from benchtop to half-ton-per-day pilots, with commercial expansion planned.

The SeaChange Grass-to-Gas project demonstrates a farm-based bioeconomy model integrating winter rye, corn stover, and manure in on-farm anaerobic digestion systems to produce renewable natural gas and biofertilizers. Prof. Schulte Moore pointed to its dual benefits: supporting rural economies while enhancing soil health and nutrient retention. The project's scalability is enhanced by partnerships with commercial actors such as Raceline Alternative Energy, which invested $14 million to expand the pilot facility. Plans are underway to adapt this model for Mid-Atlantic dairy and hog farms.

Beyond energy production, the Institute pursues environmental impact solutions, such as integrating pyrolysis at wastewater treatment plants to treat digestate, reduce PFAS contamination, and produce stable carbon for soil amendments—linking bioeconomy innovation with environmental stewardship and potential monetization of ecosystem services.

Workforce development remains central to Prof. Schulte Moore's vision. Over five years, her team has trained more than 60 graduate students and postdocs, engaged dozens of high school teachers, and reached thousands of people nationally and internationally. Of particular importance to her is forging interdisciplinary collaboration, noting that students trained in bioprocessing are actively engaging with peers in agronomy, environmental science, law, and sociology, fostering a systems-level understanding of the bioeconomy.

Addressing low natural gas prices, she noted that the bioeconomy's economic viability relies on renewable fuel credits, low-carbon fuel standards, and careful feedstock management, including efforts to qualify winter rye as a D3 RIN-eligible feedstock despite regulatory hurdles.

Overall, Prof. Schulte Moore's session highlighted the power of combining natural resources, transdisciplinary research, workforce training, and public-private partnerships to create a resilient, scalable, and economically viable bioeconomy—one that strengthens rural communities, enhances environmental stewardship, and positions the United States for leadership in a rapidly evolving global sector.

© 2026 Council on Competitiveness

Financing the Bioeconomy: Unlocking Capital for Scalable Solutions

The capital needed to scale bio-based solutions is massive, but what is holding investors back? This session explored public-private models, risk perception, policy signals, and what kinds of capital structures can catalyze growth across the bio value chain.

PANELISTS

Mr. Dave Resac, Chief Financial Officer, Primient

Mr. Mark Warner, CEO, Liberation Bioindustries

Dr. Roger Wyse, Co-founder and Managing Partner, RW Associates

Key Session Takeaways

Several themes emerged during the discussion, including:

- Technological validation, scale-up, investor confidence, and customer adoption all require coordinated risk mitigation.
- Venture and federal funding are insufficient for capital-intensive bio-manufacturing, pushing companies to seek overseas investment.
- Low-carbon fuel standards, RIN credits, catalytic capital, and innovation insurance can accelerate adoption and support financial viability.
- Brazil and Europe demonstrate how national-level financing and supportive policies can dramatically shorten commercialization timelines.
- The United States can leverage world-leading technology and talent, but translating innovation into domestic manufacturing will require bold, integrated strategies.

Session Summary

Mr. Dave Resac, Chief Financial Officer, Primient, reflected on the long trajectory of bio-manufacturing in the United States, drawing on his 15-year tenure at Primient. He noted that the company's first industrial biomanufacturing initiative began nearly 20 years ago in Loudon, TN, complementing citric acid production. Despite the time that has passed, gaps between major new bio-based projects highlight persistent challenges in scaling and commercializing innovations. To overcome these challenges, which Mr. Resac grouped in three buckets—technology de-risking, investment acceleration, and customer uptake—he pointed to the importance of bringing diverse stakeholders together.

Technological progress, he explained, has benefited from advances in artificial intelligence and microbial strain development, dramatically

© 2026 Council on Competitiveness

"By unlocking barriers, we can double the size of the U.S. bio-manufacturing sector and grow by $200 billion over the next 10 to 15 years."

Mr. Dave Resac
Chief Financial Officer, Primient

shortening timelines to market. Yet he stressed that scaling facilities is critical to reduce risk and create proof points for investors and partners. "Once we build that facility, we are in a 20-year-plus relationship, and we cannot have it go the other way," he said, underlining the importance of securing long-term commercial agreements.

Mr. Resac also highlighted policy and incentive structures, including low-carbon fuel standards and renewable identification number (RIN) credits, as pivotal tools in making projects financially viable. He pointed to a Boston Consulting Group report suggesting that overcoming these barriers could double the size of the U.S. bio-manufacturing sector and generate an additional $200 billion over the next 10 to 15 years.

Dr. Roger Wyse, Co-founder and Managing Partner, RW Associates, looked at the broader financial and structural challenges of de-risking the bioeconomy, drawing on 25 years of experience investing in innovative bio-focused companies. The need for access to capital at every stage, from university grants to commercial launch, creates major risks for both entrepreneurs and investors. Dr. Wyse highlighted the critical role of partnerships between large, financially stable companies and smaller ventures, as these relationships serve as a form of de-risking for investors.

Dr. Wyse also offered innovative approaches to overcoming market adoption barriers. One example, catalytic capital, is a Wall Street-funded bond mechanism that subsidizes performance guarantees for farmers adopting new bio-products. This reduces risk for farmers while enabling companies to generate earlier revenue streams. Another concept, "innovation insurance," would underwrite the risk of adopting new technologies, akin to crop insurance, providing farmers with confidence to integrate novel solutions into their operations. Dr. Wyse further discussed post-IPO challenges, citing LanzaTech as an example. Despite having multiple operating commercial plants worldwide, none are in the United States, the company's market capitalization has fallen dramatically since going public. This highlights a gap between technological maturity and investor confidence domestically.

Mr. Mark Warner, Chief Executive Officer, Liberation Bioindustries, provided a candid, ground-level view of the financial challenges facing domestic bio-manufacturing ventures. He outlined three critical stages: early-stage R&D, scale-up, and commercial manufacturing (TRL seven and above), noting that the latter is the hardest to finance in the current U.S. environment, a point Mr. Warner illustrated with his company's experience: founded in 2022, they broke ground on a $115 million facility within nine months but faced an 18-month delay in securing secondary funding because binding off-take agreements were not yet in place.

Mr. Warner highlighted the structural limitations of U.S. funding for bio-manufacturing, noting that 80 percent of his company's financing has come from overseas. While foreign capital enables project completion, it often comes with restrictions that may not align with U.S. economic or strategic priorities. He contrasted this with Brazil, where

© 2026 Council on Competitiveness

"A lot of people who come up with funding approaches for these biorefineries have never actually done large-scale project finance, and they do not really understand how the buckets of capital have to interrelate."

Mr. Mark Warner
Chief Executive Officer, Liberation Bioindustries

a $200 million facility was conceived, financed, and operational in 36 months through the National Development Bank, demonstrating a sharp contrast in timeline and the value of government support to accelerate commercialization. The lack of domestic risk capital and clear funding pathways is a major obstacle to scaling the U.S. bioeconomy.

The Hon. Deborah L. Wince-Smith, President and CEO, Council on Competitiveness, framed the discussion in a policy and strategic context, stressing the need for a U.S. National Development Bank to provide long-term, high-capital financing that traditional venture models cannot

"We need to think big and bold. We have to get rid of the valley of death…we need a valley of life."

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

support. She highlighted historical examples, such as the MIT-developed A123 battery, where underfunded domestic scale-up allowed manufacturing and technology leadership to move overseas. "We need to think big and bold. We have to get rid of the valley of death… we need a valley of life," she urged, advocating for bold public-private solutions to support domestic bio-manufacturing and secure U.S. competitiveness in the bioeconomy. Ms. Wince-Smith stressed that the United States has the talent and technology to lead but needs integrated strategies combining technology, finance, and policy to translate innovation into domestic manufacturing capacity.

© 2026 Council on Competitiveness

From Discovery to Deployment: Accelerating Innovation from Lab to Market

Due to a convergence of advanced technologies—including AI—innovation in synthetic biology and biomanufacturing is rapid and accelerating. This discussion examined the groundbreaking discoveries in bio and how the United States can further accelerate the journey from lab to market without compromising safety or public trust. Advances in fermentation and chemical/materials synthesis serve as vital bridges between laboratory breakthroughs and consumer-ready products.

PANELISTS

Dr. Beth Conerty, Regional Innovation Officer, iFAB Tech Hub

Prof. Fabio Ribeiro, Distinguished Professor in Chemical Engineering, Purdue University—CISTAR-LEAPS

Key Session Takeaways

Several themes emerged during the discussion, including:

- The lack of intermediate-scale domestic infrastructure is a critical barrier to scaling U.S. bio-manufacturing and precision fermentation.
- Federal funding acts is a catalytic mechanism, de-risking early-stage investment and attracting substantial private capital.
- U.S. startups often relocate overseas due to infrastructure and capital limitations, creating economic and strategic disadvantages.
- AI can accelerate manufacturing efficiency and decision-making, but its benefits require aligned infrastructure, cost discipline, and energy solutions.
- The combination of U.S. talent, freedom, and cross-sector collaboration is a unique advantage that can be leveraged to replicate innovation ecosystems nationwide.
- Advanced energy solutions, including small modular nuclear reactors, could provide reliable, high-temperature heat and electricity to support bio-manufacturing scale-up in the Midwest.

Session Summary

Dr. Beth Conerty, Regional Innovation Officer, iFAB Tech Hub, opened the discussion by highlighting the mission of the Illinois Fermentation and Agriculture Bio-manufacturing (iFAB) Tech Hub, a consortium of 34 partners spanning industry, government, economic development, and higher education. The iFAB Tech Hub is focused on growing bio-manufacturing and precision fermentation in central Illinois, leveraging long-standing regional collaboration. The Hub

© 2026 Council on Competitiveness

"The speed to market for new facilities is absolutely critical for global competition and national security."

Dr. Beth Conerty
Regional Innovation Officer, iFAB Tech Hub

has a seven-year track record at the Integrated Bioprocessing Research Lab at the University of Illinois, which has de-risked early-stage biomanufacturing for hundreds of companies.

Dr. Conerty noted that one of the persistent bottlenecks for U.S. bioeconomy growth is the lack of domestic infrastructure—fermentation tanks, utilities, and supply chains—for scaling pilot projects to demonstration and early manufacturing runs. While the United States excels in fundamental research, she argued, it lacks the intermediate infrastructure needed to reduce capital burdens and accelerate commercialization.

Dr. Conerty also discussed the international competitive disadvantage this creates, as companies frequently move overseas for demonstration-scale development, imposing costs, delays, and workforce strain on startups. To counter this, iFAB is creating a complete "lab-to-line" ecosystem within a 45-minute drive, connecting University of Illinois facilities with industry incumbents in Decatur, IL. This setup integrates multi-user fermentation tanks, feedstock, wastewater treatment, power, steam, and rail infrastructure, aiming to drastically reduce costs and speed time-to-market, which is critical for both global competitiveness and national security.

In a follow-up question on replicable ecosystem practices, Dr. Conerty highlighted the catalytic role of federal funding. iFAB secured $51 million in federal support, which, combined with $680 million in commitments from industry partners, dramatically lowered the risk profile for private investment while delivering measurable ROI for the federal government. She described this strategic use of public funds as a game-changer for fostering regional bioeconomy hubs.

Prof. Fabio Ribeiro, Distinguished Professor in Chemical Engineering, Purdue University—CISTAR-LEAPS, framed his perspective around his experience leading a National Science Foundation Engineering Research Center focused on translating shale and biomass technologies from laboratory research to commercial deployment. He highlighted the United States' historic success in keeping technology and energy resources domestic, contrasting it with other countries' approaches.

A central theme of his remarks was the transformative potential of artificial intelligence (AI) for manufacturing and bio-manufacturing. He explained that AI can optimize operations through automation, predictive maintenance, and process efficiency. However, leveraging these benefits requires both adequate infrastructure and early economic discipline, especially to reduce time-

© 2026 Council on Competitiveness

to-market for mid-scale projects. Prof. Ribeiro stressed that projects without clear cost and scale viability are unlikely to succeed, as early-stage bio-manufacturing is extremely capital and energy-intensive.

He also noted that innovations in energy infrastructure—like small modular nuclear reactors—could provide reliable, high-capacity heat and electricity, helping the Midwest become a center for biomass and bio-manufacturing. The combination of AI, infrastructure, and cost-conscious project selection, he argued, could reduce development timelines from 15 years to five years, creating a competitive advantage for U.S. companies.

In response to a question on replicable ecosystem practices, Prof. Ribeiro emphasized the unique strength of the United States: people. He noted the freedom, meritocracy, and industriousness of U.S. talent, combined with collaboration across government, industry, and academia, as a differentiator that no other country can match. He suggested that assembling multidisciplinary teams capable of solving complex bioeconomy challenges is a core practice that can be exported to other regions.

"AI offers speed and efficiency, but without infrastructure and economic discipline, even the best technology cannot be scaled successfully."

Prof. Fabio Ribeiro
Distinguished Professor in Chemical Engineering, Purdue University—CISTAR-LEAPS

© 2026 Council on Competitiveness

From U.S. Strategy to Global Impact: Driving Partnerships, Innovation, and Standards in the Bioeconomy

The U.S. bioeconomy faces both remarkable opportunity and real risk—fragmented domestic coordination across the value chain, rising competition in global standards-setting, and a lack of alignment in global trade rules. This discussion will explore how a national strategy can expand domestic and international partnerships, accelerate innovation, improve supply chain resilience, strengthen national security, and secure U.S. leadership in the global bioeconomy.

PANELISTS

Mr. James Glueck Jr., Plant Based Products Council, Executive Director

Dr. Todd Pray, Chief Strategic Partnerships Officer, Lawrence Berkeley National Laboratory

Mr. Gustavo Sergi, CEO, Sustainea

Dr. Michael Wolf, Senior Vice President of Global Operations, Hevolution

Key Session Takeaways

Several themes emerged during the discussion, including:

- Innovation spans the entire agricultural and manufacturing value chain, requiring collaboration among farmers, startups, corporations, and consumers.
- Market demand, rather than government mandates alone, is driving growth in bio-based products. Expanding domestic engagement and awareness is essential.
- Fragmented regulations and limited interagency coordination are slowing innovation; legislative action is needed to formalize collaboration and streamline efforts.
- National labs can serve as de-risking platforms, technical advisors, and incubators for early-stage biotech companies, but they need supportive policies and collaboration frameworks.
- Competition for skilled biotech and data science professionals is intense, making strong workforce pipelines essential for U.S. competitiveness.
- Fragmented domestic and international standards are hindering scale-up; coordinated approaches and lessons from other industries can accelerate adoption.
- Combining federal, state, and industry efforts—supported by clear communication and leadership—is critical to unlocking the full potential of the U.S. bioeconomy.

© 2026 Council on Competitiveness

Mr. James Glueck Jr., Executive Director, Plant Based Products Council, described the Plant Based Products Council's evolution from the Corn Refiners five years ago, with its feedstock-agnostic approach. This flexibility, he argued, is critical in shaping policy for a rapidly evolving bioeconomy. He highlighted the Plant Based Products Council's value chain perspective, noting that its membership spans farmers, startups, established manufacturers, and consumer-facing companies, creating a holistic platform for policy and market discussions.

Mr. Glueck stressed the importance of partnerships across the entire value chain, both domestically and internationally. He provided an example of innovation occurring at multiple stages: corn growers from seven states have invested in Arable Labs, an early-stage technology development company. He also elevated consumer demand as a key driver for the bioeconomy, noting a 20 percent increase over five years in consumer familiarity and interest in bio-based products. More than half of U.S. consumers express greater enthusiasm when understanding the link to agriculture and rural communities.

State governments were highlighted as critical partners, too. While state-level procurement programs may not drive large volumes, they provide important "stamps of approval" that influence markets and raise awareness. Globally, Mr. Glueck pointed to the need for U.S. leadership in shaping standards, citing the Global Plastics Treaty as an example where engagement signals priorities to international markets.

Domestically, Mr. Glueck noted that fragmentation among agencies—USDA, DOE, EPA—and outdated regulatory frameworks create barriers to scaling the bioeconomy. Legislative efforts, including bipartisan bills codifying multi-agency coordination, are key to addressing these gaps. He concluded by framing the U.S. as possessing strong

"Now is the time to seize the momentum we have—with strong feedstock supply, robust consumer interest, and growing global competition—and turn that into a coordinated national effort to lead in the bioeconomy."

Mr. James Glueck Jr.
Executive Director, Plant Based Products Council

feedstock supply, consumer interest, and global opportunity, but stressed the need for coordinated national effort to lead in the bioeconomy.

Dr. Todd Pray, Chief Strategic Partnerships Officer, Lawrence Berkeley National Laboratory, reflected on his career in biotechnology, including roles in the pharma startup sector and industrial biotechs like Amyris and Impossible Foods, before joining Berkeley Lab. The lab's role, he said, is in scaling early-stage biotech innovation, particularly through the Advanced Biofuels and Bioproducts Process Development unit.

He argued that government regulations sometimes hamstring innovation, citing restrictive feedstock and product requirements from different

© 2026 Council on Competitiveness

"The national labs can be your skunkworks, technical assistance providers, and a focal point for de-risking innovation—but we need policy that allows us to work effectively with industry and retain talent."

Dr. Todd Pray (pictured at left)
Chief Strategic Partnerships Officer, Lawrence Berkeley National Laboratory

agencies that can that slow commercialization. But Dr. Pray also highlighted the national labs as underutilized partners for de-risking technologies, providing technical assistance, and integrating across federal programs such as DARPA, NIH, DOE and NSF. Multi-lab consortia like the Joint Bioenergy Institute and the Agile Biofoundry are models for collaborative infrastructure and upstream technology development, he said.

A key challenge is foreign influence concerns, which are slowing collaborations with startups—such as U.S. small businesses that have senior personnel or investment from international locations not considered countries of risk or otherwise

"The U.S. has competitive raw materials and R&D funding, but without domestic coordination and consumer demand, we cannot fully capitalize on our potential."

Mr. Gustavo Sergi
CEO, Sustainea

sensitive—and reducing the ability to retain talent. Dr. Pray highlighted the Lab Embedded Entrepreneur program, Cyclotron Road, which has supported 84 companies over 11 years, raising over $3.5 billion in follow-on funding. Programs like this are critical for nurturing a strong national bioeconomy and retaining global talent.

Dr. Pray concluded by urging the U.S. to maintain strong international collaboration, warning that losing talent to other countries could quickly erode competitiveness in biotechnology.

Mr. Gustavo Sergi, CEO, Sustainea, focused on the market dynamics and domestic coordination necessary to scale the U.S. bioeconomy. He noted that U.S. consumers generally do not pay a premium for bio-based products, which limits

© 2026 Council on Competitiveness

the ability of companies to cover higher costs for sustainable inputs. He stressed the importance of aligning policy, state-level programs, and market incentives to foster domestic consumption.

Mr. Sergi highlighted Europe as a model for coordinated bioeconomy policy, noting that shared standards and regulatory alignment have successfully driven consumption there.

The United States has a competitive advantage in raw material abundance and R&D funding, Mr. Sergi noted, but warned that realizing leadership requires both domestic funding and widespread demand. Without coordination, the United States risks falling behind even with these advantages.

Dr. Michael Wolf, Senior Vice President of Global Operations, Hevolution, described Hevolution's unique structure, with operations in Saudi Arabia and the United States, investing up to $1 billion annually in synthetic biology R&D across the innovation lifecycle—from basic research to commercialization. Dr. Wolf argued that collaboration and integration are essential to overcoming challenges in the bioeconomy, particularly around data sharing, talent retention, and cross-border research.

He highlighted a talent gap in data expertise, exacerbated by competition from high-paying tech jobs, and stressed the need for sharing expertise across institutions. Dr. Wolf also called for national standards for the bioeconomy, noting fragmentation across verticals like food and pharmaceutical production. He suggested looking to other industries, such as fintech and consumer products, for lessons in efficiency and standardization.

Finally, Dr. Wolf argued that strong leadership and unified communication are critical for advancing the bioeconomy, both nationally and globally. By modeling collaborative behavior and speaking with consistent messaging, institutions can accelerate innovation and maximize impact.

"We need strong leadership, clear communication, and consistent standards to ensure the bioeconomy can thrive both domestically and globally."

Dr. Michael Wolf
Senior Vice President of Global Operations, Hevolution

© 2026 Council on Competitiveness

Leveraging 40 Years of Competitiveness Impact to Grow the U.S. Bioeconomy

Building on a day of bold ideas, this discussion focused on actionable next steps to advance U.S. leadership in the bioeconomy. Panelists shared insights on the essential ingredients and strategic priorities needed to accelerate the bioeconomy, while exploring opportunities to leverage the Council's 40th anniversary—including the April 2026 bioeconomy-focused Competitiveness Conversation in Omaha, NE—to shape America's competitiveness over the coming decade.

PANELISTS

Mr. Erik Fyrwald, CEO, IFF, and Chairman, Council on Competitiveness

Mr. Jim Stutelberg, CEO, Primient

Moderator: **The Hon. Deborah L. Wince-Smith**, President and CEO, Council on Competitiveness

Key Session Takeaways

Several themes emerged during the discussion, including:

- The U.S. bioeconomy is fragmented; coordination across government, industry, academia, and labs is essential.
- Clear roles, responsibilities, and timelines are needed to translate ideas into tangible action.
- Policies should reduce costs, increase demand, and explore innovative models like minority government stakes and off-take agreements.
- Success depends on collaboration among trade associations, startups, investors, farmers, and government.
- Developing domestic talent and enabling smart immigration are crucial for maintaining global competitiveness.
- Public interest in sustainable, bio-based solutions must be harnessed to drive demand and political support.
- Stakeholders must adopt a proactive, unified approach, embracing risk and innovation to build a "burgeoning and bright" bioeconomy.

Session Summary

The Hon. Deborah L. Wince-Smith, President and CEO, Council on Competitiveness, opened the closing session with a call to action to translate the day's discussions into outcomes for the bioeconomy initiative under the Council's National Innovation Commission. She acknowledged the contributions of hosts and panelists and set the stage for a conversation focused on building a coordinated policy agenda, integrating diverse stakeholders, and driving tangible impact across the bioeconomy.

© 2026 Council on Competitiveness

"We need to bring together all parts of the ecosystem—industrial members, universities, labs, and end users—to build a coordinated, national bioeconomy agenda. We need builders who will step up above their own interests to drive a national bioeconomy agenda—bold and brave—believers in our future."

The Hon. Deborah L. Wince-Smith
President and CEO, Council on Competitiveness

She framed the effort as a systems integration challenge, noting the current fragmentation in the bioeconomy compared to other sectors like AI. Ms. Wince-Smith stressed the importance of identifying common threads, unifying stakeholders, and creating a national imperative to advance this sector. She also highlighted the Council's approach of bringing together industrial members, universities, labs, and end users to build a collaborative platform that transcends individual interests.

"We need to start with low-hanging fruit, build frameworks for cost reduction and demand growth, and explore innovative financing to de-risk bioeconomy investments."

Mr. Jim Stutelberg
CEO, Primient

She concluded with a rallying mantra for the initiative: "Building the bioeconomy and beyond: burgeoning and bright, breaking barriers, boosting, bridging, and binding, bold, brave, and believing in our future.

Mr. Jim Stutelberg, CEO, Primient, focused on operationalizing the bioeconomy agenda and answering the practical question: "Who is going to do what, to whom, and when?" He underscored two foundational elements for progress: incentives to reduce costs and incentives to drive demand growth.

He also turned back to his earlier comments in the day around the importance of starting with "low-hanging fruit"—tangible, achievable actions that can build momentum without getting bogged

© 2026 Council on Competitiveness

down in complex debates. Using examples from Primient's decarbonization journey, he illustrated how incremental steps, like transitioning from coal to natural gas co-generation, create early wins that catalyze larger initiatives.

Mr. Stutelberg also explored financing models to de-risk investment, referencing government minority stakes in Intel and the Department of Defense's investments in rare earth metals companies. He suggested that similar infrastructure investment approaches could stimulate growth in the bioeconomy while providing reasonable returns to taxpayers.

Mr. Eirk Fyrwald, CEO, IFF, highlighted the power of collaboration across industry, trade associations, and government. He argued that by aligning on challenges and solutions, the bioeconomy sector could gain stronger support from federal and state governments.

Workforce development was a central theme. Mr. Fyrwald stressed the importance of cultivating scientists, engineers, and plant operators while also supporting "smart immigration" to attract top international talent. He shared examples of Nobel laureates and other world-class scientists leaving or declining opportunities in the United States, and the need to retain global talent to maintain U.S. leadership.

Mr. Fyrwald also reflected on the need for coordinated financing, combining federal, state, corporate, and philanthropic resources to de-risk projects. He noted growing consumer demand for sustainable, nature-based solutions, such as healthier foods, better drugs, and renewable materials, which can serve as both market drivers and political support for the bioeconomy. Finally, he encouraged partnerships with startups and highlighted the need to protect intellectual property while integrating farmers into the ecosystem to strengthen political and public backing.

"We are much stronger together than apart. Collaboration across industry, government, and startups will drive workforce, financing, and consumer support for the bioeconomy."

Mr. Eirk Fyrwald
CEO, IFF
Chairman, Council on Competitiveness

Ms. Wince-Smith returned to close the session, reiterating that the bioeconomy requires systems integration across fragmented sectors, and encouraging participants to engage in follow-ups, contribute their expertise, and help recruit "builders" who will advance national priorities above individual interests.

She cited the Council's past work on energy transformation and product liability reform as a model for bringing together stakeholders who do not typically engage, illustrating how coordinated action can overcome structural barriers.

Her final message reinforced the day's themes: reducing barriers, boosting collaboration, bridging gaps, binding stakeholders together, and acting with boldness and belief in the future of the bioeconomy.

© 2026 Council on Competitiveness

Touring the Primient Lafayette Corn Processing Facility

Following the discussion, meeting attendees toured the Primient Lafayette Corn Processing Facility—the most energy-efficient corn wet mills in the world. The plant produces 40 train carloads of high-fructose corn syrup each day, along with crystalline fructose, and is widely recognized for its innovative approach to sustainable manufacturing.

A highlight of the visit was the facility's natural-gas-powered combined heat and power system, which serves as its primary recycled-energy platform. This co-generation system captures waste heat created during electricity generation and converts it into steam and additional electricity for use throughout the corn wet milling process. Primient's complete transition from coal to natural gas has significantly reduced greenhouse gas emissions, helping the Lafayette plant earn ENERGY STAR recognition for its efficiency.

Attendees also learned how the facility's low-carbon dextrose and advanced energy-efficient processes are enabling a new co-located partnership with Sustainea. By supplying dextrose as feedstock for the production of bio-based monoethylene glycol, the two facilities can optimize resource use, eliminate transport emissions between sites, and further strengthen the region's emerging bio-industrial ecosystem.

© 2026 Council on Competitiveness

© 2026 Council on Competitiveness

Participants

HOST

Mr. James Stutelberg
CEO
Primient

COUNCIL LEADERSHIP

Mr. Erik Fyrwald
Chair
CEO
IFF

Hon. Deborah L. Wince-Smith
President and CEO

Mr. Chad Evans
Executive Vice President and
Chief Operating Officer

PARTICIPANTS

Dr. Peter Allen
Executive Director
Commercialization Strategy
University of Pittsburgh

Hon. Ron Alting
State Senator
District 22
Indiana State Senate

Dr. Dion Antonopoulos
Division Director, Biosciences
Argonne National Laboratory

Dr. Tahllee Baynard
Vice President, Ignite
Lockheed Martin Space

Mr. John Bode
CEO and President
Corn Refiners Association

Ms. JoAnn Brouillette
Operating Partner
Lewis and Clark Agrifood

Dr. Mung Chiang
President
Purdue University

Dr. Beth Conerty
Regional Innovation Officer
iFAB Tech Hub

Mr. Jared Deye
Technical Manager
Primient

Mrs. Emily Downey
Administrative Coordinator
Primient

Dr. Monica Dus
Director, Office of National Labs
University of Michigan

Mr. Ben Forsythe
Director
Sustainability and Value Creation
Indiana Corn Marketing Council

Mr. Tim Fowler
General Manager
Sweeteners and Acidulants
Primient

Ms. Libby Fritz
Vice President
AgriNovus Indiana

Dr. Sarah Glaven
Gerhard R. Andlinger Visiting Fellow
Princeton University

Mr. James Glueck Jr.
Plant Based Products Council
Executive Director

Mr. Alex Green
General Counsel
Primient

Ms. Tiffany Henry
Executive Assistant
Primient

Mr. Collin Huffines
Economic Development Manager
Greater Lafayette Commerce

Mr. Brian Jacobson
Program Manager
Infrastructure
iFAB Tech Hub

Mrs. Alesha Johnson
Director of Communications and Marketing
Primient

Dr. Sean Jones
Deputy Laboratory Director for Science and
Technology
Argonne National Laboratory

Mrs. Meghan Kane
Manager
External Communications
Primient

Ms. Courtney Kingery
CEO
Indiana Soybean Alliance and
Indiana Corn Growers Association

Mrs. Laura Kowalski
Head of Global Sustainability and Marketing
Primient

Dr. Chris Kratochvil
Vice President of External Relations University
of Nebraska System

Mr. Trevor Lane
Director
Attractions South Region
Indiana Economic Development Corporation

Mr. Eric Lee
Director
Business Development Fermentation
Primient

© 2026 Council on Competitiveness

Dr. Douglas Mans
Director
Environmental Molecular Sciences Division
Pacific Northwest National Laboratory

Mr. Timothy Meinhold
General Manager
Commodities
Primient

Mr. Travis Montoya
Primient Lafayette Plant Manager
Primient

Mr. Steve Myers
Chief Operating Officer
Primient

Prof. Sankar Nair
Professor and Associate Chair
Georgia Institute of Technology

Mr. Michael Nelson
Vice President
Council on Competitiveness

Dr. Ismael Nieves
General Manager
iPROOF
Primient

Mr. Nick Nissing
Strategic Advisor
Bayer Crop Science

Prof. Brad Orr
Assoc. Vice President for Research
University of Michigan

Ms. Jackie Ostrowicki
Assistant Vice President
Marketing and Community Engagement
University of Nebraska

Mr. Mark Palmer
Government Relations
Primient

Mr. Ajikumar Parayil
Founder and CEO
Manus

Dr. Todd Pester
Vice President
Seed Research and Development
Corteva Agriscience

Ms. Dianne Powell
West Central Indiana Regional Director
Office of U.S. Senator Todd Young

Dr. Todd Pray
Chief Strategic Partnerships Officer
Lawrence Berkeley National Laboratory

Dr. Shashank Priya
Vice President
Research and Innovation
University of Minnesota

Prof. Arthur Ragauskas
Professor and Acting Head
Department of Chemistry and Biomolecular Engineering
University of Tennessee, Knoxville

Mr. David Resac
Chief Financial Officer
Primient

Prof. Fabio Ribeiro
Distinguished Professor in Chemical Engineering
Purdue University—CISTAR—LEAPS

Hon. Tony Roswarski
Mayor
City of Lafayette

Prof. Lisa Schulte Moore
Director
Bioeconomy Institute
Iowa State University

Mr. Gustavo Sergi
CEO
Sustainea

Ms. Jaclyn Shaw
Senior Associate Vice Provost for Research Strategy and Operations
Tufts University

Dr. Steve Walker
Professor of Practice
University of Notre Dame

Mr. Mark Warner
CEO
Liberation Bioindustries

Mr. Shane Warren
Managing Director
KPS Capital Partners

Mr. Gregory Wenndt
General Manager
Industrial Starch
Primient

Ms. Anne White
President
Lilly Neuroscience
Eli Lilly and Company

Dr. Michael Wolf
Senior Vice President, Global Head of Operations
Hevolution

Ms. Christy Wright
President and CEO
AgriNovus Indiana

Dr. Roger Wyse
Managing Partner
RW Associates

Dr. Jill Zullo
Executive Vice President and COO
BioMADE

© 2026 Council on Competitiveness

Council on Competitiveness Board, Executive Committee, General Members, Partners, Fellows & Staff

BOARD

Mr. Erik Fyrwald
Chair
CEO
IFF

Mr. Kenneth Cooper
Labor Vice-Chair
International President
IBEW
Co-Chair, National Commission

Ms. Joan Gabel
Academic Vice-Chair
Chancellor
University of Pittsburgh
National Commissioner

Mr. Charles O. Holliday, Jr.
Chairman Emeritus
Council on Competitiveness
National Commissioner

The Hon. Deborah L. Wince-Smith
President and CEO
Council on Competitiveness
Co-Chair, National Commission

EXECUTIVE COMMITTEE

Mr. Walter Carter, Jr.
President
The Ohio State University

Dr. Mung Chiang
President
Purdue University
National Commissioner

Mr. Jim Clifton
Chairman and Chief Executive Officer
Gallup
National Commissioner

Dr. Michael M. Crow
President
Arizona State University

Dr. Daniel Diermeier
Chancellor
Vanderbilt University
National Commissioner

Dr. Taylor Eighmy
President
University of Texas at San Antonio
National Commissioner

Dr. Suresh V. Garimella
President
University of Arizona

Dr. Jeffrey Gold, M.D.
President
University of Nebraska System
National Commissioner

Dr. Sheryl Handler
President & Chief Executive Officer
Ab Initio

Mr. Rajeeb (Raj) Hazra
Chief Executive Officer
Quantinuum

Dr. Farnam Jahanian
President
Carnegie Mellon University

Dr. Mehmood Khan
CEO
Hevolution Foundation

Dr. Pradeep K. Khosla
Chancellor
University of California, San Diego

Laurie E. Locascio, Ph.D.
President and Chief Executive Officer
American National Standard Institute (ANSI)

Dr. Craig Martell
Chief Technology Officer
Lockheed Martin

Dr. Gary S. May
Chancellor
University of California, Davis
National Commissioner

Mr. John May
Chief Executive Officer
Deere & Company

Dr. Jennifer L. Mnookin
Chancellor
University of Wisconsin—Madison

Mr. Jere W. Morehead
President
University of Georgia

Mr. Joshua Parker
Chief Executive Officer
Ancora
National Commissioner

Mr. Mark Peters
President and CEO
The MITRE Corporation

Mr. Nicholas T. Pinchuk
Chairman, President, and
Chief Executive Officer
Snap-on Incorporated

Ms. Donde Plowman
Chancellor
University of Tennessee, Knoxville
National Commissioner

Dr. Justin Schwartz
Chancellor
University of Colorado Boulder

Ms. Randi Weingarten
President
American Federation of Teachers, AFL-CIO

Dr. David Kwabena Wilson
President
Morgan State University

Mr. Paul A. Yarossi
Executive Vice President
HNTB Holding Ltd.
National Commissioner

© 2026 Council on Competitiveness

GENERAL MEMBERS

Dr. Jonathan Alger
President
American University

Dr. Michael Amiridis
President
University of South Carolina

Dr. Joseph E. Aoun
President
Northeastern University

The Hon. Sandy K. Baruah
Chief Executive Officer
Detroit Regional Chamber

Dr. Stuart R. Bell
President
The University of Alabama

Dr. John C. Bravman
President
Bucknell University

Ms. Jill Bray
President
ARCS Foundation, Inc.

Dr. Elizabeth Cantwell
President
Washington State University

Dr. Laura A. Carlson
President
University of Delaware

Mr. Rehan Chaudri
Chairman
Altan Partners LLC

Dr. La Jerne Terry Cornish
President
Ithaca College

Dr. Gregory P. Crawford, Ph.D.
President
Miami University

Jennifer Cowley, Ph.D.
President
The University of Texas at Arlington

Dr. Rebecca Cunningham
President
University of Minnesota

Mr. Ernest J. Dianastasis
Managing Director
The Precisionists, Inc.

Mr. Jeff Donofrio
President and Chief Executive Officer
Business Leaders for Michigan

Rick Bierschbach, J.D.
Interim President
Wayne State University

Justice Leah Ward Sears
Interim President
Emory University

Dr. Joan Ferrini-Mundy
President
University of Maine

Mr. Mike Freeman
CEO & General Manager
Innosphere Ventures

Melissa L. Gilliam, Ph.D.
President
Boston University
National Commissioner

Dr. David A. Greene
President
Colby College

Dr. Kevin M. Guskiewicz, Ph.D.
President
Michigan State University

Dr. S. Jack Hu
Chancellor
University of California, Riverside

Mr. Garry Jenkins
President
Bates College

Mr. Brian Moynihan
President & CEO
Bank of America

Mr. Gustavo Sergi
Chief Executive Officer
Sustainea

Dr. Bill Hardgrave
President
University of Memphis

Dr. Harrison Keller
President
University of North Texas

Dr. Timothy L. Killeen
President
University of Illinois System
National Commissioner

Dr. Sunil Kumar
President
Tufts University

Ms. Rhea Law
President and CEO
University of South Florida
National Commissioner

Dr. Linda Livingstone
President
Baylor University

Brig. Gen. John Michel
Executive Director
Skyworks Global

Mr. Kwasi Mitchell
Managing Principal—Growth & Purpose
Deloitte

Prabhas V. Moghe, Ph.D.
President
University of Texas at Dallas

Jayathi Murthy, Ph.D.
President
Oregon State University

Dr. Mark Nemec
President
Fairfield University

Ajikumar "Aji" Parayil, Ph.D.
Founder & CEO
Manus

Dr. Darryll Pines
President
University of Maryland
National Commissioner

Dr. Susan Poser
President
Hofstra University

Mr. David Ricks
Chair and Chief Executive Officer
Eli Lilly and Company
National Commissioner

Mr. Rory Riggs
Managing Member
Balfour, LLC

Dr. Rodney Rogers
President
Bowling Green State University

Dr. Timothy D. Sands
President
Virginia Polytechnic Institute
and State University

Dr. Edward Seidel
President
University of Wyoming

Mr. Gustavo Sergi
Chief Executive Officer
Sustainea

Mr. Gunjan Sinha
Chairman & Co-Founder
OpenGrowth Ventures

Mr. Paul P. Skoutelas
President & CEO
American Public Transport Association

Ms. G. Gabrielle Starr
President
Pomona College

Dr. Elisa Stephens
President
Academy of Art University

Mr. Steven Stevanovich
Chairman & CEO
SGS Global Holdings

© 2026 Council on Competitiveness

Mr. Jim Stutelberg
Chief Executive Officer
Primient
National Commissioner

Ms. Gayle Terry
Chief Marketing Officer & President
Domestic and General (D&G) U.S.

Dr. Satish Tripathi
President
University at Buffalo

Marlene Tromp, Ph.D.
President
University of Vermont
National Commissioner

Dr. Gerald Turner
President
Southern Methodist University

Dr. Robert Wagner
President
Idaho State University

Mr. Mark Warner
CEO
Liberation Labs

Dr. Gregory Washington
President
George Mason University

The Hon. Olin L. Wethington
CEO & Co-Founder
Graham Biosciences LLC
National Commissioner

Ms. Mary Ellen Wiederwohl
President & CEO
Accelerator for America

Dr. Wendy Wintersteen
President
Iowa State University
National Commissioner

NATIONAL LAB PARTNERS

Dr. Steven F. Ashby
Director
Pacific Northwest National Laboratory
National Commissioner

Dr. Kimberly Budil
Director
Lawrence Livermore National Laboratory

Dr. Paul Kearns
Director
Argonne National Laboratory
National Commissioner

Dr. Thomas Mason
Director
Los Alamos National Laboratory
Co-Chair, National Commission

Dr. Stephen K. Streiffer
Director
Oak Ridge National Laboratory
National Commissioner

Jud Virden, Ph.D.
Laboratory Director
National Laboratory of the Rockies
President
Alliance for Energy Innovation
National Commissioner

Dr. Michael Witherell
Director
Lawrence Berkeley National Laboratory
National Commissioner

NATIONAL AFFILIATES

Dr. Dean Bartles
Chief Executive Officer and President
Manufacturing Technology
Deployment Group

Dr. David Oxtoby
President
American Academy of Arts and Sciences

DISTINGUISHED FELLOWS

Dr. France Córdova
Science Philanthropy Alliance

Mr. James G. Foggo, USN (Ret.)
Allied Joint Force Command, Naples, Italy

Dr. Paul J. Hommert
Sandia National Laboratories

Mr. Steve Isakowitz

Dr. Ray O Johnson
Technology Innovation Institute

Martha Kanter
College Promise Campaign

Mr. Alexander A. Karsner
Elemental Labs

Dr. Jon McIntyre
Nodl Advisors

Dr. Harris Pastides

Mr. Nolan Pike
Mission Possible Partnership

Ms. Kimberly Reed
Former President
Export-Import Bank of the United States

Dr. Branko Terzic
Berkeley Research Group

Dr. Anthony J. Tether
NSIP, LLC

SENIOR FELLOWS

Ms. Jennifer S. Bond
National Science Foundation

Ms. Margaret Brooks

Dr. Thomas A. Campbell
FutureGrasp, LLC

Mr. C. Michael Cassidy
Emory University

Dr. Dona L. Crawford
Livermore Lab Foundation

Dr. Jerry Haar
Florida International University

Mr. Dominik Knoll
AVA Ventures

Mr. Abbott Lipsky
Latham & Watkins LLP

Ms. Julie Meier Wright
Collaborative Economics

Mr. Mark Minevich
Going Global Ventures

Mr. Toby Redshaw
Verus Advisory, LLC

Mr. William Wescott
BrainOxygen, LLC

Dr. David B. Williams
The Ohio State University

Mr. Andrew Thompson
LifeSpeed

Dr. Steven H. Walker

STAFF

Mr. Chad Evans
Executive Vice President
Secretary to the Board

Mr. Michael Nelson
Vice President

Ms. Marcy Jones
Special Assistant to the President and CEO,
Office Manager and
Director of Member Services

© 2026 Council on Competitiveness

Compete.
Council on Competitiveness

Contact

For more information, please contact:

Mr. Chad Evans
Executive Vice President
and Chief Operating Officer
Secretary and Treasurer to the Board
cevans@compete.org

Council on Competitiveness
900 17th Street, NW
Suite 700
Washington, D.C. 20006

Join the Conversation

/company/council-on-competitiveness/

CompeteTV

Compete.org

About the Council on Competitiveness

For 40 years, the Council on Competitiveness (Council) has championed a competitiveness agenda for the United States to attract investment and talent, and spur the commercialization of new ideas.

While the players may have changed since its founding in 1986, the mission remains as vital as ever—to enhance U.S. productivity and raise the standard of living for all Americans.

The members of the Council—CEOs, university presidents, labor leaders and national laboratory directors—represent a powerful, nonpartisan voice that sets aside politics and seeks results. By providing real-world perspective to Washington policymakers, the Council's private sector network makes an impact on decision-making across a broad spectrum of issues—from the cutting-edge of science and technology, to the democratization of innovation, to the shift from energy weakness to strength that supports the growing renaissance in U.S. manufacturing.

The Council's leadership group firmly believes that with the right policies, the strengths and potential of the U.S. economy far outweigh the current challenges the nation faces on the path to higher growth and greater opportunity for all Americans.