

Advancing the U.S. Bioeconomy Initiative Summary of Summer Leadership Meeting

April 29, 2026

Davis Global Center
University of Nebraska Medical Center (UNMC)
Omaha, Nebraska

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Meeting Overview

The Council on Competitiveness convened a leadership working session for its bioeconomy initiative on April 29, 2026, at the Davis Global Center at the University of Nebraska Medical Center (UNMC). The session brought together 35 senior leaders from industry, academia, U.S. Department of Energy national laboratories, labor, venture capital, and former senior-level government officials to advance the formation of the Steering Committee for the Council's National Commission on Innovation and Competitiveness Frontiers initiative, focused on strengthening the U.S. bioeconomy.

Participants also engaged in strategic discussions to refine initiative priorities, identify opportunities to accelerate U.S. leadership in the bioeconomy, and define the structure and focus of three working groups. Through the activation of virtual working session in the late-summer and fall of 2026, the initiative will develop a set of policy recommendations to drive U.S. competitiveness in this high-growth, high-impact sector.

Council President and CEO Deborah Wince-Smith, Primient CEO Jim Stutelberg, and University of Nebraska System President Jeffrey Gold led the session in UNMC's Operational Control Center for the Center for Disaster, Bioterrorism, Aging, and Confinement Simulation — a reminder of the critical national security and resilience dimensions of the bioeconomy. Following initial remarks from these three cohosts, participants engaged in a candid, wide-ranging discussion focused on commercialization, scaling production, workforce development, standards and regulation, investment, and coalition-building.

A consistent theme emerged from across the discussion: the bioeconomy has moved from an important scientific research opportunity to a national economic, security, and supply chain resilience imperative. With biology, AI, and advanced manufacturing converging, the United States has the opportunity to build a future economy in which safer, domestically produced bio-based feedstocks underpin the materials, fuels, food, and medicines we rely on. This transition to bio-based feedstocks is happening across the globe, and U.S. capability and capacity in this domain will greatly affect the competitiveness of the country. Participants also argued that, without strengthening the U.S. bioeconomy value chain, the nation's remarkable advantages — including world-class research institutions, abundant domestic feedstocks, and robust transportation infrastructure — may not be sufficient to secure global leadership given the pace of international competition, investment, and progress in the field.

The bioeconomy initiative is intended to generate actionable recommendations for Congress, the administration, state and local government, and private-sector leaders, with initial findings and strategic framing targeted for presentation at the Council's 40th Anniversary National Competitiveness Forum on December 16-17, 2026.

Meeting Attendees

Project Leadership

Dr. Jeffrey Gold
President
University of Nebraska System

Mr. Jim Stutelberg
CEO
Primient

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

Dr. H. Dele Davies
Interim Chancellor
University of Nebraska Medical Center

Dr. Kirk Dombrowski
Vice President
Research and Economic Development
University of Vermont

Dr. Peter Dorhout
Vice President for Research
Iowa State University

Dr. Lee Ellen Drechsler
Senior Vice President
Corporate R&D
The Procter & Gamble Company

Participants

Dr. Dion Antonopoulos
Director
Biosciences Division
Argonne National Laboratory

Mr. John Bode
CEO and President
Corn Refiners Association

Ms. Veronica Breckenridge
Managing Partner
First Bight Ventures

Mr. Carlos Cabrera
Executive Chairman
Genomatica

Mr. Jim Clifton
Chairman
Gallup

Dr. Sarah Glaven
Visiting Fellow
Princeton University

Mr. James Glueck
Senior Vice President
Advanced Bioproducts
Corn Refiners Association

Mr. Gregory Jaffe
President
Jaffe Policy Consulting

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

Dr. Chris Kratochvil
Vice President
External Relations
University of Nebraska

Mr. Cody Madsen
Staff Scientist
Lawrence Livermore National
Laboratory

Mr. Steve Marshall
Vice President
R&D Process Innovation
Cargill

Dr. Jonathan McIntyre
Founding Partner
Nodl Advisors

Ms. Ann McMahon
Senior Director
Council on Competitiveness

Mr. Mike Nelson
Vice President
Council on Competitiveness

Dr. Todd Pester
Vice President
Corteva Agriscience

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

Mr. Jon Rosenberger
Director of Business Development
IBEW

Prof. Lisa Schulte Moore
Director
Bioeconomy Institute
Iowa State University

Mr. Mark Warner
Co-Founder and CTO
Liberation Bioindustries

Dr. Michael Wolf
Senior Fellow
Council on Competitiveness

Dr. Roger Wyse
Managing Partner
Manus Bio

Key Insights from Discussion

1. The Bioeconomy as a National Imperative

The bioeconomy has crossed a threshold from a scientific and research opportunity and is now a national economic and security imperative. The United States suffers from a perverse policy and business climate that empowers leading-edge research and discovery, but that does not provide a solid platform on which industry can manufacture at scale and create jobs at home — as seen in flat panel displays, solar cell technologies, semiconductors (now being reshored), advanced batteries, telecommunications equipment, rare earth processing, etc. The same dynamic is actively unfolding in biotech: China is rapidly expanding its research capacity, talent base, pharmaceutical manufacturing capability, and domestic biotechnology sector — positioning itself as a leading global competitor across the entire biotech value chain.

So this initiative is setting out to provide policy recommendations for how the United States can build and retain the innovation ecosystem, talent base, infrastructure, standards, and production capacity required to lead globally across the entire bioeconomy value chain.

2. Manufacturing vs. Innovation Leadership

Attendees had a spirited exchange around the definition of success for the United States, and whether success means manufacturing domestically, or primarily being the source of discovery and ideas. One perspective held that the United States should define success as being the originator of discoveries, and letting industrial economics determine where production occurs, as Apple does with manufacturing its technology.

The counterargument was that losing manufacturing erodes technology leadership over time (as demonstrated in semiconductors and nuclear energy production), and that national security considerations — particularly for pharmaceuticals and defense-related materials — require the United States to maintain domestic production capability for strategic sectors.

The consensus tended towards an "AND" position: innovation leadership and competitive domestic manufacturing are both necessary, and the Council's bioeconomy initiative should address both competitive positions.

3. The Capital Gap

Multiple participants with direct investment experience in the sector raised serious concerns about the availability of domestic capital for scaling the production of bio-based products. One

leader reported approaching roughly 300 investor groups without success, and finding the sector 80-90 percent foreign-funded. Structural impediments, including 18-month timelines for USDA and DOE loan guarantees (versus five months in Brazil), were cited as making the United States less competitive for facility construction.

Brazil's national development bank (BNDES) was brought up as a competitive advantage for the country, as BNDES provides low-cost leverage at scale. Venture capital was identified as a poor structural fit for the bioeconomy scale-up: with 20-year timelines to commercialization, neither the risk profile nor the return horizon aligns with typical VC fund models. “We don’t fund hardware” is a common view from VC managers.

Government support could be catalytic for first-of-a-kind domestic facilities, derisking investments in this space, with private capital following once the economics for facilities are proven or the risk profile becomes more attractive. Attendees noted that the government support to drive private investment is less than many would think.

4. Demand Certainty as Critical to Scaling the Bioeconomy

Demand certainty surfaced as the common thread running through every perceived barrier to the growth of the bioeconomy. Investors commit capital when demand is predictable; without it, innovation and policy support cannot close the investment gap.

Participants pointed to government procurement as the most powerful near-term demand signal available — drawing parallels to how the internet and semiconductor chips began as government-demand-driven markets before scaling commercially. Attendees identified the need for actionable recommendations on how the U.S. government (Department of War, Department of Energy, and others) can drive domestic demand for bio-based products as a priority output of the initiative.

5. Consumer Demand and Narrative Strategy

Several attendees argued the bioeconomy consumer story is wrong. Carbon credits and sustainability framing do not resonate with most U.S. consumers, who are unwilling to pay a price premium for bio-based products in price-sensitive categories. However, health-focused messaging (e.g., avoiding microplastics, improving food ingredient quality, cancer risk reduction) do motivate consumer spending. In particular, younger consumers are increasingly sophisticated about product composition and quality.

The group discussed how to identify product categories where health premiums or performance advantages can make bio-based economics work without requiring consumers to pay a premium.

6. Where to Compete: High-Value Niches vs. Commodity Displacement

Leaders debated which sectors and high-value products can most competitively leverage bio-based feedstocks for production. Participants argued attempting to out-compete fossil fuels on cost for bulk commodity applications is the wrong approach, as oil represents a billion years of carbon-density optimization and is essentially unbeatable on pure economics at scale. Instead, the opportunity lies in high-value specialty molecules, precision biology applications (CRISPR, small molecules, integrated robotics), and formulation additives where cost is a small fraction of the total product value.

Participants distinguished sharply between the high-precision bioeconomy (e.g., precision medicine, specialty chemicals) and the bulk commodity bioeconomy (fuels, bulk chemicals), noting these have very different competitive dynamics and require different strategies for the bioeconomy to be successful. The Council's initiative should segment its recommendations accordingly.

7. Feedstock Advantages and the Matching Problem

Attendees cited the U.S. bio feedstock position as a genuine competitive advantage — [DOE's Billion Ton Study](#) (2023) — an assessment of U.S. renewable carbon resources — identifies 1.5 billion tons of available biomass, and co-location of bio-based manufacturing at existing agricultural processing infrastructure (such as Primient's Indiana facility) offers cost advantages. Participants also noted U.S. leadership in cheap energy (especially in Texas and the South), AI and computing capabilities, and that China is a net agricultural importer as U.S. advantages.

However, the feedstock advantage alone is insufficient: the challenge is matching available feedstocks to technologies and product markets where the full economics — including energy, labor, capital, downstream processing (DSP), and yield — generate acceptable profits. One reason for past failures in the sector is pushing biology into commodity markets where fossil fuel economics dominate.

8. Downstream Processing as an Underappreciated Barrier

Early efforts have improved fermentation yields, but many of those gains are lost because downstream processing remains too costly at scale. One participant cited recent Ginkgo Bioworks data showing that the bottleneck had shifted from bioreactor performance to DSP capacity. Therefore, design-for-manufacturability thinking and chemical engineering expertise must grow as priorities in the bioeconomy R&D pipeline.

9. Regulatory Environment

Participants identified the regulatory environment as both a barrier and an area of potential bipartisan action. While not in attendance, Ms. Ester Baiget, President and CEO of Novonesis, at the Council's 2025 National Competitiveness Forum, commented that while the EU is often criticized as over-regulated, European regulation is actually accelerating bioeconomy development, while U.S. regulation is acting as an impediment. Specific examples raised included crop insurance rules that disincentivize farmers from adopting cover crops for bio-based aviation fuel feedstocks. Leaders also identified regulatory harmonization (making rules coherent across agencies and reducing the time and cost of commercialization), and creating single points of regulatory access as a high-priority workstream.

10. Role of the U.S. Department of Energy National Laboratories and Cross-Agency Coordination

The U.S. Department of Energy national laboratories are ready and have the capacity to partner with industry and academia on the full range of bioeconomy challenges: R&D, scale-up science, life-cycle analysis, supply chain optimization, and AI integration. Argonne and Lawrence Livermore representatives noted the national labs are already working on bioeconomy-related national security scenarios, including food security wargaming. Participants with OSTP experience highlighted the National Bioeconomy Board — stood up to coordinate executive branch bioeconomy activities — as a model worth expanding. The group agreed OSTP engagement and cross-agency coordination (USDA, EPA, FDA, DOE, DOW, NSF, NIH) are essential to avoid siloed effort and to elevate the bioeconomy to a true national initiative. Leaders also identified the National Academy of Engineering as a potential conduit to the White House.

11. Talent, Workforce, and the University Ecosystem

Participants raised concerns about the gap of U.S. talent in the relevant engineering and scientific disciplines, particularly in chemical engineering, DSP, and bioprocess scale-up. While the United States still attracts top global talent through its universities, leaders expressed it is more difficult now to keep that talent in the United States, as career opportunities in manufacturing exist more readily overseas.

Attendees identified community colleges and two-year technical programs as an underrepresented but critical component of the workforce pipeline, with Southeast Community College in Nebraska highlighted as a national leader in biomanufacturing workforce development. Leaders in the room noted the need to expand talent development recommendations to cover both research-level university training and trades and technical education.

12. Semiconductor Analogy and the Chips and Science Act as a Model

Leaders repeatedly invoked the CHIPS and Science Act as the template for what this initiative should aim to achieve. Key lessons cited: (1) a compelling, quantified narrative (the 32 percent to 12 percent domestic manufacturing share figure) that made the national security case undeniable; (2) a broad coalition — universities, industry, national security community, and labor — rather than a single industry association; (3) a clear financial case that government investment could crowd in multiples of private capital (The CHIPS and Science Act catalyzed over \$540 billion in private-sector semiconductor investments since its passage, alongside more than \$140 billion earmarked specifically for private R&D. This capital stems directly on the Act's \$52.7 billion public investment); and (4) language from prior Council reports that was incorporated nearly verbatim into legislation. Participants noted that the Council's nonpartisan, cross-sector credibility gives its reports political traction.

Bioeconomy Initiative Next Steps

Looking ahead, the Council will build on this work through its Bioeconomy Initiative, bringing together experts from across industry, academia, government, investment, and other sectors to identify high-impact opportunities to strengthen U.S. bioeconomy leadership. Through a series of working sessions in fall 2026, the Council will examine opportunities across investment and commercialization, market development, and national capacity, including talent, infrastructure, and the policy and regulatory environment, and translate these insights into a focused set of actionable 10X recommendations. The recommendations will be released at the 2026 National Competitiveness Forum on December 17th in Washington DC, and followed in 2027 by a sustained education and engagement campaign, additional thought leadership, and deeper work on critical issues that emerge through the initiative.

Expanding Engagement

As the initiative moves forward, the Council will continue to broaden its engagement with leaders across the bioeconomy value chain. We welcome the active participation of those already engaged in the effort and encourage participants who are the leaders of their organizations to consider joining the Council as we develop and advance our recommendations.

As a nonprofit, member-based organization, the Council funds its work through membership dues. Expanding the community of leaders and organizations engaged with the Council strengthens the initiative while providing the financial foundation to sustain this work and advance its recommendations over the long term.

We also encourage participants to think broadly about their networks and identify leaders who could bring important perspectives, capabilities, and influence to the conversation. Introductions to CEOs, university leaders, labor leaders, and other experts who could strengthen the initiative, and potentially join the Council, is especially valuable. Our goal is to build a broad, cross-sector coalition with the expertise, influence, and commitment needed to translate the bioeconomy's extraordinary potential into greater U.S. competitiveness.