



Council on Competitiveness Bioeconomy Initiative

Working Session 2 Prep Brief

Win the Market: Demand and Global Competitive Advantage

Virtual Working Session | Thursday, September 24, 2026 | 2:00–3:00 p.m. ET

Zoom link: <https://compete-org.zoom.us/j/86396705968?pwd=tbPQmMj7290Q0TCdMzJJRXbIIAt6Km.1>

Project Background

The Council has been building a body of work around the U.S. bioeconomy and its implications for competitiveness, innovation, and national economic security. This effort builds on discussions at the [2025 National Competitiveness Forum](#), the leadership gathering hosted by Jim Stutelberg at [Primient in Lafayette](#), the Council's April 2026 bioeconomy [working session](#), and the Nebraska Competitiveness Conversation hosted by University of Nebraska System President Jeff Gold.

Building on these discussions and the growing national focus on biotechnology and biomanufacturing, the Council is convening six virtual working sessions starting on Thursday, September 17 and concluding on Thursday, October 22, each scheduled for one hour from 2-3 PM Eastern. The virtual working sessions will identify a focused set of high-impact, strategic recommendations to strengthen U.S. competitiveness and leadership in the global bioeconomy.

THE SIX-SESSION PROCESS

The six one-hour sessions will examine three complementary dimensions of the U.S. bioeconomy, with two sessions devoted to each:

- 1. Build Fast, Scale Big.** *Investment, Commercialization, and Biomanufacturing Leadership*
- 2. Win the Market.** *Demand and Global Competitive Advantage*
- 3. Build National Capacity.** *Talent, Infrastructure, and Ecosystem Leadership*

The first session in each focus area will surface emerging trends, critical challenges and chokepoints, opportunities for U.S. leadership, and potential solutions. Following each session, the Council team will circulate a summary of the discussion, highlighting emerging

recommendations and areas for further exploration, and invite participants to provide feedback. The second session will build on this input by challenging and refining the recommendations, assessing feasibility and impact, identifying gaps and unintended consequences, and prioritizing the ideas with the potential for transformational impact.

Council staff will synthesize the work across all six sessions into a concise strategic recommendations report for release at the [2026 National Competitiveness Forum](#). For additional background on the initiative, see the [Bioeconomy Initiative Project Plan](#).

SESSION 2 OVERVIEW | WIN THE MARKET: DEMAND AND GLOBAL COMPETITIVE ADVANTAGE

This second working session will focus how the United States create durable markets for bio-based products and technologies, and translate technological leadership into global economic advantage.

Discussion will explore:

- Creating demand for emerging technologies before they reach full commercial maturity
- Accelerating adoption of bio-based products across major industries
- Federal, state, and commercial procurement as market-creation tools (e.g., procurement mandates, purchasing requirements, etc.)
- Strategic trade and international economic policy (also cover this in the third focus area on infrastructure)
- Strengthening trusted supply chains and strategic partnerships
- Building consumer and public confidence in (and desire for) bio-based products

SESSION 2 AGENDA

- 5 minutes — Opening and framing. Purpose, context, and desired outcome.
- 10 minutes — Expert framing. Two or three kickoff discussants briefly identify the most important issues from their perspective.
- 40 minutes — Working discussion. Open discussion, debate, challenge, and recommendation development.
- 5 minutes — Synthesis and next steps.

COMMENT PERIOD

Following the session, the Council team will circulate a shared document summarizing the discussion and highlighting key recommendations and areas for further exploration. All project participants will be invited to provide feedback, which the Council team will consolidate and use to inform the ongoing work and recommendations.

FRAMING THE DEMAND CHALLENGE

A recurring theme from the Council's bioeconomy discussions is that demand is a gating factor for scale. A promising technology can fail to reach commercial production even when the underlying science works. Investors and manufacturers need confidence that customers will purchase the resulting product at a price that supports the required investment. Without sufficient visibility into future demand, the business case for building U.S. production capacity is weak.

A previous Council workshop captured this dynamic directly: “If your supply chain does not give you a low-cost product, and your demand is not willing to pay for it, you do not have a business.” The challenge, therefore, is to identify the technologies and applications where technology, economics, manufacturing, and market demand reinforce one another to create a viable path to scale.

This challenge is particularly acute in biomanufacturing. Building commercial-scale production capacity requires substantial upfront investment, and putting steel in the ground in the United States can be significantly more expensive than in competing countries. At the same time, the United States can offer important advantages in feedstocks and operating economics once scale has been reached. The result is a fundamental tension where the United States may have attractive long-term production economics, but companies struggle to justify the initial investment without sufficient confidence in future demand.

Demand, capital, and cost are therefore mutually reinforcing. Insufficient demand certainty increases investment risk and the cost of capital, which can lead to fewer facilities and limited domestic scale. Limited scale, in turn, keeps production costs high and makes products less competitive, further weakening demand. The reverse can also be true: credible demand can help unlock investment, investment can create production capacity and scale, scale can reduce costs, and lower costs can expand the market.

So, how can the United States jumpstart this cycle and create the conditions for demand to become durable and commercially self-sustaining?

One brief comment on the distinction between creating demand and creating a market: Government procurement, commercial commitments, and other demand-side interventions can help create an initial market for emerging technologies, reduce investment risk, and provide the confidence needed to build production capacity. But the ultimate objective is to reach the point where the U.S. bioeconomy competes and grows on its own merits.

That begins with identifying where bio-based products can win in the market. Previous Council discussions have highlighted the importance of focusing on technologies and applications where the underlying biology creates a meaningful value proposition. Premium markets may provide an important entry point, but durable scale will require products to compete within the economics and purchasing criteria of mainstream markets.

The perspective from Dr. Lee Ellen Drechsler, Senior Vice President, Corporate Research and Development, Procter and Gamble, offers a useful framework: products need to deliver a combination of performance, sustainability, and value. Customers generally will not adopt a product simply because it is bio-based, but rather those where biology enables a product that customers already want because it is better, cheaper, safer, more functional, more resilient, or otherwise more valuable.

At the same time, demand is shaped by more than price and willingness to pay. Industrial customers must have confidence in product quality, consistency, supply reliability, specifications, and performance. Switching from an incumbent material or production process can also carry significant qualification, operational, and supply-chain risks. Creating demand therefore also means reducing the barriers that make customers reluctant or unable to switch.

Government can play an important role in addressing these barriers and creating early markets. USDA's BioPreferred Program, for example, establishes federal purchasing preferences for biobased products in more than 125 designated categories, incorporating requirements into federal solicitations and contracts. But the broader opportunity is to consider how federal, state, and commercial procurement can provide stronger and more predictable demand signals for strategically important products and technologies.

A recent federal interagency report on building a domestic biomanufacturing ecosystem similarly identified continued federal procurement during scale-up and demonstration as a means of de-risking private investment, while pointing to targeted incentives where biobased or biotechnology-derived products could address U.S. supply-chain vulnerabilities.

The challenge for this working group is to consider how the United States can build the market conditions, demand signals, customer confidence, and competitive economics needed to move promising technologies from demonstration to commercial scale, and ultimately from early markets to durable, commercially self-sustaining U.S. and global market share.

THOUGHT STARTER QUESTIONS FOR SESSION 2

The United States has significant advantages in the bioeconomy do not guarantee that U.S. technologies will be commercialized and manufactured domestically, or that U.S. companies will capture global markets.

Key question: How does the United States create durable demand and outcompete global rivals in the markets of the future?

- What would create markets in which U.S. bio-based products can achieve sufficient demand, scale, cost competitiveness, and customer acceptance to become commercially self-sustaining and globally competitive?

More Framing Questions to Consider:

Finding the markets where biology can win:

1. Where does biology offer a genuine competitive advantage over traditional production?
2. Which applications are most likely to support U.S. production at commercial scale?
3. Where should the U.S. pursue cost parity, and where can superior performance, functionality, resilience, or other attributes support a premium?
4. Are there particular markets where the value of the final product is sufficiently high that the cost of the biological input is a relatively small share of total product value?
5. In what cases should the U.S. prioritize high-value markets and specialty applications versus large commodity markets?

Creating demand:

6. What would give companies enough confidence in future demand to make major investments in U.S. production capacity?
7. Where can government procurement create an early market without creating a permanently subsidized market?
8. What role should major corporate purchasers play in creating demand signals, advance commitments, offtake agreements, or other forms of market certainty?

Moving from early adoption to scale:

9. What prevents successful demonstration projects from becoming large commercial markets?
10. What is required to move from a handful of premium customers to mass-market adoption?
11. How can companies reduce the risk of switching from incumbent petroleum- or fossil-based inputs?

Competing globally:

12. In which markets could the U.S. become a global producer and exporter?
13. Where have China, Europe, Brazil, and other countries developed advantages that dominate/challenge U.S. market share?
14. What combination of trade policy, investment, standards, intellectual property, supply-chain partnerships, and domestic capacity is necessary to compete?
15. Where should the United States seek trusted international partnerships, and where is domestic capability strategically important?

Building markets people will actually use:

16. What do customers actually value: price, performance, reliability, sustainability, health, safety, domestic sourcing, or something else?
17. How important is the “bio-based” attribute itself to purchasing decisions?
18. What evidence would be needed to establish trust in new bio-based products?

FURTHER ISSUE FRAMING

ISSUE 1. IDENTIFY WHERE BIOLOGY CAN ACTUALLY WIN

Where can biology create an economically durable advantage that can support U.S. production and global market share? Which markets offer the strongest combination of demand, value, biological advantage, and U.S. competitive advantage?

Relevant criteria include:

- Addressable market
- Customer willingness to pay
- Performance advantage
- Cost competitiveness
- Feedstock availability
- Manufacturing complexity
- Capital intensity
- U.S. comparative advantage
- Supply-chain importance
- Platform potential
- Export potential

Previous Council-led sessions raised a particularly useful distinction between high-precision/high-value applications and bulk commodity applications. Participants questioned whether competing head-to-head with fossil-derived commodities on pure cost is the right strategy in many cases, while identifying potential opportunities in specialty molecules, precision biology, additives, and other higher-value applications.

ISSUE 2. CREATE DEMAND CERTAINTY

How can the United States give companies and investors enough confidence in future demand to justify commercial-scale investment?

Potential issues:

- Federal procurement
- State and local procurement
- Defense and national-security procurement
- Commercial offtake agreements
- Advance purchase commitments
- Anchor customers
- Demand aggregation
- Long-term contracting
- Demonstration-to-commercial transition
- Procurement specifications and performance requirements
- Financing tied to credible future demand

One question to think about is how public and private demand can help technologies reach sufficient scale to become commercially competitive. For example, USDA's existing BioPreferred Program provides federal purchasing preferences across more than 125 categories of biobased products and is explicitly designed to accelerate market development for these products, but are existing procurement tools sufficiently strategic, targeted, measurable, and consequential to influence investment decisions?

ISSUE 3. MOVE FROM EARLY ADOPTERS TO MAINSTREAM MARKETS

What causes customers to move from experimenting with bio-based products to adopting them at scale?

Possible barriers include:

- Cost premiums
- Performance uncertainty
- Reliability and consistency
- Supply availability
- Qualification requirements
- Switching costs
- Compatibility with existing manufacturing systems
- Lack of standards or specifications
- Customer risk tolerance

- Consumer awareness and trust

We should consider the adoption curve from Demonstration to first customer to anchor customers to market validation to scale to cost reduction to mainstream adoption.

Are there consistent areas where the U.S. system breaks down, and what interventions would move technologies across each stage?

ISSUE 4. COMPETE THROUGH THE ENTIRE VALUE CHAIN

What does it take to make U.S. bio-based products competitive from feedstock through final customer?

Session 1 of these virtual workshops identified an important “matching problem.” Abundant feedstocks do not automatically create competitive products. The economics depend on the combination of feedstock, biological conversion, energy, labor, capital, yield, downstream processing and manufacturing, logistics and product marketing and distribution, and ultimately the value of the product.

Where are U.S. costs or capabilities weakest? Could integration or regional clustering create advantages? Could geographically anchored ecosystems help connect feedstocks, infrastructure, manufacturing, customers, and workforce?

ISSUE 5. BUILD TRUST AS A MARKET INFRASTRUCTURE

What will make customers and society comfortable adopting products made through new biological technologies?

Trust may depend on:

- Safety
- Product performance
- Transparency
- Traceability
- Consistent labeling
- Reliable measurement
- Third-party certification
- Environmental claims
- Health claims
- Regulatory clarity
- Consumer education

A previous Council-led session identified that “the science of consumers is way harder than the science of biotechnology.”

USDA's BioPreferred certification provides one example of market infrastructure designed to address this problem: its label is based on third-party verification of biobased content. USDA also explicitly cautions that a higher biobased-content percentage does not necessarily mean better performance, safety, or environmental impact. How else can we demonstrate value, rather than simply demonstrating that something is “bio-based”?