

BioMADE harnesses the power of biology to help create and domestically source the manufactured goods that people use every day. The global bioeconomy is projected to reach up to \$30 trillion<sup>1</sup> within the next two decades, and it's estimated that up to 60% of materials in the global consumer product supply chain could be produced biologically<sup>2</sup>. **With S.F. 2598, Minnesota has the opportunity to be a national leader in the 21<sup>st</sup> century bioeconomy by co-investing in a first-of-its-kind bioindustrial manufacturing innovation campus.**

By supporting the development of biomanufacturing technologies, BioMADE and its 180+ member organizations strengthen American competitiveness, create a more robust and resilient supply chain, and help the U.S. become more self-sufficient. BioMADE is also helping build a diverse and globally competitive STEM workforce to ensure American workers are prepared and ready to fill new jobs within this rapidly growing industry.

In just two years, BioMADE has grown to a member ecosystem of companies, start-ups, academic institutions, and non-profit organizations across 31 states and has invested over \$75M in more than 35 projects around the country.

## The Needed Infrastructure

The U.S. faces a foundational gap in its ability to scale up bioindustrial manufacturing from laboratory research and development to commercial production. Without addressing this gap, the nation will be unable to expand domestic flexible industrial biomanufacturing capacity and address pressing supply chain vulnerabilities.

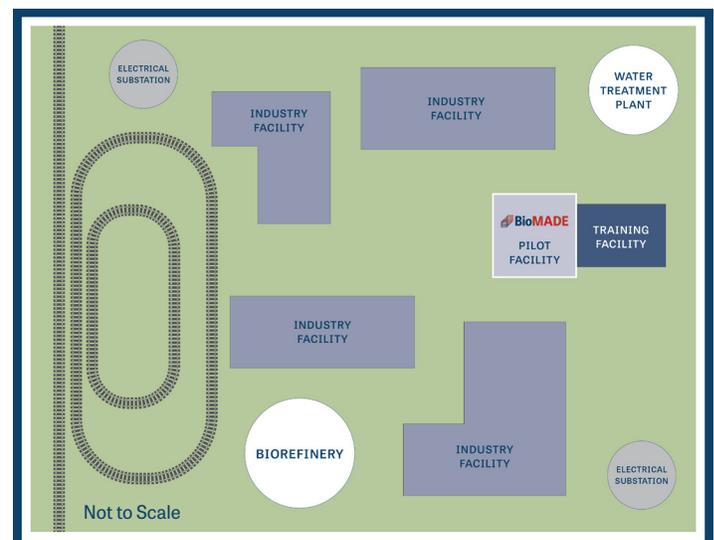
The key gap is the intermediate step between the lab and commercial market. Closing this gap requires the **establishment of pilot-scale biomanufacturing infrastructure** to validate a technology or product. This gap defies private investment from major manufacturers who will not see the return on investment on such capital assets. To realize the promise of industrial biomanufacturing, Congress has funded a multi-year effort to catalyze the creation of pilot-scale infrastructure.

## Minnesota's Opportunity

Right now, with S.F. 2598, **Minnesota has the opportunity to be a national leader in bioindustrial manufacturing** by co-investing in the first campus in a proposed national network of bioindustrial manufacturing sites. The cornerstone of the campus will be a state-of-the-art bioindustrial manufacturing pilot plant that will attract industry, provide needed manufacturing infrastructure, inspire innovation, and create well-paying jobs. The pilot plant would seed the development of additional industry-owned manufacturing production facilities on the same site.

Co-investing in this bioindustrial manufacturing campus will:

- Make Minnesota a national leader in the new bioeconomy and build on our longstanding history of innovation
- Support Minnesota farmers and create new markets for their feedstocks
- Create well-paying jobs in urban and rural communities
- Improve environmental sustainability and reduce reliance on petrochemicals
- Enhance national security by creating domestic supply chains for everyday products



<sup>1</sup> Schmidt Futures, (2022). The U.S. Bioeconomy: Charting a Course for a Resilient and Competitive Future.

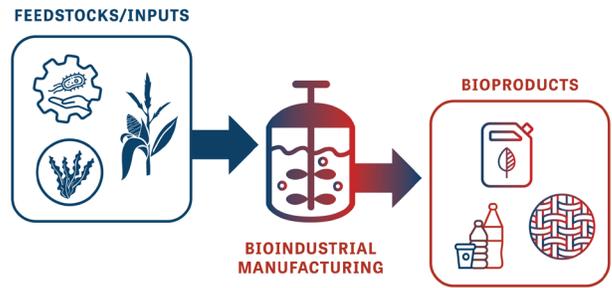
<sup>2</sup> Tubon, T., & DeKloe, J. (2022). Building the Bioindustrial Manufacturing Workforce. CEP

## BioMADE's Investment in Minnesota

This bioindustrial manufacturing innovation campus will be a first-of-its-kind project that will put Minnesota in the center of this transformation of American manufacturing. This investment is a 1-to-1 state match to existing federal funds. This project will:

- Help start-up companies and small businesses grow and advance products from the lab to the commercial market
- Connect industry to valuable research and development opportunities, government relationships, and BioMADE project funding
- Build bridges between industry and academia, increase access to educational resources, and strengthen the workforce development pipeline
- Create thousands of employment opportunities and millions of dollars of economic impact for Minnesota by attracting the development of a robust ecosystem of industry facilities

The economic promise of bioindustrial manufacturing—and the ways it will positively impact Minnesotans and all Americans—is only growing. **Now is the time to establish Minnesota as a leader in the 21<sup>st</sup> century bioeconomy.**

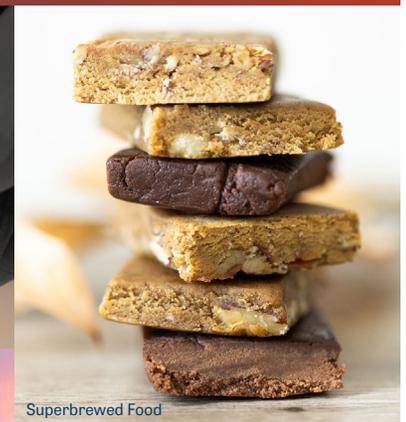


## What is Bioindustrial Manufacturing?

Bioindustrial manufacturing uses biology to convert agricultural feedstocks and waste streams to high-value chemicals, materials, and products. Because bioindustrial manufacturing typically uses feedstocks such as corn, soy, and sugar beets, American farmers will benefit from the new markets created by BioMADE technologies, and rural communities will benefit from the manufacturing jobs creating the associated products. Bioindustrial manufacturing enhances national security by creating more robust and resilient domestic supply chains and creates more environmentally sustainable products with less reliance on traditional petrochemical sources.

### What can be created with bioindustrial manufacturing?

- Carbon-negative chemicals that can be used for water treatments, concrete, fertilizers, detergents, and more
- PFAS alternatives and bio-based fire-resistant composite materials
- Bioplastics and durable fibers without microplastics
- Chemicals used to make compostable tote bags, coffee capsules, and food packaging
- Growable cement and alternative natural rubber to make tires
- Proteins, fragrances, and skincare products



## Contact BioMADE

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