# Alliant Energy + BioForward

## Wisconsin:

## Location Benchmarking + Competitive Positioning

October 10, 2025

GLS GLOBAL LOCATION STRATEGIES®

Alliant Energy

BioForward WISCONSIN

# Wisconsin's Value Proposition

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Wisconsin offers a compelling combination of world-class research, specialized workforce, cost competitiveness, and collaborative industry networks that position it as a leading destination for biopharma investment. From discovery through commercialization, the state provides the essential elements, specifically with its excellent access to talent and relevant academic institutions, growing supply chain, and lower operating costs, required to support high-value, complex biopharma manufacturing projects with lower capital risk.

1. **World-Class Research & Innovation Ecosystem**
    - Anchored by the University of Wisconsin-Madison, a top-tier, globally recognized research institution with globally recognized strengths in biotechnology, chemistry, medical sciences, and computer sciences. The Medical College of Wisconsin is another excellent research institution known for cardiovascular and neuroscience research,
    - A network of academic medical centers, research parks, and biotech incubators drives discovery and technology transfer.
2. **Specialized Talent Pipeline**
    - Over 32,000 life sciences professionals employed statewide, with concentrations in biotechnology, pharmaceuticals, and medical device fields.
    - A steady flow of graduates from biochemistry, biomedical engineering, computer science, and related programs ensures long-term workforce sustainability.
3. **Competitive Business Climate**
    - Lower operating costs than established industry hubs (Boston, San Francisco, etc.), offering more affordable wages, utilities, and real estate.
    - Central U.S. location provides logistical advantages for reaching both coasts and international markets.
    - Supportive tax and incentive programs tailored to manufacturing, R&D, and job creation.
4. **Collaborative Industry Network**
    - As Wisconsin's leading life sciences industry association, BioForward leads advocacy efforts, fosters connections among startups, established companies and global leaders, and champions the growth of Wisconsin's biohealth ecosystem.
    - Strong partnerships between industry, academia, and government drive workforce development and industry alignment.
5. **Quality of Life that Attracts and Retains Value**
    - Madison consistently ranks among the nation's best places to live, offering a blend of affordability, culture, and natural amenities.
    - A strong emphasis on health care, education, and community well-being makes Wisconsin an attractive destination for top-tier scientific and technical talent.

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# Executive Summary

# Industry Overview

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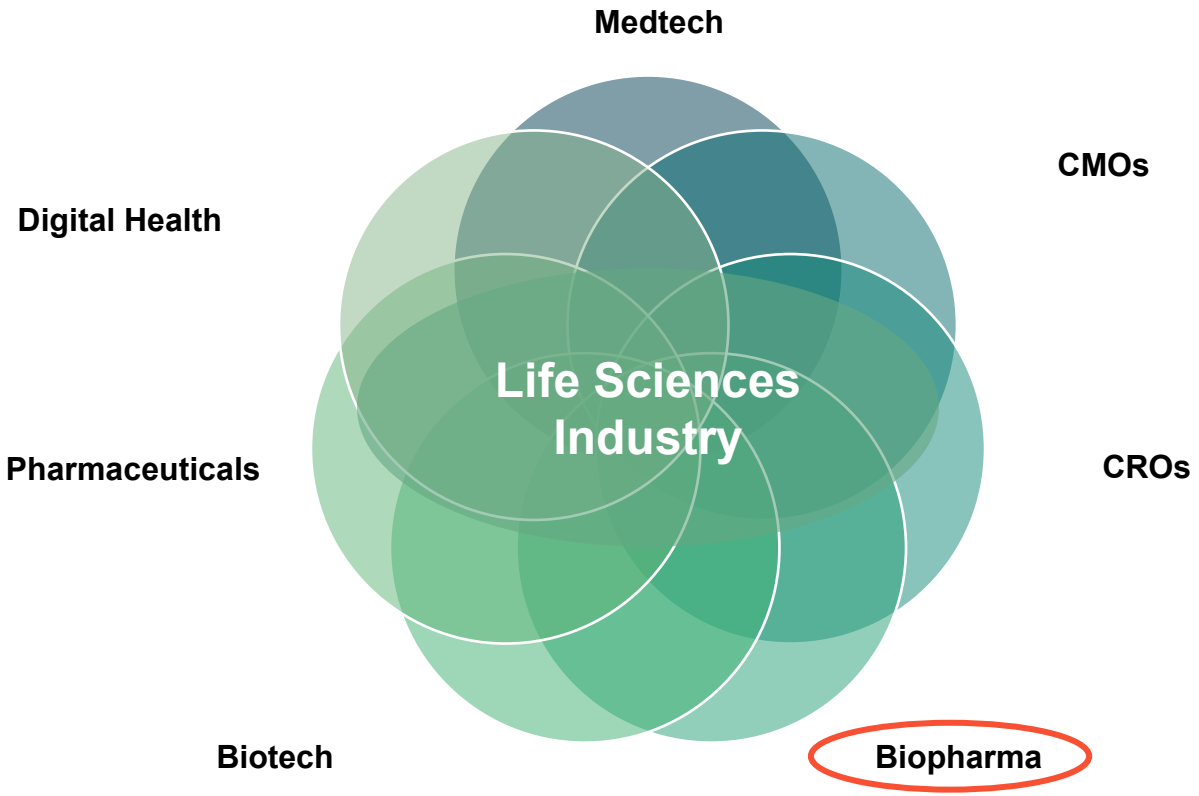
Biopharma manufacturing represents one of the most dynamic and high-value subsectors within the broader Life Sciences industry, combining cutting-edge innovation with large-scale production needs. As companies expand capabilities in biologics, cell and gene therapies, and advanced drug delivery, they require communities that offer specialized talent, resilient infrastructure, and collaborative ecosystems. Wisconsin is uniquely positioned to meet this demand, leveraging its world-class research institutions, growing network of biomanufacturers, and cost-competitive business climate. With the combined leadership of Alliant Energy and BioForward, the state can align its ecosystem and assets to attract and support the next generation of biopharma investment.

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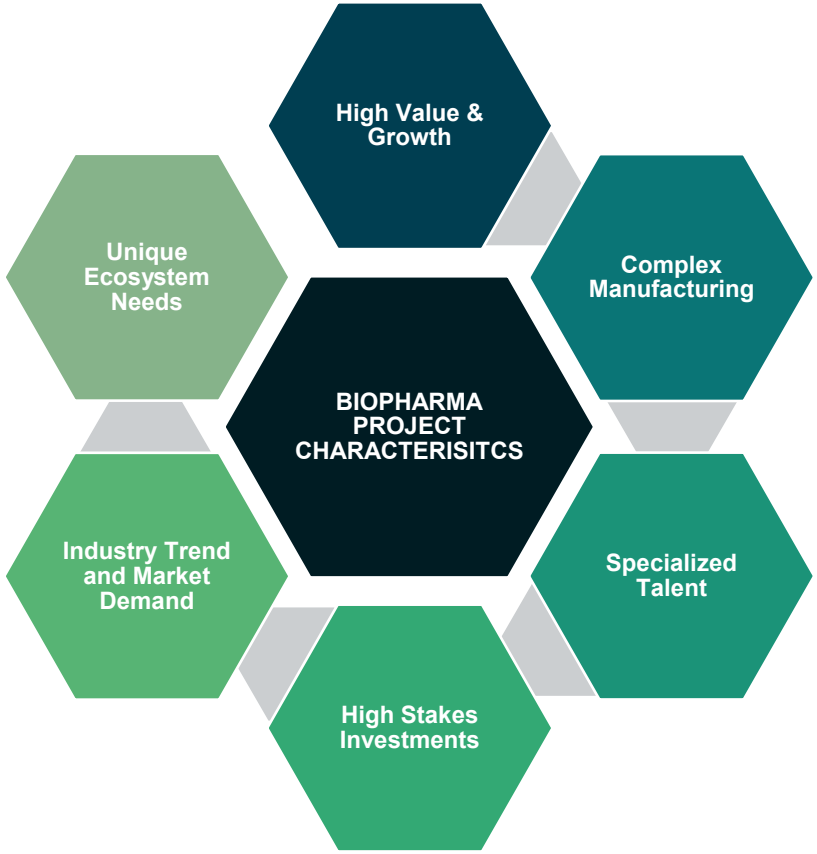
# Industry Overview



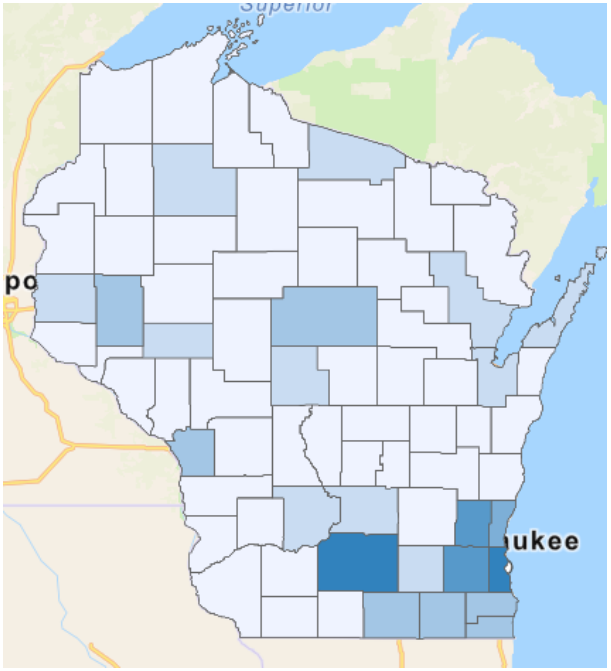
Biopharma projects are defined by their scale, complexity, and reliance on specialized ecosystems. These investments often involve high-value, long-term commitments and advanced manufacturing processes that demand precision, regulatory rigor, and resilient infrastructure. Success depends on access to specialized talent in bioprocessing, engineering, and quality assurance, alongside supportive research institutions and supply chain networks. As industry trends increasingly emphasize biologics, cell and gene therapies, and domestic manufacturing resilience, communities must demonstrate both cost competitiveness and the ability to provide unique ecosystem advantages.



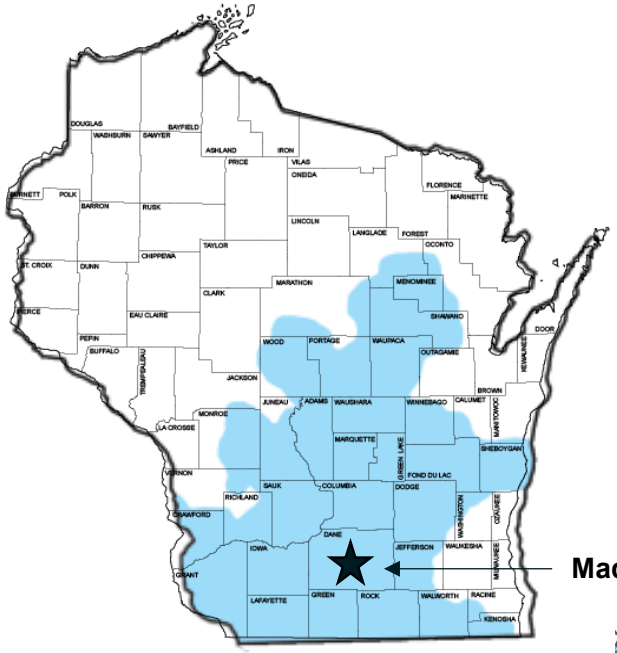
# Wisconsin Ecosystem: Alliant Energy

- **Territory & coverage:** Alliant Energy serves large areas around Madison—including Dane County communities such as Verona—adjacent to the City of Madison (which itself is primarily MGE territory). Alliant Energy services 480,000 electric customers and 191,000 gas customers across Wisconsin. The energy provider surrounds the entire Greater Madison MSA.
- **Typical electricity costs (Wisconsin):** Latest EIA data (May/June 2025) show **commercial ~13.3¢/kWh** and **industrial ~8.6¢/kWh** statewide—useful as a planning baseline before tariff/program optimization.

**Heat Map of Existing Biopharma Manufacturing Establishments**



**Overlay of Wisconsin Counties and Alliant Energy Service Territory**



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# Wisconsin Ecosystem: Assets

## Ready locations & sites within Alliant territory (in close proximity to Madison)

- **Liberty Business Park (Verona, WI):** Alliant-listed site fronting US-151; ~20–30 minutes to Dane County Regional Airport and directly adjacent to Madison's west-side biohealth cluster (URP/West Madison). Good fit for pilot MFG, QC, and non-GMP labs needing quick highway access.
- **Alliant "Ready Sites" program:** Matching funds for due-diligence (environmental, geotech, marketing) to accelerate site readiness—useful for life-science GMP buildouts with strict timeline risk.
- **Additional certified/marketed parks within WPL territory:** Examples include 151 Business Park (Beaver Dam), a US-151 corridor site north of Madison; WEDC also lists Beaver Dam Commerce Park as shovel-ready. These broaden options for larger utilities-served footprints while staying within the metro's labor shed.

## Greater South-Central region biohealth infrastructure

- **Lab real estate & density:** The Madison market totals ~4.8M SF across 89 lab buildings with ~2% vacancy (2024–25 snapshot), concentrated on the west side/University Research Park (URP)—a short hop from Verona/US-151 sites.
- **Research anchors:** UW–Madison, Morgridge Institute for Research, Medical College of Wisconsin and Milwaukee School of Engineering (MSOE), and WiCell (national stem-cell bank/cytogenetics) provide IP, core facilities, and translational partners tied to personalized medicine and cell/genetic therapies.
- **Company & startup platform:** University Research Park houses 120+ companies; Forward BIOLABS offers turnkey wet-lab coworking that cuts startup time by 6–9 months—ideal for vendor/supplier footholds and pilot teams.
- **Workforce pipeline:** Statewide Wisconsin Universities with broad scientific, engineering and computer science degrees including UW-Madison and UW MS in Biotech. Statewide technical college system connecting to employers to ensure curriculum meets industry needs (Biotechnology A.A.S, apprenticeship).

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# Wisconsin Business Conditions

### Strategic Location & Logistics
- Centrally located in the U.S.; within a one-day truck haul of 1/3 of the U.S. population.
- Interstate highways, freight rail, and nearby global airports (Chicago O'Hare, Milwaukee, Minneapolis) ensure supply chain efficiency.
- Proximity to major healthcare markets and skilled labor pools.

### Stable & Cost-Effective Operating Environment
- Lower exposure to natural disasters → reliable supply chains.
- Competitive operating costs with a business-friendly climate.
- Deep roots in advanced manufacturing reinforce reliability and scalability.

### Manufacturing Heritage, Scale, & Emerging Strengths
- 470,000+ workers in manufacturing (1 in 6 jobs statewide).
- $65B+ annual economic contribution.
- Specialized strengths: machinery, food processing, paper, fabricated metals.
- Emerging strengths: radiopharmaceuticals, medical devices, precision engineering.

### Relevance for Biopharma
- Synergies with the region's food and beverage industry, which provides deep expertise in fermentation, quality control, and regulatory compliance—capabilities that are highly relevant to biopharmaceutical manufacturing and innovation.
- Workforce skilled in precision production, chemical engineering, and regulated environments.
- Integrated culture of industrial excellence → scalable, reliable biomanufacturing.
- State concentration in biopharma manufacturing ~3x the national average.

### Scale & Impact of Biohealth
- 53,000 employees across 2,200+ companies.
- $32B annual economic impact; one of Wisconsin's fastest-growing industries.
- Recognized as a **U.S. Biohealth Tech Hub (2023)**.

### Geographic Distribution
- Major hubs: Madison, Milwaukee, Pleasant Prairie, Janesville.
- Emerging clusters: Green Bay, LaCrosse, & Eau Claire.
- Proximity to Chicago enhances connectivity and market access.

# Wisconsin Differentiators

| Category | Wisconsin | Large Coastal Hubs (MA, CA, NY) |
|---|---|---|
| **Operating Costs** | 💲 Lower labor, utilities, & real estate costs → more efficient scaling | 💲💲💲 High costs, limited affordable space |
| **Cluster Strength** | Madison's biohealth concentration ~2x national avg and anchored by companies like Exact Sciences, Promega, Millipore Sigma, PPD Thermo-Fisher | Dense but saturated clusters; competition for talent/resources |
| **Research Powerhouse** | UW–Madison: top NIH-funded public university that's strong in genomics, stem cells, oncology, theranostics | Top-tier research universities but oversubscribed talent pools |
| **Manufacturing & Scale-up** | Integrated R&D + biomanufacturing (Catalent, Pfizer, Eurofins) in-state | Often rely on out-of-state/overseas for scale-up |
| **Federal Recognition** | EDA Tech Hub designation + $49M for personalized medicine | Only a few states recognized nationally |
| **Workforce Pipeline** | Apprenticeships, biohealth career pathways, technical colleges, high retention, supported by:<br>• Strong regional university systems (e.g., University of Wisconsin campuses, University of Minnesota, University of Iowa)<br>• Access to a steady pipeline of graduates trained in biotech, engineering, and health sciences<br>• Collaborative workforce development initiatives across state lines | Strong pipelines but higher turnover, transience in labor force |
| **Location & Logistics** | Midwest hub with access to Chicago O'Hare and interstate freight. Proximity to major talent pools in Chicago, Minnesota, and Eastern Iowa, all with deep life science and tech workforces | Global access, but congestion & higher logistics costs |
| **Business Climate** | Stable, collaborative partnerships (WEDC, WARF, universities, industry) | Competitive but fragmented; policy uncertainty in some regions |

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# Wisconsin Ecosystem

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## Wisconsin: At the Center of the U.S. Market

Wisconsin's central location provides unmatched access to major markets, supply chains, and talent across the Midwest and beyond.

### Strategic Location

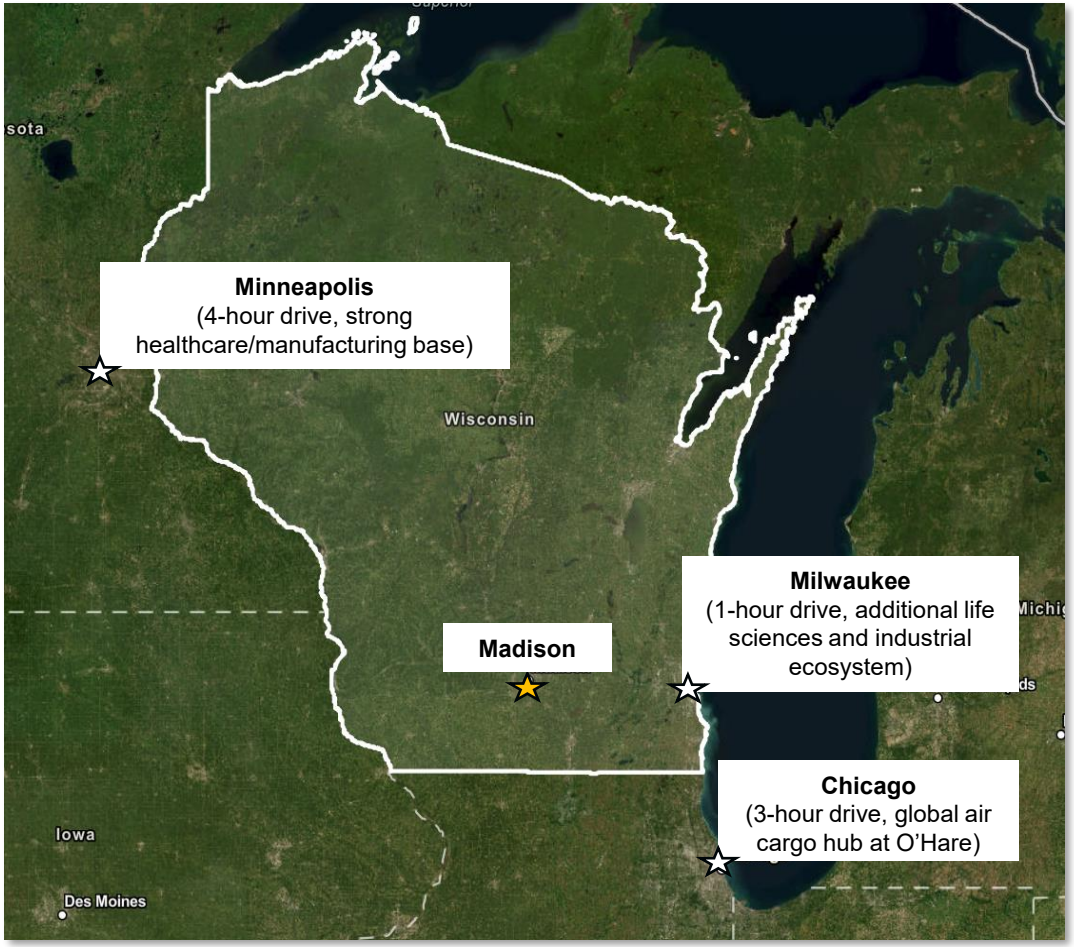
- Centrally located in the U.S., with direct access to both coasts.
- Within a one-day truck haul of one-third of the U.S. population.
- Home to reliable logistics infrastructure: interstate highways, freight rail, and nearby global airports.

### Proximity to Major Markets

- Chicago: With 59,000 employees and $1.9B in VC funding over the last 5 years, Chicago is a large asset for the Madison MSA to draw on for talent. Also, ORD is one of the world's busiest air cargo hubs.
- Minneapolis: Located adjacent to the Mayo Clinic (and its 51,000 workers, it reinforce access to skilled labor pools and strong healthcare markets.

### Stable & Resilient Operating Environment

- Less exposed to natural disasters (hurricanes, wildfires, earthquakes), supporting supply chain reliability.
- Cost-effective, business-friendly environment with deep roots in advanced manufacturing.

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## Wisconsin: Strong Local Supply, Regional Reach

**Chicago MSA:** Huge output, but competition is fierce — grads are pulled into pharma, healthcare, consulting, finance, and tech. Opportunity to flow into Wisconsin with there's targeted recruitment.

**Minneapolis MSA:** Strong STEM pipeline, especially aligned with med tech and health sciences. Potential to attract talent if Madison markets itself as a complementary hub with lower costs and strong research ties.

**Madison MSA:** This is significant for a metro Madison's size. It shows UW–Madison and other institutions generate a deep pool of science graduates, fueling local biohealth growth. It also means Madison isn't solely reliant on in-migration — it produces its own pipeline.

**Milwaukee MSA:** Smaller output, but close enough to feed Madison's talent pool if companies make regional connections.

**Iowa:** University of Iowa and Iowa State are short drives from Southern Wisconsin and offer a large graduate pool to pull from

**Implications for Wisconsin's Labor Shed:**

1. *Self-Sustaining Talent Engine*: Madison already produces a large volume of science grads relative to its size — nearly double Milwaukee's, despite being a smaller metro. This supports its growing biohealth concentration without depending entirely on external inflows.
2. *Regional Talent Attraction:* Chicago and Minneapolis together produce 17,600+ grads annually — a massive regional pool. Madison can attract a share of these by emphasizing its collaborative ecosystem, lower cost of living, and cutting-edge biomanufacturing opportunities.
3. *Competitive Positioning*: Chicago dominates in raw numbers but also in competition. Madison's smaller, high-density cluster can pitch itself as a place where young scientists have faster career acceleration and direct ties to major research institutions (UW–Madison, WARF).
4. *Pipeline Strategy:* To keep pace with industry growth, Madison must combine local retention (keeping UW–Madison grads) with regional recruitment (targeting Minneapolis and Chicago grads).Workforce programs like Actualizing Biohealth Career Pathways position Madison well for inclusion and broadening access.

| MSA | Awards in Life & Physical Sciences |
|---|---|
| **Chicago-Naperville-Elgin, IL-IN** | 11,140 |
| **Minneapolis-St. Paul-Bloomington, MN-WI** | 6,460 |
| **Madison, WI** | 4,153 |
| **Milwaukee-Waukesha, WI** | 2,171 |
| **Ames, IA** | 2,118 |
| **Iowa City, IA** | 1,765 |

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## Wisconsin: A National Leader in Manufacturing

Wisconsin's deep-rooted manufacturing strength provides the foundation for advanced industries like life sciences and biopharma.

### Manufacturing Heritage & Scale

- Wisconsin ranks consistently among the top states for manufacturing employment and GDP share.
- Over 470,000 workers employed in manufacturing, representing nearly 1 in 6 jobs statewide (JobsEQ).
- Manufacturing contributes more than $65 billion annually to Wisconsin's economy.

### Specialized Strengths

- Leadership in machinery, food processing, paper, and fabricated metals.
- Advanced sectors emerging in radiopharmaceuticals, medical devices, and precision engineering.
- Strong supply chain ecosystem supporting high-value production.
- Wisconsin has no property tax on machinery and equipment, which is often a large financial burden for CapEx heavy industries

### Why This Matters for Biopharma

- Skilled workforce experienced in precision production, quality systems, and regulated environments.
- Established culture of industrial excellence ensures reliability and scalability.
- Foundation of manufacturing capability positions Wisconsin to excel in complex biopharma manufacturing logistics.

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# Wisconsin Ecosystem

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## Wisconsin's Life Sciences Ecosystem

Wisconsin's diverse life sciences industry spans biopharma, medtech, digital health, and advanced research—generating billions in economic impact and employing tens of thousands across the state.

### Scale & Impact

- More than 53,000 employees across 2,200+ companies statewide.
- Annual economic impact of $32 billion, making it one of Wisconsin's fastest-growing industries.

### Geographic Distribution

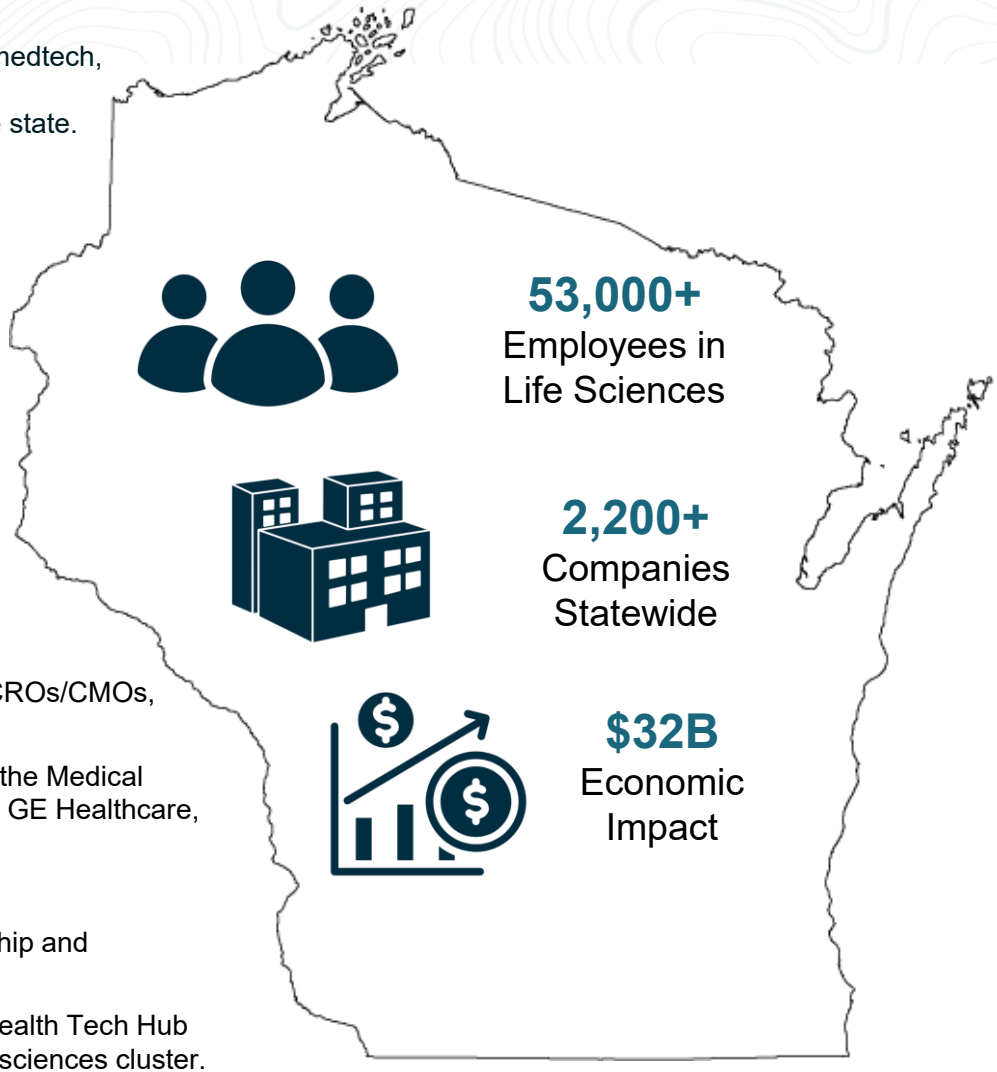
- Activity concentrated in Madison, Milwaukee, Pleasant Prairie, and Janesville, with emerging clusters in Green Bay and Wausau.
- Proximity to Chicago enhances supply chain efficiency and market access.

### Industry Breadth

- Strong presence in biopharma, biotech, medical devices, CROs/CMOs, and digital health.
- Anchored by world-class institutions like UW-Madison and the Medical College of Wisconsin, alongside global companies such as GE Healthcare, EPIC Systems, and Exact Sciences.

### Collaboration & Momentum

- BioForward Wisconsin provides statewide industry leadership and collaboration.
- Federal Recognition: Wisconsin designated as a U.S. Biohealth Tech Hub in 2023, reinforcing its status as a nationally significant life sciences cluster.

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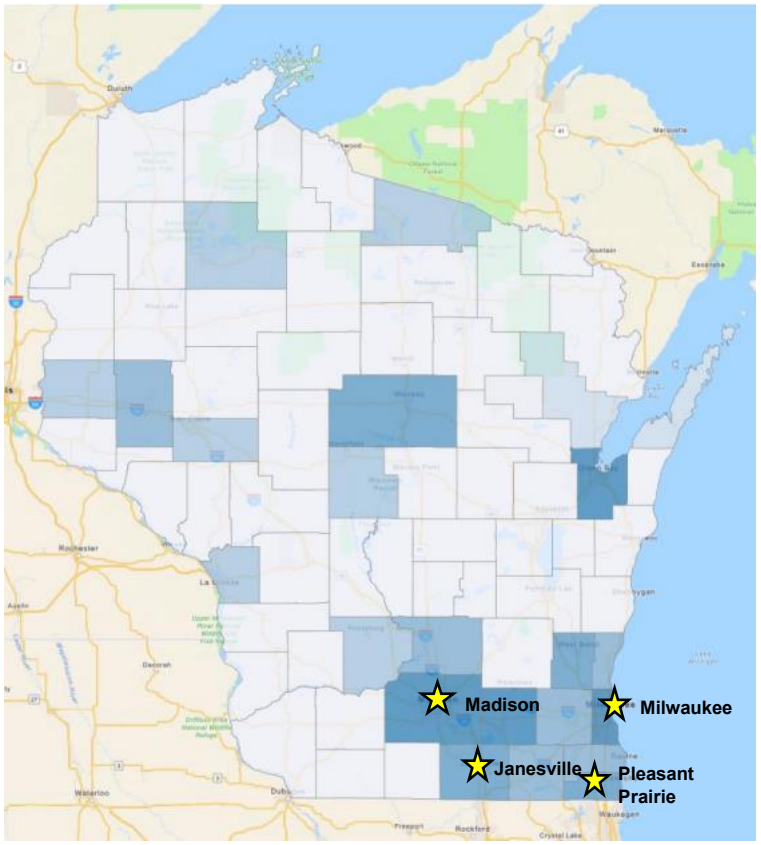
**Overview of Scale and Scope**

Wisconsin's biohealth industry has grown into a significant contributor to the state's economy, with more than **53,000 employees across 2,200+ companies**. The state's concentration of biopharmaceutical manufacturing employment is roughly **three times the national average**, reflecting a distinctive specialization in drug development and production.

Beyond sheer numbers, Wisconsin's industry generates an estimated **$32 billion in annual economic impact**, positioning it as one of the state's fastest-growing and most globally relevant sectors. Activity is concentrated in Madison, Milwaukee, Pleasant Prairie, and Janesville, creating a statewide network that blends research, manufacturing, and clinical expertise. These locations are strategically located along major transportation corridors and their proximity to Chicago further enhance supply chain efficiency and access to markets, attracting both R&D and large-scale production investments.

Wausau and Green Bay are emerging biopharma hubs but do face challenges such as limited proximity to international airports and smaller scientific talent pools. Wausau is home to UAS Laboratories (≈230 employees) contributing to the region's life sciences and chemical manufacturing base. In the Green Bay MSA, MilliporeSigma recently expanded its Sheboygan facility to produce membranes for lateral flow, underscoring the broader region's strength in manufacturing and supply chain activity. These developments highlight potential for incremental biopharma-related growth anchored in Wisconsin's manufacturing capabilities, even if these markets are emerging.

**Geographic Distribution by Employment in Pharmaceutical Manufacturing**




Source: JobsEQ,

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# Anchor Companies + Recent Expansions

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Wisconsin's biopharma sector is anchored by homegrown leaders like Exact Sciences and Promega, complemented by major global players such as Eli Lilly, Catalent, and Fujifilm CDI. The state has seen multi-billion-dollar investments in molecular diagnostics, biologics, and pharmaceutical manufacturing, alongside innovations in stem cell research and medical isotopes led by firms like SHINE Technologies. Together, these companies highlight Wisconsin's growing role as a diverse and globally competitive hub for biopharma research, development, and production.

| Recent Expansion | Location | Global HQ | Details |
|---|---|---|---|
| **Exact Sciences** | Madison, WI | Madison, WI | Madison-based leader in molecular diagnostics, best known for Cologuard and expanding into precision oncology. |
| **Arrowhead Pharmaceuticals** | Madison, WI | Pasadena, CA | Develops RNAi-based therapies targeting genetic diseases; recently invested a 160,000 square foot drug manufacturing facility and an approximately 125,000 square foot laboratory to support process development and analytical activities in Verona. |
| **Fujifilm CDI** | Madison, WI | Madison, WI | With a location in Madison to advance biologics development and production, it specializes in iPSC-derived cells and regenerative medicine; key player in biomanufacturing innovation. |
| **Promega Corporation** | Fitchburg/ Madison, WI | Fitchburg, WI | Global biotech supplier headquartered in Fitchburg, providing reagents, assays, and instruments for life sciences research. |
| **GE Healthcare** | Waukesha/ Madison, WI | Chicago, IL | Major imaging and medical technology firm with global headquarters for imaging and digital solutions is in Waukesha, for strong operations across the Milwaukee region. |
| **Medical College of Wisconsin & Versiti Blood Research Institute** | Milwaukee, WI | Milwaukee, WI | Milwaukee-based academic research and clinical hub advancing cancer, cardiovascular, and blood health innovation. |
| **Eli Lilly** | Pleasant Prairie, WI | Indianapolis, IN | Global biopharma company leading in the discovery, development, manufacture and sale of pharmaceutical products. Investing heavily in Wisconsin manufacturing, focused on scaling biologics and next-generation therapies. |
| **Catalent** | Madison, WI | Somerset, NJ | Provides advanced biologics development and manufacturing services through large-scale facilities operations. Announced a $45M expansion of its Madison biologics site, adding 200 jobs and doubling down on the region's reputation as a hub for biologics development and production. |
| **Aldevron** | Madison, WI | Fargo, ND | A Danaher company producing plasmid DNA, mRNA, and proteins for cell and gene therapies. Its Wisconsin presence and Innovation Lab bolsters the state's positioning in the fast-growing genetic medicine supply chain. |
| **NorthStar Medical Radioisotopes** | Beloit, WI | Beloit, WI | NorthStar Medical Radioisotopes expanded to increase its Molybdenum-99 production and processing capabilities using non-uranium-based electron accelerator technology. |
| **Sterling Pharma** | Germantown, WI | Dudley, UK | Sterling Pharma Solutions expanded toits Wisconsin facility through a $3 million investment in antibody-drug conjugate (ADC) development and manufacturing services |

# Research and Specialized Capabilities



The **University of Wisconsin–Madison** serves as the cornerstone of Wisconsin's biopharma research environment. With more than **$1.5 billion in annual R&D expenditures**, UW consistently ranks among the nation's top public research universities. Its historic breakthroughs in stem cell science and its ongoing leadership in genetics, precision medicine, and biomedical engineering make Madison a magnet for scientific innovation. The university generates a steady pipeline of scientific talent and fosters industry partnerships through technology transfer and startup incubation.

Other institutions further reinforce this base: the **Medical College of Wisconsin** and the **Versiti Blood Research Institute** in Milwaukee specialize in translational medicine, cell therapy, and genomics. Anchors such as Promega and Fujifilm CDI provide essential tools, reagents, and advanced manufacturing capacity.

BioForward Wisconsin, the state's industry association, plays a pivotal convening role, linking these institutions with industry and government through initiatives like the federally designated **Wisconsin Biohealth Tech Hub (WBHTH)**. This culture of collaboration is a defining strength of the ecosystem.

Wisconsin's draw for biopharma R&D projects can be seen through recent activity by Sterling Pharma Solutions, which acquired Alcami's Germantown facility in 2020. Sterling has since built on Germantown's legacy of custom development and manufacturing, positioning the site as a strategic U.S. hub for APIs and complex drug development services. This investment aligns with other global players deepening their Wisconsin presence, such as Merck KGaA expanding API capabilities through MilliporeSigma in Madison, Thermo Fisher's acquisition of PPD with its CRO facility in Middleton, and Siegfried's purchase of Curia Global's operations in Grafton—collectively reinforcing Wisconsin's role in the global biopharma supply chain.

Wisconsin is positioned to play a leading role in the future of personalized medicine and genetic research, areas that are reshaping biopharma globally. The state's strength lies not only in breakthrough discoveries but in the infrastructure and ecosystem that allow research to move from lab to market. Personalized medicine depends on advanced genomics, bioinformatics, and precision diagnostics—all fields where Wisconsin's academic and research institutions have built nationally recognized expertise.

The state's designation as a **U.S. Tech Hub for biomanufacturing** reinforces this momentum. It signals federal recognition of Wisconsin's ability to integrate research, workforce development, and advanced production in ways that strengthen the nation's competitiveness in life sciences. For personalized medicine and genetic research, this means access to targeted funding, stronger industry-academic collaboration, and a platform to attract new investment.

# Workforce and Talent Pipeline

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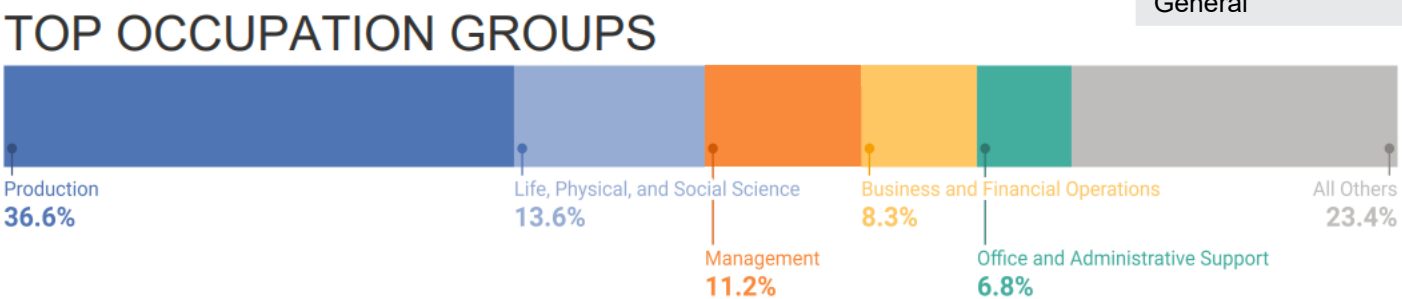
Wisconsin's workforce combines scientific expertise with a strong manufacturing tradition. The state's universities and colleges confer more than 14,500 health and life sciences degrees and 4,600 engineering degrees annually, ensuring a steady pipeline of technical talent. The top occupation groups for the biopharma industry in Wisconsin were mostly in production, management, and within life, physical, and social sciences.

UW–Madison ranks among the top institutions for producing PhDs in biochemistry and molecular biology, while Madison College and other technical colleges deliver targeted training programs in biotechnology and biomanufacturing. UW Madison is also ranked 13th in the county for Computer Science, which is becoming more essential in the field of biopharmaceuticals. Employment in GMP manufacturing, lab technology, and genomics research is a noted specialization, with local companies benefiting from transferable skills rooted in Wisconsin's broader manufacturing base.

According to CBRE, Madison ranked 14th out of the top 20 metros for R&D (focused on the number of "core" R&D occupations, including biochemists, biophysicists, bioengineers, biomedical engineers, biological scientists and biological technicians). Madison had a total of 1,880 employees across all biopharma occupations in 2023. Of those occupations, Madison has the highest concentration of microbiologists, chemists and biological technicians of the top 100 markets in part due to highly educated workforce supported by the University of Wisconsin in Madison.

Madison's quality of life—consistently ranked among the best in the U.S.—makes it an attractive destination for talent from Tier 1 hubs. Combined with lower costs of living and doing business, these factors create a compelling environment for both retaining local graduates and attracting experienced professionals from outside the state.

| Program | Awards |
|---|---|
| **University of Wisconsin- Madison** | |
| Biochemistry | 187 |
| Bioengineering & Biomedical Engineering | 197 |
| Biology/Biological Sciences, General | 568 |
| Chemistry, General | 230 |
| Industrial Engineering | 153 |
| Microbiology, General | 83 |
| Neuroscience | 301 |
| **University of Wisconsin- Platteville** | |
| Manufacturing Engineering Technology | 58 |
| **University of Wisconsin- La Crosse** | |
| Microbiology, General | 21 |
| **Marquette University** | |
| Biomedical Sciences, General | 161 |

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# Workforce and Talent Pipeline

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Wisconsin can tap into neighboring labor sheds to support growth in biopharma manufacturing, precision medicine, and neurotech/digital health. The alignment of academic output with industry needs positions Wisconsin to attract early-career talent, build regional training partnerships, and support cluster development in Madison and Milwaukee.

## Chicago Area

- *Strengths:* Strong enrollment in Biology and Neuroscience at UIC and Northwestern; diverse program offerings across multiple universities.
- *Limitations*: Limited presence in Microbiology; DePaul has low STEM enrollment overall.

## Greater Illinois

- *Strengths*: UIUC excels in Chemistry, Engineering, and Bioengineering with the highest total enrollment.
- *Limitations*: Illinois State University has minimal STEM program representation.

## Iowa

- *Strengths*: Iowa State and University of Iowa show strong numbers in Industrial Engineering, Biology, and Neuroscience.
- *Limitations*: Microbiology and Biochemistry are underrepresented

## Minnesota

- *Strengths*: University of Minnesota-Twin Cities has high enrollment across all STEM programs, especially Biology and Chemistry. No major limitations evident; most balanced STEM portfolio.

| | Chicago | | | | Greater Illinois | | Iowa | | Minnesota |
|---|---|---|---|---|---|---|---|---|---|
| | Northwestern University | University of Chicago | DePaul University | University of Illinois Chicago | University of Illinois Urbana-Champaign | Illinois State University | Iowa State University | University of Iowa | University of Minnesota-Twin Cities |
| **Total - All Programs** | 10,406 | 7,680 | 5,887 | 9,307 | 17,509 | 5,698 | 8,096 | 9,815 | 13,831 |
| **Biochemistry** | X | X | 4 | 79 | 54 | 5 | 50 | 40 | 80 |
| **Bioengineering and Biomedical Engineering** | 105 | X | X | 128 | 125 | X | 56 | 116 | 150 |
| **Biology/Biological Sciences, General** | 151 | 127 | 47 | 482 | 16 | 133 | 158 | 92 | 356 |
| **Chemistry, General** | 82 | 135 | 12 | 58 | 160 | 25 | 38 | 76 | 150 |
| **Industrial Engineering** | 69 | X | X | 67 | 122 | X | 133 | 45 | 104 |
| **Microbiology, General** | X | 6 | X | X | 18 | X | 42 | 31 | 2 |
| **Neuroscience** | 142 | 65 | 31 | 100 | 12 | X | 4 | 67 | 104 |

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# Workforce and Talent Pipeline

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- **Scale of employment:** Madison accounts for just over half (3,559 of 6,582 jobs) of Wisconsin's total biopharma-related workforce, showing its role as the state's core employment hub.
- **R&D concentration:** Madison has a relatively higher share of chemists, biological technicians, and industrial engineers, reflecting its research-driven cluster anchored by UW–Madison and local biotech firms. Madison is also home to Epic Systems, a digital health company for EHR software, which fuels R&D activity in the state through its 13,000 employees.
- **Manufacturing strength:** Both Madison and the state overall employ large numbers of packaging/filling operators and chemical equipment operators, but Madison holds a disproportionate share of these jobs (over 50% of state totals), highlighting its strength in production scale-up. Additionally, Marquette boasts a strong biomedical sciences and engineering program, which broadens the area's manufacturing capabilities.
- **Wages:** Across nearly all occupations, Madison wages slightly exceed state averages (e.g., industrial engineers at $106K vs. $104K; supervisors at $87K vs. $86K), reinforcing its status as a competitive talent market.
- **Specialized roles:** Managerial and high-skill positions such as industrial production managers and inspectors/testers are also more concentrated in Madison, suggesting higher-value operations relative to the rest of the state.

**Madison MSA Staffing Pattern**

| 6-digit Occupation | Empl | Avg Ann Wages | Annual Demand |
|---|---|---|---|
| Packaging and Filling Machine Operators and Tenders | 408 | $46,300 | 47 |
| Chemical Equipment Operators and Tenders | 304 | $53,400 | 28 |
| Inspectors, Testers, Sorters, Samplers, and Weighers | 176 | $65,100 | 21 |
| First-Line Supervisors of Production and Operating Workers | 148 | $87,400 | 15 |
| Industrial Engineers | 145 | $106,300 | 11 |
| Chemists | 144 | $73,500 | 13 |
| Laborers and Freight, Stock, and Material Movers, Hand | 89 | $48,500 | 12 |
| Biological Technicians | 88 | $58,900 | 11 |
| Industrial Production Managers | 76 | $153,900 | 6 |
| Industrial Machinery Mechanics | 69 | $76,800 | 8 |
| Remaining Component Occupations | 1,912 | $89,000 | 180 |
| **Total** | **3,559** | | |

**Wisconsin Staffing Pattern**

| 6-digit Occupation | Empl | Avg Ann Wages | Annual Demand |
|---|---|---|---|
| Packaging and Filling Machine Operators and Tenders | 751 | $45,800 | 85 |
| Chemical Equipment Operators and Tenders | 559 | $51,900 | 50 |
| Inspectors, Testers, Sorters, Samplers, and Weighers | 324 | $64,500 | 38 |
| First-Line Supervisors of Production and Operating Workers | 272 | $86,200 | 26 |
| Industrial Engineers | 267 | $104,100 | 20 |
| Chemists | 265 | $78,500 | 23 |
| Laborers and Freight, Stock, and Material Movers, Hand | 164 | $48,700 | 22 |
| Biological Technicians | 161 | $58,000 | 19 |
| Industrial Production Managers | 140 | $152,100 | 10 |
| Industrial Machinery Mechanics | 127 | $75,800 | 14 |
| Remaining Component Occupations | 3,552 | $90,400 | 321 |
| **Total** | **6,582** | | |

Source: JobsEQ

Annual demand is a of the sum of the annual projected growth demand and separation demand. Separation demand is the number of jobs required due to separations---labor force exits (including retirements) and turnover resulting from workers moving from one occupation into another. Note that separation demand does not include all turnover---it does not include when workers stay in the same occupation but switch employers. Growth demand is the increase or decrease of jobs expected due to expansion or contraction of the overall number of jobs.

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# Workforce and Talent Pipeline

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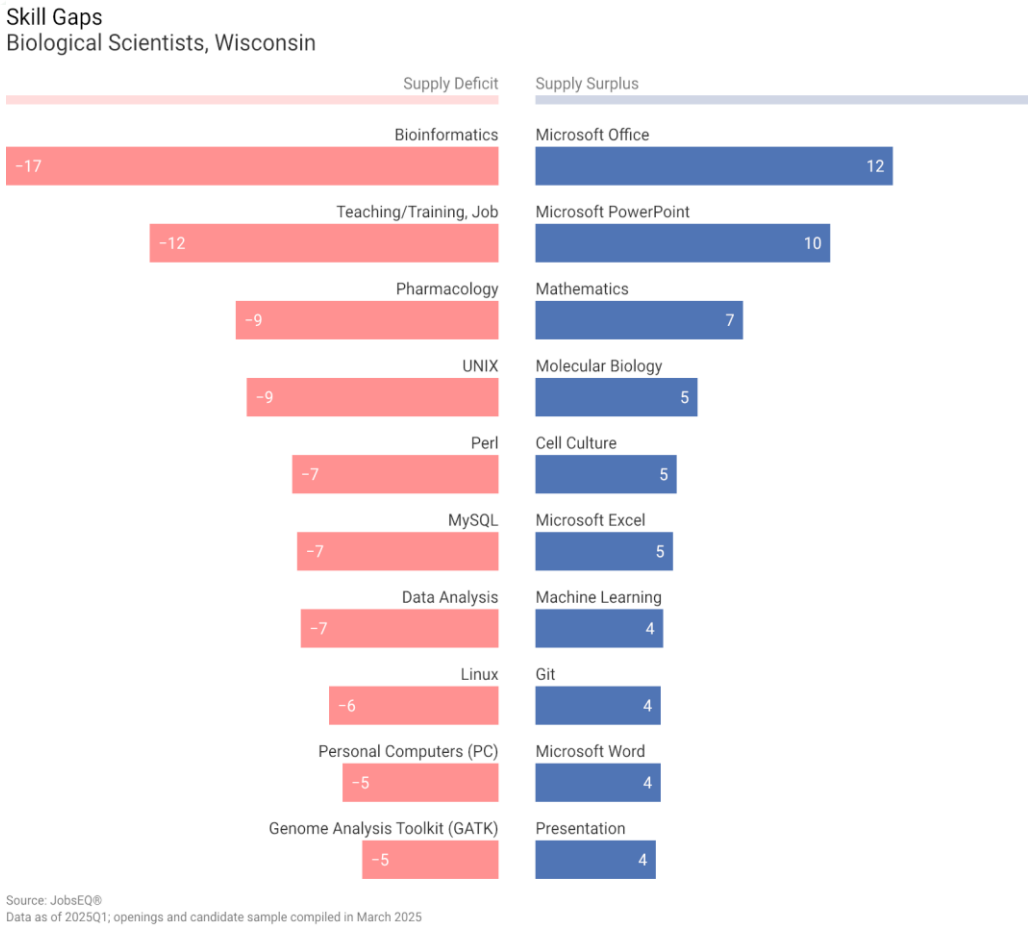
Wisconsin's biopharma sector is well-positioned for growth, but skills mismatches present both challenges and opportunities. Employers report **gaps in advanced technical skills** such as bioinformatics, pharmacology, data analysis, and programming languages (UNIX, Perl, MySQL, Linux), as well as in specialized research tools like genome analysis. These shortages suggest that while the state has a strong foundation in life sciences, additional investment in **computational biology, digital health, and data-driven research training** will be critical to sustaining innovation. Courses in bioinformatics and health systems engineering could address some of these gaps as well.

However, the region shows a **surplus of general skills** such as Microsoft Office, PowerPoint, and presentation abilities, alongside moderate strength in molecular biology, cell culture, and machine learning that is supported by strong life science and molecular biology programs at Wisconsin universities. This indicates that Wisconsin's workforce is well-prepared in baseline research and professional skills but requires more targeted development in cutting-edge bioinformatics and computational science to meet the evolving needs of biopharma R&D. Southern Wisconsin has already begun to make these investments through its computer science programs at UW Madison and new AI and Engineering courses at UW Milwaukee.




Addressing these gaps will ensure that the state can fully capitalize on its growing cluster in Madison and beyond, attracting investment in high-value research and advanced manufacturing.

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# Wisconsin Business Conditions + Differentiators

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# Wisconsin's Differentiators

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Wisconsin differentiates itself from larger, more saturated markets through its unique blend of **collaboration, cost-effectiveness, and central location**.

## Biopharma-Specific Differentiators

**Biohealth Tech Hub Designation**: Out of 192 tech hub applications, Wisconsin is one of 12 states to receive EDA Tech Hub designation and $49M in federal funding for personalized medicine, setting it apart nationally.

**Cluster Strength:** The Madison metro ranks nearly twice the national average in biohealth concentration, creating density like established hubs but with room to grow. Industry leaders like Exact Sciences, Promega, GE HealthCare, and PPD-Thermo Fisher anchor the ecosystem.

**Research Powerhouse (UW–Madison):** UW–Madison ranks consistently in the top 10 for NIH funding among public universities. It has world-class research in genomics, stem cells, imaging, and oncology. The Wisconsin Alumni Research Foundation (WARF) is one of the oldest and most successful tech transfer organizations in the U.S., fostering commercialization.

**Manufacturing & Scale-up Capacity**: Unlike some coastal hubs, Wisconsin pairs cutting-edge R&D with strong biomanufacturing capacity (Promega, Millipore Sigma, Eurofins, Catalent).This integration across the value chain (research → development → manufacturing) makes Wisconsin attractive for end-to-end biohealth operations.

**Workforce Development in Biohealth**: Actualizing Biohealth Career Pathways and technical colleges support industry-aligned training. Apprenticeships and inclusion initiatives expand access to biotech jobs—something many coastal states are still working to scale.

## General Economic & Business Environment

**Cost competitiveness:** Operating costs—labor, utilities, and real estate—are substantially lower than in coastal Tier 1 hubs, providing firms with opportunities to scale efficiently. The state's geography offers logistical advantages, with proximity to major markets such as Chicago and Minneapolis, and reliable access to national supply chains.

**Recognition of these strengths is growing:** the U.S. Economic Development Administration recently designated Wisconsin as a **Tech Hub in personalized medicine**, bringing federal resources and national visibility.

**Central Location & Logistics:** Positioned in the Midwest with proximity to Chicago's O'Hare International Airport, Wisconsin provides global connectivity. Strong freight, rail, and interstate systems support supply chain efficiency.

**Stable Workforce**: Wisconsin has one of the highest labor force participation rates in the Midwest. Retention and turnover rates are better than in more transient labor markets on the coasts.

**Public–Private Partnerships**: Active collaboration between state government, the Wisconsin Economic Development Corporation (WEDC), universities, and industry (e.g., Wisconsin Investment Fund). Policies emphasize workforce pipelines and support for scaling companies.

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# Collaborative Business Environment

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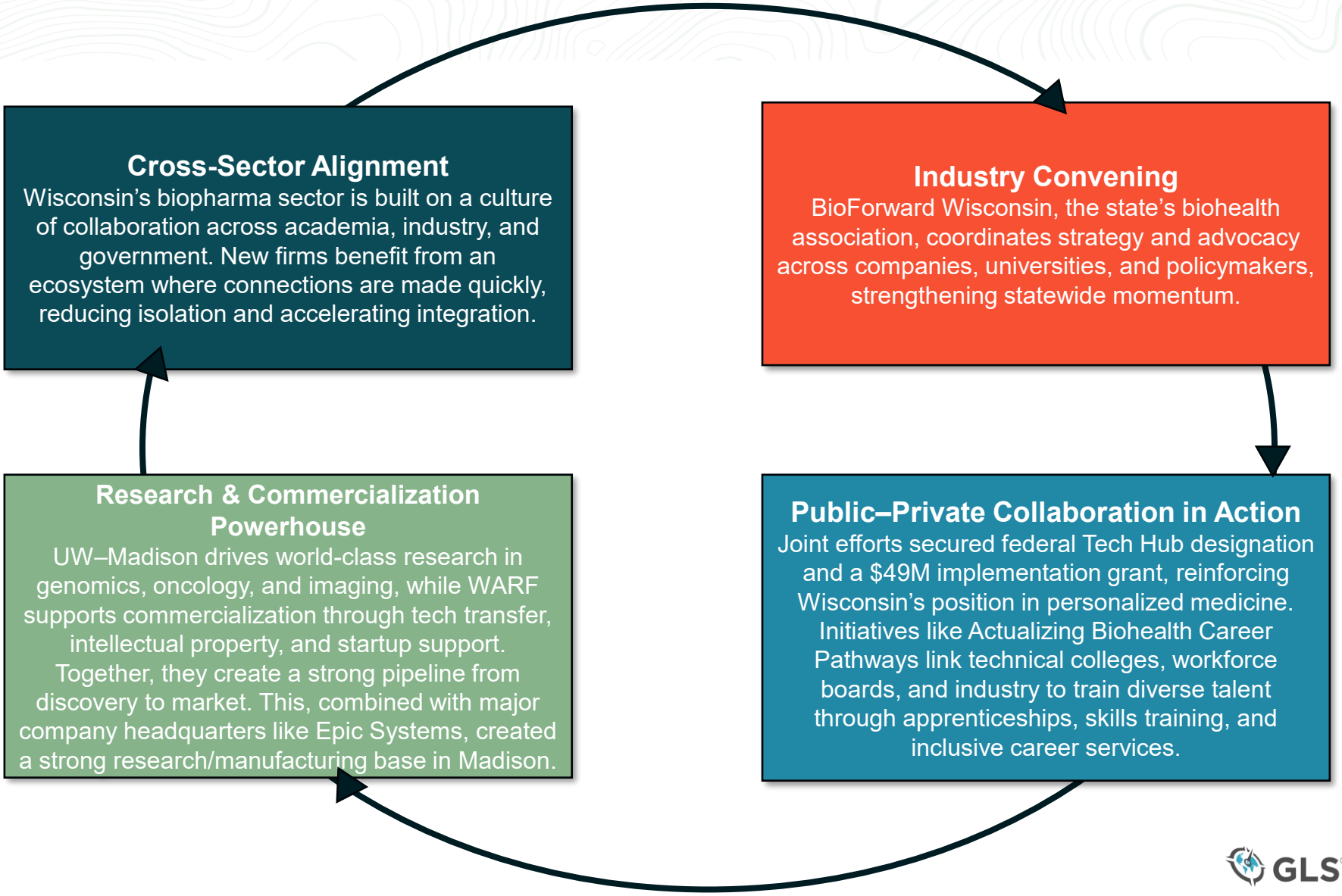


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# Cost Competitiveness

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Operating costs in Wisconsin are considerably lower than in coastal Tier 1 biopharma hubs. Labor costs for biological scientists are 25–40 percent below Boston or San Francisco for entry level and 37-59 percent for experienced hires while still supporting a highly skilled workforce in biomanufacturing, R&D, and quality assurance.

**Real estate costs** are similarly advantageous: lab and office space in Madison is often 200-300 percent cheaper than in Cambridge or the Bay Area. **Utilities** represent another differentiator. Alliant Energy and other utilities in Wisconsin offer stable, reliable, and affordable power—critical for biomanufacturing facilities that require uninterrupted electricity and clean water access.

| | Pharmaceutical & Medical Manufacturing | | Biological Scientists | | |
|---|---|---|---|---|---|
| MSA | Total Wages | Avg Ann Wages per Worker | Annual Wage-Entry Level | Annual Wage-Experienced | Rent per sqft |
| Boston-Cambridge-Newton, MA-NH | $483,897,087 | $185,608 | $76,800 | $147,000 | $49.06 |
| San Francisco-Oakland-Fremont, CA | $1,159,252,603 | $270,614 | $86,000 | $170,100 | $66.06 |
| Washington-Arlington-Alexandria, DC-VA-MD-WV | $673,820,185 | $199,699 | $68,400 | $144,400 | $53.29 |
| San Diego-Chula Vista-Carlsbad, CA | $405,186,115 | $171,451 | $77,000 | $137,700 | $45.23 |
| Raleigh-Durham-Cary, NC | $658,208,257 | $138,729 | $62,500 | $128,700 | $27.77 |
| Denver-Aurora-Greeley, CO | $93,998,084 | $91,631 | $62,600 | $118,200 | $37.39 |
| Indianapolis-Carmel-Greenwood, IN | $1,809,630,270 | $224,924 | $52,700 | $120,100 | $23.79 |
| Columbus-Marion-Zanesville, OH | $83,414,170 | $102,380 | $56,600 | $104,400 | $18.25 |
| Madison-Janesville-Beloit, WI | $108,897,540 | $116,542 | $61,300 | $107,200 | $16.77 |

Source: JobsEQ, Commercial Edge

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# Strategic Location + Logistics

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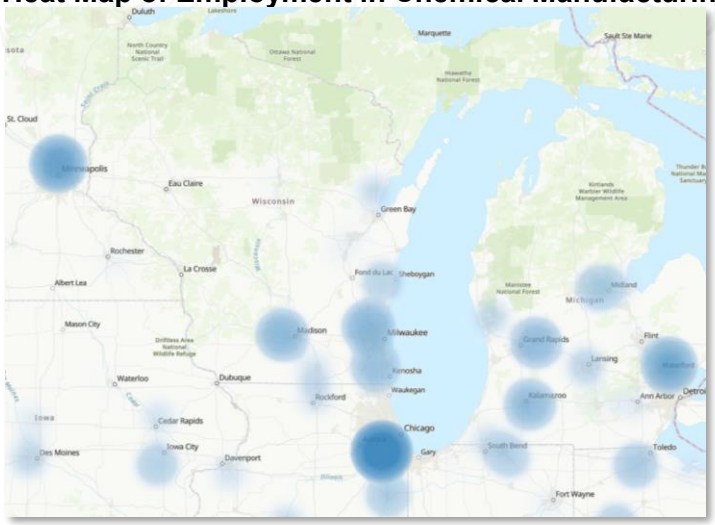
In the heat map for the broader NAICS code of Chemical Manufacturing on the left, there are many leading MSAs, creating significant competition for Madison. By zooming in on the NAICS for Pharmaceutical and Medical Manufacturing, a clear hub surrounding Wisconsin arises for the Madison to continue to build upon.

Geographically, Wisconsin sits at the center of the U.S. market and offers companies robust logistical advantages. Madison is within a three-hour drive of **Chicago O'Hare International Airport**, one of the world's busiest air cargo hubs, providing global connectivity for clinical trial materials and finished pharmaceuticals. Proximity to **Minneapolis and Milwaukee** further enhances access to major Midwestern healthcare and manufacturing markets. This proximity to other major markets increases the labor shed of Madison and provides the greater MSA with a strong pipeline for the industry to continue to grow.

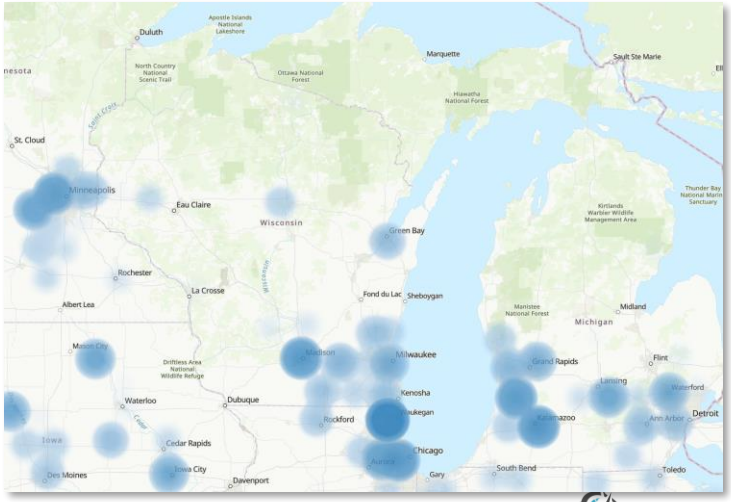
Interstate highways and regional rail lines support efficient freight movement, making Wisconsin an ideal hub for just-in-time supply chains. Importantly, the state is less exposed to natural disasters such as hurricanes or wildfires, offering companies stability and supply chain resilience.

These advantages position Wisconsin as a strategic distribution and production location within the broader U.S. market.

**Heat Map of Employment in Chemical Manufacturing**




**Heat Map of Employment in Pharmaceutical Manufacturing**




Source: JobsEQ

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# Incentives + Growth Policies

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Wisconsin's business environment is reinforced by competitive state incentives tailored to advanced manufacturing and R&D. In May 2024, Governor Tony Evers and WEDC launched a $100 million public–private investment fund, splitting $50M in federal funds with $50M matched by private investors. The fund targets startups and emerging firms across sectors including health care, technology, manufacturing, and agriculture. Notably, HealthX Ventures and Venture Investors Health Fund received initial allocations of $15M and $12M, respectively.

The Wisconsin Economic Development Corporation (WEDC) offers refundable job creation and investment tax credits, while workforce training programs can be customized for company-specific needs. Programs such as the Qualified New Business Venture (QNBV) credit further encourage investment in early-stage companies by providing tax incentives to investors.

In August 2025, the Evers administration announced an incentive for Eli Lilly's $4 billion expansion—providing up to $100 million in performance-based state tax credits. Earlier, in July 2025, WEDC awarded $2 million in tax credits to Catalent for a $45 million investment, helping create ~200 highly skilled biohealth jobs in Madison. This marks the fourth time the state has supported Catalent's multi-phase growth through targeted tax incentives.

At the local level, communities like Madison and Dane County support projects through infrastructure readiness, TIF financing, and site development partnerships. Utilities such as Alliant Energy also play a direct role in economic development, helping with site selection, infrastructure, and customized energy solutions. The state also has strategic focus areas & collaborative projects outlined by UW-Madison and consortium partners. Key initiatives include:

- **Data infrastructure**: Secure health-data ecosystems for personalized therapy development
- **Mobile cancer screening**: Deploying fleets to underserved areas to close health equity gaps.
- **AI-powered theranostics**: Enhancing imaging and clinical data integration.
- **Manufacturing & commercialization support.**
- **Workforce development:** Building inclusive pipelines for biohealth talent.

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# National Recognition + Momentum

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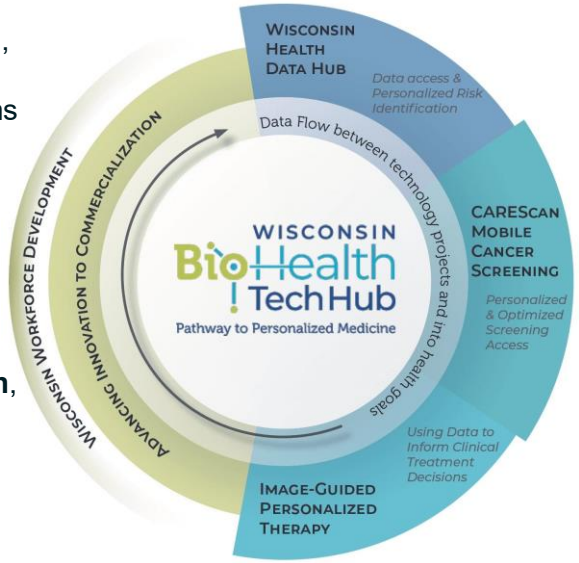
- **Federal Recognition & Tech Hub Designation:** In October 2023, Wisconsin was officially designated as one of 31 inaugural Regional Technology & Innovation "Tech Hubs"—and one of only 12 focused on biotech/personalized medicine—by the U.S. Economic Development Administration under the CHIPS and Science Act. This strategic recognition positions Wisconsin at the forefront of national biotech innovation and leadership.
- **Phase 2 Grant: $49 Million to Fuel Biohealth Innovation:** In July 2024, Wisconsin secured a $49M Phase 2 Implementation Grant, surpassing Phase 1, to further develop its biohealth ecosystem. Combined with $7.5M in state funding and $24M in industry commitments, total investment exceeds $80M.
- **Economic Impact: Jobs & Activity:** Projections estimate 30,000+ direct jobs in personalized medicine and an additional 111,000 indirect jobs over the next decade, along with $9 billion in economic. The sector already boasts a $32 billion annual contribution, supports 129,000+ jobs, and adds $6 billion in products and services. Madison and Milwaukee regions stand out as national biohealth leaders, with Madison nearly twice the national average in cluster concentration.
- **Ecosystem & Leadership**: A broad consortium of 18 partners—including UW–Madison, Exact Sciences, Madison College, BioForward Wisconsin, and economic development entities—drives the Tech Hub's strategy and execution. Madison College leads programs like the Actualized BioHealth Career Pathways (ABC Pathways) to create workforce readiness via apprenticeships and advanced training.
- **Strategic Momentum**: The distinguished Tech Hub status not only unlocks significant public investment, but also draws private sector interest and expansions—such as Microsoft citing the designation in its decision to expand a data center in Wisconsin. Momentum is further reinforced by recent high-profile investments such as **Eli Lilly's $3 billion expansion in Pleasant Prairie** and **Catalent's $45 million Madison expansion**, both of which signal strong confidence from global firms in Wisconsin's operating environment. These developments place Wisconsin firmly on the map for biopharma executives seeking cost-efficient, collaborative, and strategically located alternatives to saturated coastal markets.

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# Conclusion

# Conclusion + Recommendations

## Overview

Madison ranks among the nation's most balanced emerging biopharma markets—combining a world-class research base, specialized talent, and a growing manufacturing footprint. While smaller in scale than legacy coastal hubs, its cost structure, central location, and collaborative business environment make it exceptionally well-positioned for on-shoring and domestic expansion projects seeking reliability, affordability, and operational certainty.

## Key Takeaways

- **Top-Tier Research Strength:** UW–Madison and its affiliated institutions sustain global credibility in genomics, oncology, and stem-cell science, anchoring a robust innovation ecosystem.
- **Integrated R&D + Manufacturing:** Madison's continuum of discovery through production positions it as a cost-efficient hub for scaling technologies within the U.S. supply chain.
- **Cost + Quality Advantage:** Operating costs remain 30–50% below coastal peers while maintaining one of the nation's highest concentrations of scientific and technical talent.
- **On-Shoring Opportunity:** Growing federal and corporate focus on domestic biomanufacturing aligns with Madison's strengths—ample land, stable infrastructure, and a supportive state policy environment.
- **Momentum + Recognition:** Recent expansions by firms such as Eli Lilly, Catalent, and Exact Sciences, reinforce Madison's credibility as a U.S. biohealth leader.

## Strengthen What Works

- **Deepen Workforce Pipelines:** Expand biohealth career pathways and strengthen alignment between technical colleges and industry needs.
- **Accelerate Site Readiness:** Advance utilities-served, biomanufacturing-ready sites to support projects under tight development timelines.
- **Market the Full Value Chain:** Emphasize Madison's ability to host both innovation and production functions in a single, cohesive ecosystem.

## Close Remaining Gaps

- **Enhance Project Responsiveness:** Develop a coordinated "bio-ready" project response team to streamline permitting and incentive packaging.
- **Increase Visibility:** Target national campaigns around on-shoring, supply chain resilience, and sustainable manufacturing to elevate Madison's profile.
- **Expand Incentive Flexibility:** Explore discretionary tools and infrastructure support mechanisms tailored to large-scale biomanufacturing investments.

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# Outlook

## Outlook

**Madison's foundation in research excellence, technical workforce, and cost competitiveness positions it as an ideal on-shoring destination for biopharma and life sciences manufacturing. By pairing its quantitative strengths with improved responsiveness and site readiness, Madison can convert competitive interest into long-term, capital-intensive investment wins.**

- The U.S. biopharma sector continues to consolidate into fewer, larger, more capital-intensive projects—favoring states like Wisconsin that can offer affordability, reliability, and ecosystem depth.
- Wisconsin's growing roster of anchor companies signal enduring momentum and investor confidence.
- The Madison MSA is highly competitive for both R&D and Manufacturing projects within the industry, so it is crucial that state and local resources are leveraged to maximize economic development competitiveness to convert leads into wins.
- Continued alignment among Alliant Energy, BioForward, WEDC, and research institutions will be essential to sustaining growth and ensuring Wisconsin remains a premier destination for biohealth investment.

GLS GLOBAL LOCATION STRATEGIES®

MATCHING COMPANIES AND COMMUNITIES FOR LONG-TERM, SUSTAINABLE SUCCESS


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