



BIOHEALTH EXCELLENCE

From devices and diagnostics to pharmaceuticals and personalized medicine, the future of the field is being built in Wisconsin.

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**\$37.7
BILLION**

economic impact



**2,236
COMPANIES**



**\$2.2
BILLION**

medical and scientific
instrument exports
in 2024

\$\$\$



\$\$



\$
up to
35%
lower



Cost of Living



**\$1.7
BILLION**

annual research
spending in FY23 at
UW-Madison alone,
\$1 billion of it in the
life sciences.

**BIOHEALTH
R&D SPENDING**

AT WISCONSIN UNIVERSITIES
HAS RISEN BY

28%

since 2018

**BIOHEALTH TECH
HUB DESIGNATED
BY U.S. GOVERNMENT**



**WISCONSIN SUPPLIERS
PROVIDE PRODUCTS WORTH**



\$7.8 BILLION

to the state's biohealth industry annually.

BIOHEALTH EXCELLENCE

INDUSTRY STRONG. TECHNOLOGY SMART. FUTURE READY.



WISCONSIN'S LEADERS IN BIOHEALTH



SCALING UP WISCONSIN

In 2024, pharmaceutical giant **Eli Lilly & Co.** announced a \$3 billion expansion of its manufacturing facility, forecasting the addition of 750 jobs to its current workforce of 130-plus in southeast Wisconsin.

TECH HUBS¹

U.S. Economic Development Administration

After being designated as a Regional Technology Hub by the U.S. federal government in 2023, Wisconsin in 2024 achieved a significant milestone as a Phase 2 recipient in this program when the U.S. Department of Commerce Economic Development Administration awarded the state \$49 million in federal grants, bringing Wisconsin's total funding so far to more than \$80 million. The collaborative and interdisciplinary **Wisconsin Biohealth Tech Hub** is focused on personalized medicine, incorporating imaging and theranostics, genomics, and big data and analytics driven by artificial intelligence and machine learning. The tech hub's first projects focus on health data, mobile cancer screening, and advancing innovation to commercialization, among other themes.



\$37.7 BILLION

economic impact of Wisconsin's biohealth industry¹

Source: (1) Wisconsin Biohealth Industry Landscape and Economic Impact Report, prepared for BioForward Wisconsin by TEconomy Partners LLC, October 2024

220

medical device manufacturers in Wisconsin¹

2,236

Wisconsin biohealth companies¹

53,318

biohealth industry employment¹



WISCONSIN'S ESTABLISHED STRENGTH IN BIOHEALTH

IS CONCENTRATED IN FOUR AREAS:

- **Medical device manufacturing**, with a primary focus in medical imaging technologies. Everything from MRI and dialysis machines to pacemakers and vacuum devices for negative pressure wound therapy—as well as diagnostic equipment, supplies, and kits—is made in Wisconsin. The 11,624 jobs in this subsector translate to a specialized employment concentration (31% higher than the national average).¹
- **Biopharmaceuticals**, with several areas of focus related to biomanufacturing. From the development of drugs and therapies to translational and integrated science, Wisconsin has a long history of excellence in biotechnology and biopharmaceuticals. Within the biopharmaceuticals sector specifically, Wisconsin has a specialized employment concentration exceeding three times the national average.¹
- **Radiation/nuclear medicine**, spanning both the device and the biopharmaceutical subsectors. Via the research and educational expertise of UW-Madison, Wisconsin is building a core competency in radiotherapeutic technologies.
- **Active pharmaceutical ingredients (APIs)**, for which Wisconsin is a manufacturing hub.

The sector also has high-growth areas including:

- The University of Wisconsin-Madison recently launched the **Initiative for Theranostics and Particle Therapy**, designed to foster collaboration among experts in several medical specialties with the goal of accelerating precision radiation therapy and imaging, within the Carbone Cancer Center. This new initiative will further contribute to Wisconsin's existing strength in theranostics, which uses the dual capabilities of nuclear medicine to combine targeted therapies with diagnosis to treat cancerous tumors and other conditions.
- **Medical laboratories:** Since 2019, the sector has added 5,617 jobs in Wisconsin.²
- **Medical equipment and supplier wholesalers:** Employment in this category is steadily growing (up 14% since 2019), and with more than 5,800 jobs, this subsector is 11% more concentrated in Wisconsin than the national average.²



325 MILLION

patients worldwide are served by the electronic medical records systems of Epic Systems.³

Source: (1) Wisconsin Biohealth Industry Landscape and Economic Impact Report, prepared for BioForward Wisconsin by TEconomy Partners LLC, October 2024; (2) Lightcast 2023.4 Dataset; (3) Epic Systems website, 2025

BIOHEALTH EXCELLENCE

INDUSTRY STRONG. TECHNOLOGY SMART. FUTURE READY.



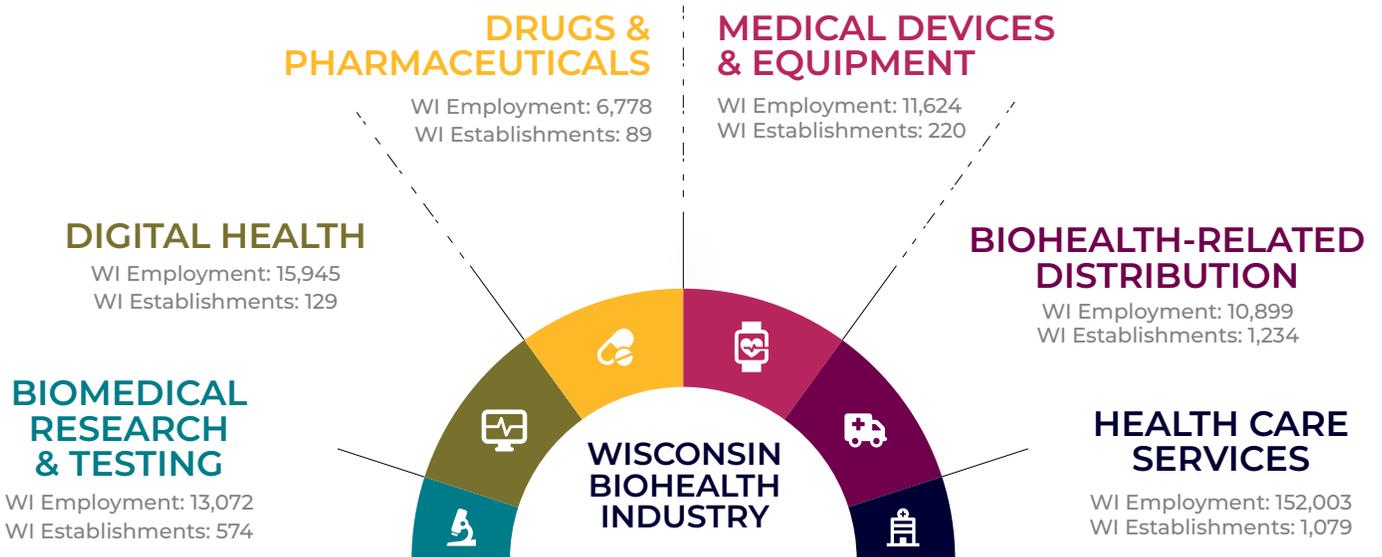
Wisconsin ranks
1ST IN THE U.S.

for medical imaging
(irradiation apparatus) manufacturing,¹
MORE THAN 12 TIMES THE NATIONAL AVERAGE
employment concentration

3,290

employed in Wisconsin
medical image manufacturing¹

BIOHEALTH R&D SPENDING
AT WISCONSIN UNIVERSITIES
HAS RISEN BY **28%**
since 2018.²



Sources: (1) Lightcast 2025 Q1 Dataset; (2) Wisconsin Biohealth Industry Landscape and Economic Impact Report, prepared for BioForward Wisconsin by TEconomy Partners LLC, October 2024; (3) Council for Community and Economic Research Cost of Living Index; Chart source: Wisconsin Biohealth Industry Landscape and Economic Impact Report, prepared for BioForward Wisconsin by TEconomy Partners LLC, October 2024



Wisconsin suppliers provide products worth

\$7.8 BILLION

to the state's biohealth industry annually.¹

INDUSTRY AND ENTREPRENEURIAL SUPPORT

Wisconsin's strength in biohealth comes together with the help of **BioForward**, an industry organization that facilitates partnerships among government, academia, and private industry. An Eau Claire office was added to Madison and Milwaukee locations last year. Its biomanufacturing center of excellence also includes:

- ▶ The **Forward BIO Institute**, based at UW-Madison, which supports transformative research in the field of biomanufacturing, translates technologies into the private sector, and establishes public-private partnerships to connect UW inventors and researchers with industry leaders. As part of this initiative, the institute is establishing a new master's degree at UW-Madison in biomanufacturing innovation.
- ▶ **Forward BIOLABS**, a shared lab facility at the University Research Park in Madison that provides office and lab space and other supportive services for biotech startups. Its aim is to lower the barrier for entrepreneurs in launching new ventures. Early outcomes are promising: Young companies that have used this space or graduated from Forward BIOLABS have far exceeded projections. In addition to expanding laboratory operations in Madison, a Milwaukee facility was opened on a pilot basis.

Biohealth companies know that in Wisconsin, they can find a **broad and deep supply chain** including the suppliers and workforce they need to create their products as well as companies that can handle the logistics of bringing those products to market.

A Secure Supply Chain



Source: (1) Wisconsin Biohealth Industry Landscape and Economic Impact Report, prepared for BioForward Wisconsin by TEconomy Partners LLC, October 2024

BIOHEALTH EXCELLENCE

THE WORKFORCE YOU NEED



3,832

Biohealth patents were awarded to Wisconsin entities from 2018-2023.¹



UW-Madison is

#2 IN THE U.S.

for Ph.D. degrees in biochemistry, biophysics, and molecular biology.²

ADVANCING KNOWLEDGE

In Wisconsin, our universities lead in research and technology commercialization, supporting partnerships, companies, and policymakers to develop new, innovative products that fill market needs.

World-renowned health and medical education and research take place in Wisconsin at institutions such as:

- ▶ The **UW-Madison School of Medicine and Public Health**, the first in the nation to fully integrate medicine and public health
- ▶ The only standalone **Department of Medical Physics** in the U.S., at UW-Madison
- ▶ The **Morgridge Institute for Research**, an independent biomedical institute exploring uncharted scientific territory to discover tomorrow's cures
- ▶ The **UW-Milwaukee Institute for Drug Discovery**
- ▶ The **Center for Predictive Computational Phenotyping** at UW-Madison
- ▶ The **Medical College of Wisconsin (MCW)**, investing \$347 million in research in 2023³
- ▶ MCW's **Department of Biomedical Engineering**, a collaboration with Marquette University
- ▶ The **Clinical and Translational Science Institute** at Marquette University
- ▶ **Madison College**, where adults who already hold a bachelor's degree can complete a single-semester certificate program to gain the skills needed for biotech jobs

Our 16 technical colleges and 34 universities, with a combined total of 99 campus locations around the state, prepare students to make strong contributions to Wisconsin's economy—and the leaders who hire them.

The **Wisconsin Alumni Research Foundation (WARF)**—an independent nonprofit technology transfer organization serving UW-Madison—holds multiple **patents for prominent scientific discoveries**, including:

- The influenza vaccine
- Magnetic resonance spectroscopy
- CT image reconstruction
- Pluripotent stem cells and media
- Skin grafts
- Compositions to diagnose swallowing disorders

Several other patents have recently expired, but nevertheless indicate the highly influential nature of the research taking place at UW-Madison:

- Radiation therapy
- Medical imaging technologies
- Conjugated linoleic acid
- Zemplar/Calcijex/Vitamin D derivatives
- A retinal stem cell progenitor

Source: (1) Wisconsin Biohealth Industry Landscape and Economic Impact Report, prepared for BioForward Wisconsin by TEconomy Partners LLC, October 2024; (2) Lightcast 2025 Q1 dataset; (3) National Center for Education Statistics Higher Education Research & Development Survey



Of Wisconsin employers,

97%

say they are satisfied with technical college graduates' education¹

A WORKFORCE BUILT FOR MANUFACTURING

Wisconsin pioneered industry-focused workforce development in the U.S. As the first state to develop a technical college system, we have 100+ years of experience in training our workforce to meet employers' needs and staying up to date with the ever-changing requirements of industry. Our **investment in fabrication laboratories (fab labs) at the K-12 level**—\$5.5 million in state support over the past 10 years, with local districts investing additional matching funds—ensures that students receive hands-on experience solving real-world problems using science, technology, engineering, art, and math (STEAM) skills. With the second-highest concentration of manufacturing employment in the country,² we offer you a skilled, experienced workforce that is ready to be productive starting on the day you open your doors.



4,670

engineering degrees and certificates awarded in 2022

Lightcast 2024 Q4 Dataset



14,552

health and life science degrees awarded in 2022

Lightcast 2024 Q4 Dataset

A highly integrated system of higher education

Our state built the **Wisconsin Technical College System** to deliver on workforce skill needs, with employer relationships and involvement at the core of its mission. With nearly 275,000 students across 16 colleges and more than 50 campuses throughout the state, Wisconsin's largest higher education system offers:

- ▶ A solid focus on the STEAM fundamentals advanced manufacturing employers highly value
- ▶ Customized training programs created at employers' request—up and running in eight weeks or less
- ▶ State-of-the-art facilities containing the same equipment industry leaders use—or, in some cases, more advanced equipment than industry standards
- ▶ Industry-prepared faculty with relevant private sector experience in the subjects they teach
- ▶ Advisory boards that proactively enlist members from industry-leading companies so the schools can stay in touch with industry needs
- ▶ In-depth relationships with area companies—often spanning decades—that involve workforce training, use of college facilities, placement of new graduates with a given company, and more. Companies' input informs program and curriculum development and delivery.

Source: (1) Wisconsin Technical College System; (2) Business Facilities magazine, July/August 2024

BIOHEALTH EXCELLENCE

THE WORKFORCE YOU NEED



MINNEAPOLIS-ST. PAUL METRO AREA HAS A COMBINED WORKFORCE OF

2.4 MILLION

for employers to draw from

U.S. Census 2023 American Communities Survey



SINCE 2017, WISCONSIN HAS HAD A **NET INFLOW**

of people in the family formation years of ages 25-54.

Forward Analytics 2022

MINNEAPOLIS

MINNESOTA

UNPARALLELED ADVANTAGES

Wisconsin offers a business climate that's especially suited to biohealth.

Workforce

We deliver a critical mass of highly skilled and highly educated employees for the biohealth sector, including life sciences, medical technology, and digital health.

Research and development excellence

UW-Madison and UW-Milwaukee are both Tier 1 research universities;¹ UW-Madison ranks sixth in the U.S. for research spending, with more than \$1.7 billion in research expenditures annually.²

Low risk of natural disaster

We offer remarkably low risk for every imaginable type of disaster, from earthquakes and wildfires to climate threats like heat waves, tornadoes, and hurricanes. According to a WEDC analysis of FEMA data, Wisconsin has the second lowest risk of natural disasters of any state.

Sources: (1) Carnegie Classification of Institutions of Higher Education; (2) U.S. NCES Higher Education Research & Development Survey; (Map) U.S. Census 2023 American Communities Survey

DULUTH/SUPERIOR
185,000*

2.5 hrs

1.5 hrs

EAU CLAIRE
114,000*

2 hrs

1.5 hrs

WAUSAU
103,000*

1.5 hrs

GREEN BAY
213,000*

APPLETON
158,000*

OSHKOSH-NEENAH
113,000*

FOND DU LAC
66,000*

2.5 hrs

LA CROSSE
91,000*

2.5 hrs

MADISON
465,000*

1.5 hrs

JANESVILLE-BELOIT
106,000*

1 hrs

SHEBOYGAN
74,000*

MILWAUKEE
1 Million*

ILLINOIS

CHICAGO



MILWAUKEE AND CHICAGO METRO AREAS HAVE A COMBINED WORKFORCE OF

7.2 MILLION

for employers to draw from

U.S. Census 2023 American Communities Survey

* Figures represent the working-age population for each Metropolitan Statistical Area

BIOHEALTH EXCELLENCE

UNPARALLELED ADVANTAGES

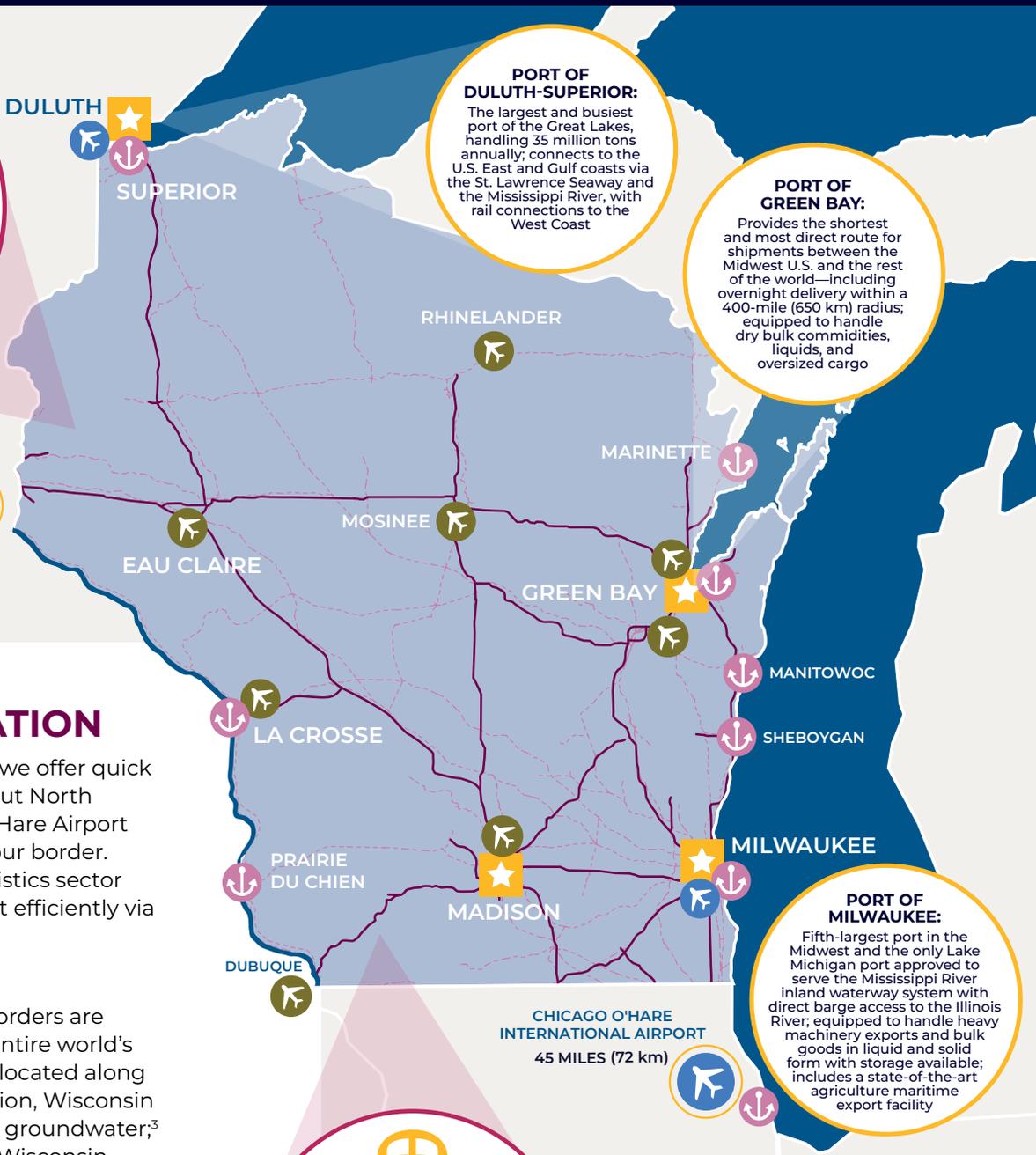
NEARLY 40% 
of U.S. manufacturers
ARE REACHABLE
WITHIN
A DAY'S DRIVE
U.S. Bureau of Labor Statistics

MINNEAPOLIS-SAINT PAUL INTERNATIONAL AIRPORT
 25 MILES (40 km)

PORT OF DULUTH-SUPERIOR:
 The largest and busiest port of the Great Lakes, handling 35 million tons annually; connects to the U.S. East and Gulf coasts via the St. Lawrence Seaway and the Mississippi River, with rail connections to the West Coast

PORT OF GREEN BAY:
 Provides the shortest and most direct route for shipments between the Midwest U.S. and the rest of the world—including overnight delivery within a 400-mile (650 km) radius; equipped to handle dry bulk commodities, liquids, and oversized cargo

PORT OF MILWAUKEE:
 Fifth-largest port in the Midwest and the only Lake Michigan port approved to serve the Mississippi River inland waterway system with direct barge access to the Illinois River; equipped to handle heavy machinery exports and bulk goods in liquid and solid form with storage available; includes a state-of-the-art agriculture maritime export facility



AN IDEAL LOCATION

From the center of the U.S., we offer quick access to markets throughout North America. Chicago and its O'Hare Airport are less than an hour from our border. And our well-developed logistics sector moves your goods to market efficiently via rail, road, air, or water.

Natural resources

Nearly 85% of Wisconsin's borders are water,¹ and one-fifth of the entire world's liquid surface fresh water is located along the state's borders.² In addition, Wisconsin has 1.2 quadrillion gallons of groundwater;³ this plentiful supply means Wisconsin businesses have no trouble getting access to the water they need for their operations.

Fiscal responsibility

From our fully funded state pension system⁴ to our extraordinary credit rating, we offer a politically stable, low-tax, low-regulation, business-welcoming environment.


WISCONSIN IS SERVED
BY FOUR
CLASS I
RAILROADS
Surface Transportation Board

-  COMMERCIAL PORTS
-  COMMERCIAL AIRPORTS
-  FOREIGN TRADE ZONES
-  HIGHWAY SYSTEMS
-  RAILROAD LINES (SELECTED)

Sources: (1) WEDC analysis using a Wisconsin Department of Natural Resources map; (2) Wisconsin Water Facts, Wisconsin Water Library, UW-Madison; (3) Wisconsin Department of Natural Resources; (4) Wisconsin Department of Employee Trust Funds



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